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REVIEW OF POLICIES REGARDING SUBSTANCE USE DISORDERS IN STATE/FEDERAL VOCATIONAL REHABILITATION: COUNSELOR ATTITUDE, SELF-EFFICACY, AND FREQUENCY OF PROCEDURAL PRACTICES

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ABSTRACT

There is a high prevalence rate of substance use disorders in the State/Federal Vocational Rehabilitation (VR), but VR clients with substance use disorders are under-served. There are also considerable discrepancies in existing VR policies and procedures related to substance use disorders. In addition, there lacks research investigating the degree of differences of policies across 50 states and connecting substance use disorders policies and practices. Therefore, a two-phase study was employed to investigate research questions.

In Phase I, the researcher conducted a systematic review of State/Federal VR policies and procedures related to substance use disorders. To systematically evaluate policies and procedures, the researcher first developed the VR Substance Use Disorders Policy Scoring Rubric. Results of this study demonstrated that the VR Substance Use Disorders Policy Scoring Rubric had sufficient psychometric properties. There were significant insufficiency and inconsistency in policies and procedures related to substance use disorders in the VR. A strong need was signaled for State/Federal VR policy-makers to evaluate their current policies regarding substance use disorders and consider developing a universal baseline service guideline that addresses each of the rubric indicators. The rubric was a viable, preliminary tool for research and policy evaluation. Future research should address rubric validation using feedback from VR counselors.

In Phase II, the researcher conducted a counselor survey to explore relationships among policy comprehensiveness, counselor attitude, addiction counseling self-efficacy, frequency of procedural practices, years of experience, and caseload size. The sample included 215 VR counselors recruited from the Commission on Rehabilitation Counselor Certification (CRCC) mailing list. These participants came from 44 states. Most of them were White (68.3%), female (81.4%), and had a general caseload (71.2%). Participants' age ranged from 22 to 73, and their caseload size ranged from 5 to 450. Results demonstrated that VR counselors had a positive attitude and high addiction counseling self-efficacy. VR counselors only sometimes provide procedural practices related to substance use disorders. There was a significant, positive correlation between counselor attitude and addiction counseling self-efficacy. There was a significant, positive correlation between addiction counseling self-efficacy and frequency of procedural practices related to substance use disorders. There were no statistically significant relationships between policy comprehensiveness and variables of interest (i.e. counselor attitude, addiction counseling self-efficacy, and frequency of procedural practice). VR counselors should provide more procedural practices related to substance use disorders. Future research should also address psychometric validation of the addiction counseling self-efficacy scale, and policy implementation in the VR.

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CHAPTER 1

INTRODUCTION

Substance use disorders are highly prevalent in the State/Federal VR, but clients with this condition are under-served. Despite considerable discrepancies in existing VR policies and procedures related to substance use disorders, there is not much research connecting substance use disorders policies and practices. Investigations are needed to explore the degree of discrepancies of VR policies related to substance use disorders across states, as well as the relationship between policies and counselors' services. The researcher, therefore, conducted a systematic review of policies and procedures in the State/Federal VR and explored the correlation between policy comprehensiveness and counselor service variables with a counselor survey.

Substance Use Disorders in the United States

Substance use disorders have a high prevalence rate and cause severe problems in the United States. According to the Diagnostic and Statistical Manual of Mental Disorders 5 (American Psychiatric Association, 2013), substance use disorders are "a cluster of cognitive, behavioral, and physiological symptoms indicating that the individual continues using the substance despite significant substance-related problems" (p. 483). Based on the number of symptom criteria met, there are three severity categories of substance use disorders: mild (two or three symptoms), moderate (four to five symptoms), and severe (six or more symptoms). The definition of substance use disorders highlights the interpersonal, social, and physical consequences of substance use. According to the Substance Abuse and Mental Health Service Administration (SAMHSA; 2013), approximately 22.2 million people age 12 and above meet the diagnostic criteria for substance abuse disorders, which constitutes 9% of the US population in this age range. The National Institute on Drug Abuse (NIDA; 2015) reported that substance-related crime, loss of work productivity, and healthcare cost the

nation over 700 billion dollars each year. The Bureau of Justice Statistics (2012) found that drug offense constituted 35% and 33% in 2010 and 2011 respectively, which made it a prevalent offense among adult parolees.

Substance use disorders are often associated with unemployment, health complications, legal problems, and instabilities in the family. SAMHSA (2013) reported that in the adult population, people who were unemployed were more likely to have substance related issues compared to people who were full-time/part-time employed. Adults with a year of substance abuse history are more likely to attempt suicide than adults who do not (SAMHSA, 2013). According to the Arrestee Drug Abuse Monitoring survey, 62% to 87% of male documented arrestees were tested positive for some type of drug (Office of National Drug Control Policy, 2013). Substance-related problems also pose a threat to the family. Thompson, Lizardi, Keyes and Hasin (2008) found the experience of parental divorce/separation and alcohol-related issues significantly associated with children's development of alcohol dependence later in their life. Collins, Ellickson, and Klein (2007) demonstrated in a longitudinal study that alcohol intoxication had a causal relationship to divorce among young adult couples under the age of 29. The high prevalence, severe consequences, and continual threat of substance use disorders call for national attention and action.

State/Federal VR

State/Federal VR is a government agency that provides vocational services to assist people with disabilities to live independently, obtain and retain employment, and re-integrate into society (U.S. Department of Education, 2016). The Rehabilitation Act of 1973 endorsed authority of the U.S. Department of Education to administer most of the rehabilitation programs. Under this Department, the Office of Special Education and Rehabilitative Services (OSERS), specifically, the Rehabilitation Services Administration (RSA) is the

primary agency responsible for vocational rehabilitation services (U.S. Department of Education, 2016). In each state and DC, VR is expected to report to the RSA their state plan for the next fiscal year, which is open to the public on the RSA website. The RSA also administers grant/funding, supports training, provides monitoring, and submits annual reports to the President and the Congress (U.S. Department of Education, 2016). It is an active member of the social welfare system and actively engages in the social justice movement.

Substance Use Disorders in the VR

Substance use disorders pose severe challenges in the State/Federal VR program (Heinemann, McAweeney, Lazowski, & Moore, 2008; Sprong, Dallas, Melvin, & Koch, 2014). In Moore and Keferl's (2008) review of the literature, they stated a 25% prevalence rate of substance use disorders among VR services applicants. Using information from the U.S. Department of Education (2014), the number of applicants with substance use disorders is estimated at 140,000. Hollar, McAweeney, and Moore (2008) found that people with substance use disorders were one of the subgroups of VR clients with the lowest success closure rates. Failure to detect and serve clients' substance use disorders can lead to unsuccessful case closures (Rogers et al., 2011). VR counselors' most frequently reported reason for unsuccessful case closure was client miss appointment (61%), which indicated possible substance use disorders (Rogers et al., 2011). Although substance use disorders were not rated as a significant factor for unsuccessful closure, both VR clients and counselors rated the severity of disability high on their list (Rogers et al., 2011). Therefore, it is possible that though substance use disorders add to the severity of clients' disabilities, as an indirect factor, its significance is diluted or ignored.

There are many barriers to serving clients with substance use disorders in the VR (e.g. Lusk, Koch, & Paul, 2016). Lusk et al. (2016) claimed barriers such as strict eligibility

requirements, lack of access, and lack of training and skills had hindered clients with co-occurring substance use disorders to receive VR services. For example, clients are often expected to demonstrate a period of sobriety to be eligible for service, which greatly de-motivates many clients with this condition. Lusk et al. (2016) proposed a recovery-oriented stance, which utilized vocational rehabilitation services to facilitate clients' recovery.

Statement of the Problem

Much of the prior research has focused on the benefits of using standardized substance screening instruments in VR and counselors' attitudes towards clients with substance use disorders (Atherton, Toriello, Sligar, & Campbell, 2010; Glenn & Keferl, 2008; Heinemann, Moore, Lazowski, Huber, & Semik, 2014; Rodgers-Bonaccorsy, 2010; West & Miller, 1999). Little is known about how the overall VR policies and procedures have impacted VR counselors' work with clients with substance use disorders. In my review of current state VR policy and procedure manuals and keywords check (i.e. substance, drug, alcohol, and addiction), several states have no information regarding substance, drug, alcohol, or addiction on website manuals. In contrast, there are states have separate sections in their manuals and supplemental technical assistance guidelines. Indeed, it is possible that there exist such VR documents not open to public or available upon inquiry. It demonstrates inconsistency in the format and accessibility of policies and procedures across states. In a review of VR websites, the researcher found that South Carolina VR owned two four-week residential programs for clients with substance use disorders. A person working at SC VR claimed on the CRCC discussion forum that "[clients with substance abuse] were sought after". This is rare in VR practices to the best of my knowledge. It further reveals great inconsistency among all the state VR policies and procedures.

Further, as Gold (2004) highlighted, despite vocational rehabilitation counselors' strong motivation to help these clients, laws and policies had changed, impacting funding to serve these clients for their education, vocational training, job maintenance, and re-employment after a job loss. The latest iteration of legal guidelines (e.g. the Americans with Disabilities Act of 1990) no longer cover people with current substance use disorders as eligible for VR services, consequently, funding is limited to disseminate promising evidence-based practices for individuals with this condition. It is unclear if VR agencies will deny service to clients with substance use disorders, how exceptions will be made, and how consistent these practices are across states. Therefore, it is necessary to analyze the whole service line in the national context to detect areas of improvement and organize services in a systematic, holistic way.

Purpose of Current Study

Substance use disorders are highly prevalent in the VR, and policies are inconsistent across states. Therefore, the purpose of this study is two-fold. First, this study will contribute to the knowledge base of service delivery to clients with substance use disorders in VR with a comprehensive analysis of policy documents from all 50 states and DC. Second, the study is expected to contribute to establishing comprehensive substance use disorders policies and procedures in state VR. Rodgers-Bonaccorsy (2010) conducted a study with a sample of Certified Rehabilitation Counselors (CRC---a preferred credential in the VR) and urged further investigation of mechanism that could impact counselor attitude, perceived confidence, and frequency of screening and referral related to alcohol and drug problems. It is hypothesized that VR policy and procedure will associate counselors' service delivery for people with substance use disorders. For this reason, the researcher investigated the relationships among all the variables of interest, including policy and procedure comprehensiveness, counselor characteristics, counselor attitude, addiction counseling

self-efficacy, and frequency of procedural practices such as screening and referral. In sum, this is a two-phase investigation: 1) develop a tool and use it to assess VR substance use disorders policies across 50 states and DC, 2) use a national sample of VR counselors to assess how VR substance use disorders policy comprehensiveness relates to counselor attitude, self-efficacy, frequency of procedural practice, and counselor characteristics.

Policy Comprehensiveness

For this study, policy comprehensiveness means the extent to which policies and procedures related to substance use disorders are addressed in State/Federal VR policy documents. In policy analysis, this concept is closely related to formalization, which refers to "the extent to which rules, procedures, instructions and communications are written" (Pugh, Hickson, Hinings, & Turner, 1968, p.75).

Researchers have different views of the effect of policy comprehensiveness, or formalization. Some researchers proposed that formalization had a positive effect on the administration of an organization. Formalization was negatively associated with ambiguity and conflict (Michaels, Cron, Dubinsky, & Joachimsthaler, 1988). Formalization was positively associated with job satisfaction and organization commitment (Michaels et al., 1988), and productivity and efficiency (Hage, 1965). Formalization also facilitated communication (Katsikea, Theodosiou, Perdikis, & Kehagias, 2011). Another group of researchers (e.g. Hirst, Knippenberg, Chen & Sacramento, 2011) questioned the absolute positive effect of formalization and posited that formalization could be a negative factor that stifled employees' creativity and motivation.

Counselor Attitude

Health professionals' attitude is an important variable that influences the acquisition of professional knowledge and provision of service (Watson, Maclaren, & Kerr, 2006). Prior researchers have found health-care professionals' therapeutic attitudes can influence service

delivery (Van Boekel et al., 2013) and/or treatment outcome (Middendorp et al., 2016) for various health conditions, such as substance use (Van Boekel et al., 2013), back pain (Middendorp et al., 2016), mental illness (Scheerder, De Coster, & Van Audenhove, 2008), and cancer (Shimizu et al., 2013). Therapists' attitude shapes the therapeutic relationship, which is the core of helping relationships, including VR counseling (Strupp, 1973).

Negative attitudes towards people with substance use problems are found among health professionals (e.g. Van Boekel, Brouwers, Van Weeghel, & Garretsen, 2014). In fact, substance use disorders are not just among the most stigmatized and disapproved psychiatric disorders (Corrigan, Watson, & Miller, 2006), but medical conditions in general (Room et al., 2001). This strong social stigma is a possible precursor of negative attitudes carried by health professionals. Therefore, multiple researchers have advocated for education, training, and support to improve health professionals' attitude and to work effectively with this highly stigmatized population (Hayes et al., 2004; Van Boekel et al., 2013).

Addiction Counseling Self-efficacy

Self-efficacy is a person's belief in his/her capacity to effectively deal with a new situation (Bandura, 1977). Efficacy expectation and outcome efficacy are central to people's self-efficacy. Efficacy expectation refers to one's beliefs of his/her ability to perform behaviors that lead to a desirable outcome. Outcome efficacy refers to a positive outlook of the results of certain behaviors. A person with high self-efficacy would initiate coping skills, make great efforts, and maintain the coping behaviors in response to challenging situations (Bandura, 1977; Miller, Ross, Emmerson, & Todt, 1989). As a type of self-efficacy in specialty areas, addiction counseling self-efficacy was traditionally under-studied due to lack of unifying competency standards in the addictions field (Murdock, Wendler, & Nilsson, 2005). In 1998, SAMHSA published the *Addiction Counseling Competencies: The Knowledge, Skills, and Attitudes of Professional Practice* and proposed two categories:

transdisciplinary foundations and practice dimensions. Transdisciplinary foundations refer to general knowledge and skills, including understanding addiction, treatment knowledge, application to practice, and professional readiness. Practice dimensions refer to specific treatment skills: (1) clinical evaluation, (2) treatment planning, (3) referral, (4) service coordination, (5) counseling, (6) client, family, and community education, (7) documentation, and (8) professional and ethical responsibilities. Based on this categorization, Murdock et al. (2005) proposed a five-factor model of addiction counseling self-efficacy: specific addiction counseling skills; assessment, treatment planning, and referral skills; co-occurring disorders skills; group counseling skills; basic counseling skills. Other researchers proposed similar models, with other factors such as ethics (Kranz, 2003) and case management (Kranz & O'Hare, 2006). VR counselors typically do not conduct group counseling, which is common among substance use disorders counselors. They are primarily working on employment-related goals, as is consistent with agency goals. Therefore, modifications of the scale were conducted to capture characteristics of VR counselors' tasks.

Counselor Characteristics

Caseload and years of experience are widely investigated counselor characteristics in research related to service provision (e.g. Lawson, 2007; McCarthy, 2014; Tansey, Bezyak, Chan, Leahy, & Lui, 2014). Large caseloads are associated with poor job attitude (Broome, Knight, Edwards, & Flynn, 2009), reduced counselors' well-being (Lawson, 2007), and increased burnout (Templeton & Satcher, 2007; O'Sullivan & Bates, 2014). Furthermore, a large caseload is negatively associated with client outcomes (McCarthy, 2014). Caseload management is a primary work function of VR counselors (Leahy, Muenzen, Saunders, & Strauser, 2009). Years of counselor experience is another predictor of successful client outcomes (McCarthy, 2014; Gaume et al., 2014). Seasoned counselors are expected to have more skills than novice counselors, and they focus more on important counseling events that

facilitate client insights (Cummings, Slemon, & Hallberg, 1993). Kwon and Jo (2012) found positive correlations among counselor experience, empathic accuracy, and client outcomes. Counselor experience significantly predicted client outcome, with empathic accuracy as a significant mediator (Kwon & Jo, 2012). In a meta-analysis of 75 studies on clinical judgment, Spengler et al. (2009) found that counselor experience had a positive association with judgment accuracy.

Frequency of Procedural Practices

Prior researchers indicated that VR counselors seldom addressed substance use disorders with their clients, such as documenting co-occurring substance use disorders, using standardized screening instruments, and providing referrals (Sprong et al., 2014). This population is chronically under-served or un-served (Toriello, Atherton, Campbell, & Sligar, 2010). Researchers (McLellan, Woody, Luborsky, & Goehl, 1988) reported that substance abuse counselors' actual performance (e.g. treatment planning and documentation) was a better indicator of therapeutic efficacy than their education level. Chandler, Balkin, and Perepiczka (2011) claimed that counselors' confidence did not equal service quality. Therefore, to supplement the examination of counselor attitude, self-efficacy, and characteristics, this researcher will investigate what VR counselors *do with* clients by explicitly asking about the frequency of procedural practices related to substance use disorders. This investigation will also update prior researchers' work.

CHAPTER 2

LITERATURE REVIEW

Despite the high prevalence rate of substance use disorders in the State/Federal VR, people with this condition are chronically under-served. In addition, discrepancies exist in policies and procedures for VR clients with substance use disorders. There also lacks research connecting VR policies and practice. Investigations are needed to find out 1) the degree of differences of VR policies related to substance use disorders across states, and 2) the relationship between VR policies and counselors' service related to substance use disorders.

VR System and Substance Use Disorders

An Overview of the VR System. The VR is an essential part of the social welfare system that helps people with disabilities to prepare, obtain, maintain, and advance employment (Andersson, Ahgren, Axelsson, Eriksson, & Axelsson, 2011). To date, it has been serving people with disabilities in the U.S. over 90 years. According to the U.S. Department of Education (2014), the VR provides services to over one million people with disabilities each year. In the fiscal year 2012, it served 1.40 million people, among which 0.93 million (66%) were actively receiving services under an Individualized Plan for Employment (IPE). In the same year, there were 570,000 new applicants, and 480,000 (84%) were determined eligible. There is at least one state VR agency in each state, and some states have a second designated state VR office that only serves people who are legally blind (Hager & Shelton, 2006).

The VR was gradually established through a series of laws. In 1918, the Congress passed the Soldiers Rehabilitation Act to provide vocational services to veterans returning from the World War I. In 1920, the passing of the Smith-Fess Act marked the beginning of civilian VR services. Any person with a physical disability is eligible for VR services. State and federal rehabilitation system started to provide funds on a matching basis. The Rehabilitation Act of 1943 further expanded VR services to people with mental illnesses. The federal-state funding ratio has also changed from 50-50 (Smith-Fess Act of 1920) to 60-40 (Vocational Rehabilitation Act Amendments of 1954), and then to 75-25 (Vocational Rehabilitation Act Amendments of 1965; Indiana Family and Social Services Administration, n.d.). Currently, the state's funding needs to cover at least 21.3% of the total VR expenditure (Matching requirements, 2014). In 1990, the Americans with Disabilities Act stipulated rights for people with disabilities: employment, public accommodation, transportation, government operations, and telecommunication.

The VR provides a variety of services, such as assistance for independent living (e.g. transportation and assistive technology), vocational services (e.g. supported employment and vocational counseling), and training (e.g. college education and vocational training). Various professions, organizations, and agencies are part of the VR process, such as medicine, criminology, government, advocacy groups, insurance companies, to name just a few (Andersson et al., 2011). Therefore, VR counselors work with not only clients, but also relevant stakeholders such as employers, doctors, educators, policy-makers, and lawyers.

Prevalence and VR Attention. Substance use disorders are highly prevalent but receive limited attention in the VR (Heinemann et al., 2008; Sprong et al., 2014). According

to the SAMHSA, approximately 4.7 million Americans have co-occurring substance use disorders and physical or mental disabilities, which constitutes 1.5% of the US population (Sprong et al., 2014; U.S. Census Bureau, 2015). In 2014, the prevalence rate of substance use disorders among people aged 12 and above was 8.1% (SAMHSA, 2015). People with disabilities are two to four times more likely to have substance use disorders compared with the general population (U.S. Department of Health and Human Services Office on Disability, 2013).

Current and historical statistics support the high prevalence rate of substance use disorders among people engaged in the VR process. Moore and Keferl (2008) stated a 25% prevalence rate of substance use disorders among VR services applicants. Heinemann et al. (2014) summarized that the estimated prevalence rate of substance use disorders among VR clients was 22% to 50%. The RSA data only recorded 0.9% to 28.32% of primary or secondary diagnosis of substance use disorders across 50 states (Moore, McAweeney, Keferl, Glenn, & Ford, 2008). It is likely that there is under-reporting. Drebing et al. (2002) reported a prevalence rate of 80% for substance use disorders alone and 89% for co-occurring substance use disorders and psychiatric disorders in a veteran setting. This high prevalence is not a newly observed phenomenon since Moore and Li's (1994) benchmark study, in which they found that state VR applicants (28.8%) were much more likely than the general population (11.7%) to have used cocaine or crack cocaine in their life time. In the 1990s, researchers reported an 11% prevalence rate of chemical dependence in the VR and cautioned the increasing trend of co-occurring substance abuse (Rehabilitation Research and Training Center [RRTC]; 2002a).

Clients with substance use disorders were seldom identified or provided integrated treatment in their vocational services (Christensen, Boisse, Sanchez, & Friedmann, 2004; Davis, 2005; Hergenrather & Rhodes, 2006; RRTC, 2002a). Despite the high self-reported addiction (22.5%), only 5.9% were identified with a primary disability of chemical dependence (RRTC, 2002a). Among about 23.8% of male and 18.5% of female VR clients using illicit drugs, less than 1% reported their VR counselors require alcohol or drug treatment (RRTC, 2002a). They also often face severe challenges related to their condition, which requires integrated services. About 18% of these clients have drunk driving arrests (Heinemann et al., 2008), which complicates their reintegration in the society from various aspects (e.g. transportation, employment, and financial aid). People with spinal cord injury, traumatic brain injury, and severe psychiatric disabilities have an exceptionally high risk of substance use disorders, with the prevalence rate approaching 50% (U.S. Department of Health and Human Services Office on Disability, 2010). Additionally, the relapse rate in the United States was estimated at 60% (NIDA, 2014). The high prevalence rate and severe challenges call for integrated services for VR clients with substance use disorders.

Employment and VR Outcome. Employment and employment services are highly beneficial but seldom available to people with substance use disorders. Work provides various benefits such as sense of self-concept, self-esteem, connectedness to the society, and structure to one's life (Benshoff & Janikowski, 2000). Employment contributes to substance use reduction and abstinence, facilitates clients' reintegration into the society, improves people's self-esteem, hope, and relationship, and it is associated with improved mental health (Leukefeld, Webster, Staton-Tindall, & Duvall, 2007; Salyers, Becker, Drake, Torrey, &

Wyzik, 2004). Gainful employment is one of the strongest and most consistent predictors of successful substance use disorders treatment completion and continual abstinence (West, 2008). Employment variables accounted for 11% of the variance in social adjustment among people with substance use disorders (McLellan et al., 1994). In a ten-year investigation of participants with co-occurring disorders, researchers found that participants with steady employment had greater improvement at year five on independent housing and quality of life than those did not (McHugo, Drake, Xie, & Bond, 2012). Substance use disorders services were also cost-effective for employers (Jordan, Grisson, Dietzen, & Sangsland, 2008).

Despite these benefits, people with substance use disorders are often unemployed, underemployed, and/or under-served (Melvin, Davis, & Koch, 2012; West, 2008). The unemployment rate among clients in substance use disorders treatment agencies (33.9%) is significantly higher than the general population (9%), but only about one-third of treatment facilities offer vocational counseling (Melvin et al., 2012). Reif, Horgan, Ritter, and Tompkins (2004) claimed that only 10-20% of clients in need of employment counseling received it in a substance abuse treatment setting. For reasons above, researchers explored the use of vocational services for clients in recovery from substance use disorders. They found that clients who received vocational services stayed in substance abuse treatment significantly longer and achieved a greater duration of abstinence than those who did not (Petry, Andrade, Rash, & Cherniack, 2014; Shepard & Reif, 2004). Therefore, integrated services are practical for clients and cost-effective for the VR agencies.

Substance use disorders pose additional challenges to people with disabilities, and un-addressed substance use disorders negatively influence VR processes (RRTC, 2002b).

Many researchers share concerns for this sub-group of clients in the VR (Christensen et al., 2004; Moore & Li, 1994), but less is known about their VR outcomes (Pack, 2007). Pack (2007) found that the existence of secondary substance use disorders was a nonsignificant, negative predictor of competitive employment, among VR clients with physical and sensory disabilities. Pack (2007) therefore argued that VR counselors should reconsider the validity of screening out clients with substance use disorders. Although substance use disorders were not rated as a significant factor for unsuccessful closure, both VR clients and counselors rated the severity of disability high on their list (Rogers et al., 2011). Therefore, it is possible that substance use disorders add to the severity of clients' disabilities. In a recent study, Heinemann et al. (2014) investigated benefits of screening for substance use disorders with a sample of VR clients from West Virginia, Illinois, Ohio, Utah, and Kentucky. They found that clients were more likely to have successful closures if they were invited to be screened, except for clients from Ohio. Among consumers who received substance use disorders screenings, people tested negative were more likely to achieve successful closures than people tested positive, except for clients from Utah. Heinemann et al. (2014) also investigated features of clients with successful closures. They found that among these successful clients, people who received an official diagnosis or tested positive of substance use disorders had more services over a shorter period of time at a lower cost than clients without a diagnosis or tested negative in some states. Services such as intense case management can greatly help this population (RRTC, 2002b).

VR Policy and Procedure. Prior researchers indicated the under-service or non-service could be explained by insufficient and inconsistent substance use disorders

policies and procedures (Moore et al., 2008). Sprong et al. (2014) recently substantiated these concerns with a survey of 27 VR agencies. They found 40.7% of the agencies did not document substance use disorders as a co-occurring disability; 88.9% of the agencies did not use standardized substance use disorders screening instruments; 70.4% of the agencies reported not having formal policies or procedures for substance use disorders referrals; 37% of the agencies reported substance use disorders treatment completion as a prerequisite for service; 74.1% of the agencies reported not having a specific sobriety waiting period for eligibility determination; 66.7% of the agencies would continue to serve clients with alcohol relapse; 59.3% of the agencies would continue to serve clients with illegal drugs relapse; 77.8% of the respondents reported their states have alcohol or other drugs service. In Moore et al.'s (2008) review of RSA data, they found that substance use disorders policy can impact diagnostic rates. Specifically, they found that the diagnostic rate of substance use disorders in one state increased from 2.5% to 7.5% after the state initiated policy regarding sobriety waiting period, involvement in recovery as part of vocational plans, law enforcement, and regular evaluation. The researchers also underlined that this increase was different from the national declination trend at the time. Moore et al. (2008) also reported significant discrepancies among mean prevalence rates of substance use disorders estimated by VR counselors (28%), VR directors (14.9%), and state official reports (3.3%). The lack of standard policies and procedures, such as screening and documentation, can lead to underestimation at the administrator level in addition to confusion at the practitioner level. This concern was shared by other researchers as well (Moore et al., 2008). The wide variation of prevalence rates across states (0.9%-28.32%) also suggested systematic

eligibility determination, screening, coding, and reporting problems (Moore, 2005; Rogers et al., 2011).

Policy problems are also likely to impact training. Lack of training limits counselors' confidence to inquire clients' substance use or provide appropriate services (e.g. Christensen et al., 2004; Lusk, Paul, & Wilson, 2015). Researchers have advocated for specific training related to substance use disorders for a long time, since training can improve VR counselors' attitude and service quality (Chan et al., 2003; Glenn & Keferl, 2008; Lusk et al., 2015). Lusk et al. (2015) reviewed the online curriculum of 98 master's programs accredited by the Council on Rehabilitation Education (CORE), and found that only 26.5% (n = 26) of them required a substance use or addiction course, 12.2% (n = 12) of them offer it as an elective, the remaining 61.2% (n = 60) have no course on the topic. In the United States, the Council for Accreditation of Counseling and Related Educational Programs (CACREP) is another leading accreditation body on counseling programs. After a recent merger of CORE and CACREP, rehabilitation counseling programs will soon be accredited by the CACREP. In the course of this merger, the curriculum is susceptible to change. Mueser et al. (1995) claimed that the major reason for not detecting substance use disorders in VR clients is counselors' failure to inquire about their use.

Significance of the Study. Not only researchers, but also federal entities have identified the growing need to address substance use disorders in VR. As put it in the *State of Connecticut's Sate Plan for Fiscal Year 2015* (2014), people with mental illness and substance use disorders were under-served population and service such as substance abuse counseling is "only sometimes available". In the *Kentucky Statewide Needs Assessment*

(2015), VR counselors and staff, Community Rehabilitation Program respondents, and Career Center staff were asked about trends in disability populations and service needs in the future. Individuals with substance use disorders were the population identified as increasing by all three groups of professionals. In the *North Carolina Statewide Needs Assessment* (2013), researchers claimed that "This [access to substance abuse treatment] has been an issue for many years now, but solutions do not seem to be forthcoming. We seem to be reactive and slow to respond to changes." This assessment also summarized most specific VR needs to this population: treatment and relapse prevention services (e.g. NA/AA meetings), support services (e.g. transportation), and employment services and employers willing to hire (e.g. jobs set up for this population).

Despite repeated concerns of different professionals, VR agencies and researchers have reacted slowly. Moore and Li (1994) advocated for substance use disorders assessment, training, and attention in general. More recent recent researchers (e.g. Glenn & Keferl, 2008; Goodwin & Sias, 2014) advocated for similar things: screening, motivational checkups and interventions, keeping cases open for extended periods of time, and various forms of continuing care (e.g. counseling, mutual help support groups, and reopening closed cases when necessary). These practices are recommended, but still disproportionately available. Further, few research articles directly focus on VR policies and procedures related to substance use disorders (Moore et al., 2008; Sprong et al., 2014). A search using substance use disorders and vocational rehabilitation and policy as keywords at PsycInfo provided 19 results. Among these 19 studies, only one article was directly titled with policy, substance use disorders, and vocational rehabilitation. This result was found in both 2015 and 2016.

While this was an example of only one database, it illustrated the scarcity of research in this area.

For reasons above, it is meaningful and urgent to investigate VR policy and procedure comprehensiveness, so as to best understand the parameters for counselors' practice and the impact on counselors. This study can contribute to the knowledge base of service delivery to clients with substance use disorders in VR and provide empirical support for enhancement in policy and procedure. To my knowledge, this is the first known study to analyze VR policy and procedure manuals for substance use disorder and to investigate VR counselors' attitude towards substance use disorders, addiction counseling self-efficacy, and procedural practices related to substance use disorders.

Barriers to Addressing Substance Use Disorders

Researchers (Christensen et al., 2004; Glenn & Keferl, 2008; Krahn, Farrell, Gabriel, & Deck, 2006; Sligar & Toriello, 2007) have explored the barriers to addressing substance use disorders during the VR process: client lack of compliance, large caseloads, time constraints, lack of expertise, inconsistent guidelines on the evaluation and/or referral for persons with substance use disorders, limited community resources base, legal complexities, confidentiality, ethical dilemmas, and negative attitudes.

Law and Policy. VR counselors work in a gray area of law and policy regarding people with substance use disorders. In Jenkins, Patterson, and Szymanski's (1998) review of the literature, they found that VR programs first expanded to clients with substance abuse after passing the Vocational Rehabilitation Act Amendments of 1954 and its subsequent amendments in 1965. This era of "Great Society" did not last long. As President Johnson's

term came to closure and the Vietnam War continued to escalate, the VR itself was on the verge of disintegration during President Nixon's service (Pack, 2007). In the Rehabilitation Act of 1973, people with substance use disorders were no longer covered as having a type of social disability unless they have other co-occurring conditions (Rubin & Roessler, 2001). The 1998 amendments of the Rehabilitation Act of 1973 excluded "any individual whose current use of alcohol prevents such individual from performing duties of the job in question" (29 U.S.C. § 706(7)(20)(C)(v), U.S.G.P.O 1999). The Americans with Disabilities Act of 1990 and its subsequent amendments excluded "people with psychoactive substance use disorders resulting from current illegal use of drugs" (126 U.S.C. § 12211 (b), 2009). People with alcohol or drug problems would be eligible for VR services if (1) they have completed drug treatment successfully and no longer use illegal drugs, (2) they are participating in a drug treatment program and no longer use illegal drugs, or (3) they were mistakenly regarded as illegal drug users, but they are not using. The interpretations of these legal guidelines vary across states, demonstrated by their inconsistent policies (Moore & Keferl, 2008; Moore et al., 2008; Sprong et al., 2014). For instance, many states have different sobriety waiting period requirements, several states do not have such requirements, and one state claimed that it is federally prohibited to establish sobriety waiting period requirements (i.e. Vermont).

State/Federal VR programs are required by the Rehabilitation Act of 1973 to operate the order of selection mechanism when their resources are not sufficient to serve all eligible applicants (Section 101(a)(5)(A)). This means clients will be put into priority categories, and people with the most significant impairments will receive services first. An eligible client in

a priority category that is currently closed will be placed on a waiting list (VA Department for Aging and Rehabilitative Services, n.d.). According to the Rehabilitation Act (Section 7(21)(A)), an "individual with a significant disability" refers to (1) a person with severe physical or mental impairments that greatly limit one's functional capacities to achieve employment, (2) a person in need of various vocational rehabilitation services over a long time, (3) a person with one of multiple mental or physical disabilities due to a list of conditions (e.g. amputation, cancer, and mental illness), or another disability/disabilities that would cause comparably significant limitations on functioning.

The effect of the order of selection on service to clients with substance use disorders is unclear. For example, PA (2007) stated that they had an order of selection mechanism. According to the *Transition from substance abuse to recovery and work* brochure (PA VR, 2007), the order of selection was based on eligible clients' significant limitations in "physical mobility, dexterity and coordination, physical tolerance, personal behaviors, capacity to learn, medical interventions, communication, self direction". No further information was provided. It is vague how counselors weight these limitations and make decisions in practice. Confusion was reported by researchers as well. Contrary to Moore et al.'s (2008) expectation, states operated without an order of selection did not serve more clients with substance use disorders. In addition, Moore et al. (2008) claimed that the order of selection existed but could be inactive. In a longitudinal study of VR, Hayward and Schmidt-Davis (2005) found that among 30% of the reported VR offices with an active order of selection, only about one-third of them had a waiting list. Therefore, while substance use

disorders often result in severe impairments, it is not clear how VR counselors prioritize clients if their conditions involve substance misuse.

Public health policy is pivotal to service quality. First, policy delineates service procedures for workers. Policy ambiguity can result in arbitrary interpretations and biased services for clients with the same condition (McCreadie, Mathew, Filinson, & Askham, 2008). It may also limit supervisors' ability to evaluate the implementation process (Matland, 1995). Matland (1995) also proposed several reasons for public policy ambiguity, such as avoiding conflict, promoting flexibility, and paving ways for new policies. Indeed, policy ambiguity has its functions in the field. Yet, it is concerning that VR counselors with limited training for substance use disorders do not even have consistent, appropriate guidelines to reference. Ambiguous policies *are* enacted, and the degree of ambiguity impacts policy implementation directly and significantly (Matland, 1995). Second, the central goal of public health is justice (Beauchamp, 1976; Gostin & Powers, 2006). The commitment of public health is to advance the overall human well-being and improve conditions of people who are systematically disadvantaged (Gostin & Powers, 2006). Thus, strengthening policies for under-served population in the VR is an inherent obligation. Third, uncertainty about the policy and procedure limit workers' effectiveness (Peters, 2005). Peters (2005) reported child welfare workers' frustration with the discrepancy between formal and informal policy regarding release of information to kin. The vagueness in policy and structure pressured workers to define appropriate boundaries themselves (Peters, 2005). Lastly, it is unclear to what extent the policies are enacted. Moore et al. (2008) implied the existence of "active policy" and "nonactive policy" in VR regarding substance use disorders. Bruhn, Zajac, and

Al-Kazemi (2001) recommended investigation of employees' perceptions on participation in the organizational change. Therefore, it became understandable that multiple researchers recommended policy amendments and legal guideline clarifications for VR counselors over the past decades (Pack, 2007).

Caseload. Vocational rehabilitation counselors are known to have large caseloads. It is estimated that the average caseload of a VR counselor is 143 (Department of Human Services House Appropriations, 2012). Hayward and Schmidt-Davis (2005) reported an average caseload of 112, with a maximum caseload of 244 in their longitudinal study on the State/Federal VR. Skinner and Clawson (2001) reported an average caseload of 160, with a range of 85 to 313 across states. Researchers claimed that a large caseload would impede ones' ability to invest necessary time and attention to achieve working alliance (Kierpiec, Phillips, & Kosciulek, 2010). Long waiting time for service also reduces clients' satisfaction. Conversely, counselors working intensely with a small caseload may have better client outcome (Staines et al., 2004). Caseload sizes are inspected in other helping professions as well. Nurses have a caseload of 10-50 per week (Sargent, Boaden, & Roland, 2008); marriage and family therapists have a caseload of 24 (Doherty & Simmons, 1996); psychiatrists have a caseload of 33.2 per week (Pingitore, Scheffler, Sentell, & West, 2002) and psychologists have a caseload of 21.7 per week (Pingitore et al., 2002).

Frequency of Procedural Practices. Prior researchers found that VR counselors or CRCs do not typically use standardized screening instruments or tests in their practice (Christensen et al., 2004; Moore et al., 2008; Rodgers-Bonaccorsy, 2010). Therefore, this study investigates if this phenomenon still exists. Indeed, detection of substance use

disorders is the first step to integrating any service regarding substance use disorders in VR. Without screening, counselors need to largely rely on clients' self-report or observations in order to find out clients' substance misuse. Referral is another important practice for VR counselors regarding substance use disorders. First, substance use disorders are complicated biopsychosocial disorders that impact various aspects of clients' life. As a primarily employment service agency, the VR often does not have necessary resources to act as a substance use disorders treatment facility. Second, the VR involves multidisciplinary collaboration, so that proper use of partner agencies can effectively address clients' needs and avoid service redundancy. Additional procedural items such as discussing behavior change and documenting substance use also need to be inspected.

Theories

Three theories guided this study. Theory of formalization provided the theoretical support to investigate the relationship between policy comprehensiveness and counselor service. The attribution theory and the addiction counseling self-efficacy theory introduced and provided rationales to study counselor attitude and addiction counseling self-efficacy as counselor service variables.

Formalization. Formalization is a central concept to bureaucracy. It refers to "the extent to which rules, procedures, instructions and communications are written" (Pugh et al., 1968, p.75). Researchers have different views on formalization and its effect.

One group of researchers (e.g. Hage, 1965) claimed that formalization was positively associated with employees' productivity and efficiency through minimizing decisional uncertainty. This is especially meaningful in an increasingly complex society.

Therefore, it was not surprising that Meyer and Rowan (1977) found conventional theorists' favor towards formalization. In fact, Weber (1930) claimed that modern bureaucracy was a product of economic markets, which highlighted rationality and coordination. This statement indicated that formalization was a strategy that organizations naturally adopted to meet their needs. Empirical studies supported this. Using a sample of industrial salespeople and buyers, Michaels, Cron, Dubinsky, and Joachimsthaler (1988) found that formalization was negatively associated with role ambiguity, role conflict, and work alienation; formalization was positively associated with organization commitment. Similar results were also reported by recent researchers. Katsikea et al. (2011) studied a sample of 160 export sales managers, and they found a positive impact of formalization on job feedback. They explained that formalization made the communication process between sales managers and their executives more efficient, which was pivotal to untangle the complexities of foreign sales.

Another group of researchers (e.g. Hirst et al., 2011) posed doubts on the absolute positive effect of formalization and claimed that formalization could negatively influence employees' innovation and motivation. In a sample of an electronics firm and radio station workers, Rousseau (1978) found that formalization had a positive correlation with absences, propensity to leave, physical and psychological stress; it had a negative correlation with innovation and job satisfaction. In studies of social service workers, Arches (1991) found that formalization was negatively associated with job satisfaction. Reukert, Walker, and Roering (1985) proposed that formalization was associated with efficiency only under specific situations: repetitive task and stable environment. This claim posed doubts on the effect of formalization in situations that were not stable. Anderson (1977) sampled 200 direct

service professionals from 19 agencies, and he found a moderate degree of formalization was associated with higher job satisfaction and fewer feelings of alienation.

This debate could be traced in Weber's (1947, p. 339) identification of rational bureaucratic authority, which was a combination of "incumbency in a legally defined office" and "the exercise of control on the basis of knowledge". As Gouldner (1954, pp. 22-23) put it, Weber was "looking at two ways at once", and his view could be translated as "it was administration based on discipline" and "an individual obeys because the rule of order is felt to be the best known method of realizing some goal". This statement implies if policies and procedures exist and are willingly enforced, they will enhance productivity and efficiency; if either of these criteria is not met, the expected positive effects will be reduced, even to the extent that creates negative ones.

Indeed, these researchers focused on the *degree* of formalization rather than the *content* of formalization. This view was shared by other researchers (e.g. Adler & Borys, 1996; Hempel, Zhang, & Han, 2012). Adler and Borys (1996) proposed two types of formalization: enabling and coercing. They claimed that formalization that enabled employees to better accomplish tasks would bring positive outcomes, whereas formalization that coerced employees' efforts and compliance would lead to negative ones. Hempel et al. (2012) surveyed teams from high-technology companies and found that formalization of organizational processes (e.g. use of quality control procedures) empowered team members through reducing uncertainties, whereas formalization of jobs and roles (e.g. specification and delimitation of job duties) dis-empowered team members through reducing flexibility. Conceptually, appropriate formalization would help employees master their tasks; sufficient

formalization would protect them from accountability loopholes. This is especially meaningful to State/Federal vocational rehabilitation counselors who constantly deal with uncertainties and ambiguities.

Attribution Theory. People with substance use disorders are highly stigmatized, which includes social stigma and self-stigma (Corrigan, 2004; Corrigan & Rao, 2012; Laudet, 2008; Lloyd, 2013). Stigma in general has negative effects on people's self-esteem, self-efficacy (Luoma, Kulesza, Hayes, Kohlenberg, & Larimer, 2014), utilization of treatment (Finn, Bakshi, & Andréasson, 2014), quality of life (Corrigan, Sokol, & Rusch, 2013; Luoma et al., 2007), and employment (Baldwin, Marcus, & De Simone, 2010; Lloyd, 2013). In addition, clients with substance use disorders and additional minority status (e.g. criminal history, gender, sexual or ethnic minority) risk double stigma (Beckett, Nyrop, & Pfingst, 2006; Lloyd, 2013; McCabe, West, Hughes, & Boyd, 2013; Van Olphen, Eliason, Freudenberg, & Barnes, 2009). Van Olphen et al. (2009) interviewed 17 females with substance use disorders who had recently left jail. The criminal history exacerbated participants' access to public welfare and employment, and stigma kept them in the circle of relapse, recidivism, and incarceration.

Researchers proposed various theories to explain the negative attitude towards people with substance use disorders (Chappel, Veach, & Krug, 1985; Corrigan, 2000; Corrigan et al., 2000; Fishbein & Ajzen, 1972; Lloyd, 2013). In the United States, there is a historical moralistic view that substance use disorders are results of personal choice (Chappel et al., 1985). The Attribution Theory (Corrigan, 2000) expanded beyond personal responsibility and proposed an explanation for stigma with two factors: controllability and

stability. Controllability refers to how much the person is responsible for the disability, and stability refers to how much the person can recover after treatment (Corrigan, 2000). People who have disabilities that are high in controllability and low in stability are most stigmatized. People with substance use disorders, especially people with co-occurring conditions, are highly stigmatized because their disability is perceived high in control, and low in stability. In a similar vein, Lloyd (2013) applied Jones et al.'s (1984) conceptualization of stigmatization process and claimed that the perceived danger and perceived blame were key factors for social stigma towards people with substance use disorders. That is, people with substance use disorders are perceived to have control over their substance use and they are responsible for their disorders, though addiction is explained by genetic, environmental, and psychological factors (Kreek, Nielson, Butelman, & Laforge, 2005). The Theory of Reasoned Action (Fishbein & Ajzen, 1972) proposed that attitudes and subjective (or social) norms could influence one's behavior. As a result, people with substance use disorders experience treatment discrimination from health professionals (Ding et al., 2005), difficulty in getting employment or housing (Klee, McLean, & McLean, 2002; Van Olphen et al, 2009), condescending experience with police (Lister, Seddon, Wincup, Barrett, & Traynor, 2008; Minior, Galea, Stuber, Ahern, & Ompad, 2003), and rejection from families and friends (Luoma et al., 2007).

Health professionals' attitudes towards substance use disorders have improved (e.g. Rodgers-Bonaccorsy, 2010), but negative attitudes are still prevalent (Van Boekel et al., 2013). Prior researchers (West & Miller, 1999; Hergenrather & Rhodes, 2006) reported negative attitudes and poor expectations towards people with substance use disorders among

VR counselors. Recent findings suggested an improved attitude towards clients with substance use disorders in the VR (Rodgers-Bonaccorsy, 2010; Toriello et al., 2010). The attitude towards treating people with substance use disorders has moved from a rigid and punitive to a person-centered, flexible, and holistic one. For instance, the Vermont VR (2009) removed their arbitrary sobriety waiting period policy in 2007 and encouraged counselors to determine eligibility based on individual cases. Rodgers-Bonaccorsy (2010) found that CRCs had positive attitudes toward counseling individuals with substance use disorders. He claimed that this change was due to the time span between two studies (i.e. West & Miller, 1999 and Rodgers-Bonaccorsy, 2010) and improvement in CORE guidelines. Rodgers-Bonaccorsy (2010) also found that attitudes were associated with perceived confidence but not frequency of substance abuse screening and referrals. Raistrick, Tober, & Unsworth (2015) replicated their 2007 survey of attitudes towards working with people with substance misuse in the UK, and they found a reduced therapeutic commitment among doctors, nurses, and health-care assistants. In a review of 28 studies from 2001 to 2011, Van Boekel et al. (2013) reported negative attitudes among health professionals, which could lead to under-service to people with substance use disorders.

Addiction Counseling Self-efficacy. Bandura (1977) defined self-efficacy as a person's belief in his/her ability in effectively dealing with a novice situation. A person's sense of self-efficacy is built on various sources (Bandura, 1977). According to social cognitive theory, there are four origins of self-efficacy: performance experiences, vicarious experiences, verbal persuasion such as feedback, and emotional arousal. In a review of nine meta-analyses, Bandura and Locke (2003) found that self-efficacy significantly predicted

performance outcome across different spheres, such as work-related performances, psychosocial functioning, academic performances, health functioning, and athletic performance.

Self-efficacy is important to counselors. Larson and Daniels defined counseling self-efficacy as "one's beliefs or judgments about her or his capabilities to effectively counsel a client in the near future" (1998, p.180). Counseling self-efficacy has been identified as an important variable that associated with training, supervision, counseling performance, client outcome, and job satisfaction (Friedlander & Snyder, 1983; Judge & Bono, 2001; Larson et al., 1992; Melchert, Hays, Wiljanen, & Kolocek., 1996; O'Brien, Heppner, Flores, & Bikos, 1997). Training (Larson et al., 1992) and supervision (Friedlander & Snyder, 1983) increase counseling self-efficacy, which impacts counselors' performance in sessions (Friedlander, Keller, Peca-Baker, & Olk, 1986). Naturally, researchers found that counseling self-efficacy was associated with positive client outcome (Larson et al., 1992; Watson, 1992). The self-efficacy theory has also been studied in other health professionals. For example, researchers found that child care workers, residential care workers, teachers, and nurses with higher levels of self-efficacy were less apt to burn out and were more likely to stay in their profession of choice (Caprara, Barbaranelli, Borgogni, & Steca, 2003; Ellett, 2009; Dasgupta, 2012).

Bandura (2006) emphasized that measures of self-efficacy must be task specific and contextually appropriate, operationalized parsimoniously, a representation of performance on a related and challenging set of skills, and an assessment of current perceptions of capability. Addiction counseling requires specialized expertise, which cannot be captured by general

self-efficacy or counseling self-efficacy. Based on prior researchers' work (Murdock et al., 2005), Wendler (2007) provided a revised five-factor model: specific addiction treatment skills, assessment and treatment planning skills, co-occurring disorders treatment skills, group counseling skills, and basic counseling microskills. However, VR counselors work with clients with disabilities, and substance use is often a secondary condition. Their primary duty is to help clients attain or retain employment, and they typically do not provide group counseling (Leahy, Chan, & Saunders, 2003). Therefore, modification of this model is necessary based on Bandura's (2006) recommendation on self-efficacy measures. Researchers have investigated VR counselors' general self-efficacy and counseling self-efficacy (Fabian & Waugh, 2001; Matrone & Leahy, 2005). The CRCs reported a low confidence in providing formal alcohol and drug screenings (Rodgers-Bonaccosory, 2010), which aligned with other studies (Moore et al., 2008). This is the first study of addiction counseling self-efficacy of state/federal VR counselors. Therefore, the addiction counseling self-efficacy is chosen as a variable.

Research Questions

Phase I: Systematic Review of VR Substance Use Disorders Policy and Procedure

1) Can a rubric with sufficient psychometric properties be developed to evaluate comprehensiveness of policies and procedures regarding substance use disorders in the VR?

2) Based on the rubric developed, how comprehensive are the VR policies related to substance use disorders?

Phase II: VR Counselor Survey

1) What are the relationships among policy and procedure comprehensiveness, counselor characteristics (caseload size and years of experience), counselor attitude, addiction counseling self-efficacy, and frequency of procedural practices related to substance use disorders?

CHAPTER 3

METHODOLOGY: PHASE I

The following chapter discussed the investigation of the phase one of a two-phase study: policy comprehensiveness regarding substance use disorders across states. It included information about research design, rationale for rubric development, policy review, rubric development process, and investigation of psychometric properties.

Research Design

Phase I of this study employed a non-experimental, descriptive design. A descriptive study may be used to form a theory, identify problems with current practice, warrant the current practice, make decisions, or find out what others in similar situations may be doing. With a descriptive study, researchers do not manipulate variables or establish causality (Allbutt, Becker, Tidd, & Haigh, 2008). This study was fully addressed through the use descriptive statistics, which also involved an instrument development component.

Rationale for Rubric Development

In order to systematically review policies and procedures regarding substance use disorders in State/Federal VR, the researcher developed the VR Substance Use Disorders Policy and Procedure Scoring Rubric. The rubric is defined as an assessment tool that explains the expectations for a task or assignment (Stevens & Levi, 2005). It is widely and historically used for education-related evaluations, such as student learning (Newell, Dahm, & Newell, 2002), teachers' disposition (Flowers, 2006), and education reform (Bessell, 2008). It is also adopted by the nursing field for clinical purposes (Lasater, 2007; Isaacson & Stacy, 2009). The Americans with Disabilities Act of 1990 heralded the rise of providing best practices for

people with disabilities. VR agencies across the country aspired to improve their service through a series of best practice models (Fleming, Del Valle, Kim, & Leahy, 2012). However, there were no standard measurement tools to systematically assess the comprehensiveness of VR policies and procedures regarding substance use disorders. It then became apparent to the researcher that a tool was needed to help quantify, manage, process, and analyze qualitative data from the VR policy and procedure documents. It is also a practical tool to conduct program evaluation and enhance VR services. Other rehabilitation researchers can also use this rubric for various research purposes.

Policy Review

The following steps were conducted to collect VR policy data for rubric development. First, in 2015, the researcher gathered policy documents of 50 states and DC over a two-month period and archived these documents. Second, a random sample of 25 (50%) State/Federal VR offices was generated to be representative all the states and DC. Third, the researcher screened the policy documents of the randomly selected 25 states (including DC), and excluded six documents that were not relevant to service policies (e.g. West Virginia Employer Resource Guide). An additional nine documents were excluded in the screening process prior to scoring the remaining 26 states. The major documents were policy and procedure manuals, consumer manuals, state plans, and other documents such as needs assessment. Key words searches (i.e. substance, drug, alcohol, and addiction) on the VR websites were conducted for nine states since no relevant service policies were identified in the website policy documents. The researcher also followed up with phone calls to the VR offices to verify the accuracy and completeness of policies.

Rubric Development Process

The following steps were taken to develop the rubric based on the collected VR policy data. First, the researcher generated a list of eight standard procedures of VR service and used them as rubric indicators. Second, the researcher conducted a VR document review of the 25 randomly selected states, including DC, to check the wording consistency of the indicator list across states and to see if additional indicators were needed. Third, consultation with the instrument and content experts guided the final iteration of the rubric indicators.

This rubric was designed to measure comprehensiveness of the VR policies and procedures regarding substance use disorders on ten indicators: eight indicators that aligned with VR service process, and two indicators (i.e. cautions for substance use disorders, and format) that emerged after reviewing the 25 randomly selected states. The descriptions of each indicator are as follows:

1. *Application and intake*. This indicator measures the extent to which application and intake guidelines related to clients' substance use are provided.

2. *Assessment and screening*. This indicator measures the extent to which screening and assessment protocols and practices related to substance use disorders are specified.

3. *Eligibility determination*. This indicator measures the extent to which eligibility determination processes for people with substance use disorders are delineated.

4. *Individualized plan for employment* (IPE). This indicator measures the extent to which integration of substance use disorders recovery in clients' IPE is explained.

5. *Due process/disciplinary actions*. This indicator measures the extent to which due process/disciplinary actions related to clients' substance use are addressed.

6. *Release of information*. This indicator measures the extent to which guidelines for releasing clients' information of substance use disorders to another party are provided.

7. *Case closure*. This indicator measures the extent to which substance-related case closures are explained.

8. *Referral*. This indicator measures the extent to which guidelines for referring clients with substance use disorders to treatment or assessment to supplement VR services are addressed.

9. *Cautions for substance use disorders*. This indicator measures the extent to which various barriers to employment for clients with substance use disorders are emphasized, such as criminal history, probation, inconsistent employment history, and childcare.

10. *Format.* This indicator measures the extent to which a comprehensive stand-alone section or separate manual that covers major VR procedures is provided (e.g. definition of substance use disorders, intake, eligibility, assessment, IPE consideration, disciplinary actions, and release of information).

The researcher then defined the levels of the rubric (See Appendix A for the rubric). In the pilot review, two levels emerged: the lowest level that no information was provided related to substance use disorders and the highest level was comprehensive guidelines and protocols. The researcher then conducted a comprehensive review, two additional levels emerged: the minimal level that only one sentence of information was provided and the adequate level that a paragraph of information was provided for each indicators. The content of the policies, therefore, fell in to four categories: no policy, minimal policy, adequate policy, and comprehensive policy. The draft of the rubric was sent out to four raters to assess the inter-rater reliability and to gather feedback related to ease of use and applicability.

Investigation of Psychometric Properties

To investigate psychometric properties of the rubric, the researcher referenced the nominal group method (Jones & Hunter, 1995), a widely used consensus method. First, the research problem was defined as how comprehensive are the VR policies related to substance use disorders based on the rubric developed by the researcher. Second, the researcher recruited students from the Counselor Education and Supervision program at the Pennsylvania State University. Three doctoral students (i.e. A, B, and C) were recruited as raters. The researcher also sent out an email invitation to the department listserv to graduate students (both doctoral and master's level students) to recruit more raters. Two additional master's level students (i.e. D and E) agreed to participate after an explanation of the task. Rater E eventually dropped out from this study, and there was no response to the researcher's follow-up email for rating scores. All raters were asked to introduce their background in rehabilitation and addiction so as to help the researcher decide whom to recruit. All of these raters have over two years of expertise in rehabilitation and/or addiction service. Third, each recruited rater was given a 5-state sample randomly generated from the 25 selected states, including DC. The researcher also explained how to rate the states with the rubric. The researcher rated all 25 states herself, including DC, in order to compare with raters.

The researcher interviewed each rater individually after receiving the scores. The researcher explained to each rater that the goal of the discussion was to address differences in their ratings, and to get feedback on the rubric content and ease of use. Raters only changed their initial scores if they felt necessary to do so. When consensus was not reached,

the raters retained their ratings (Tinsley & Weiss, 1975). The researcher also sent out the discussion write-up to the raters and conducted a final review of scores after the discussion. Rater C was initially confused about how to rate. For several items, she rated on both general procedures and substance-related procedures. Therefore, after clarification, her ratings for substance-related procedures were used in the analysis. Two raters (i.e. B and D) decided to change their scores in the final review process (See Appendix B and C). See Table 1 for the state sample that raters receive.

Table 1

Description of Rater and State Sample

Rater	State Sample
A: third-year doctoral student, CRC, two years of rehabilitation counseling experience and over three years of disability specialist experience	CO, MN, NE, OH, PA
B: third-year doctoral student, Licensed Clinical Mental Health Counselor, and two years of crisis counseling for people with co-occurring mental health and addiction problems	MN, NE, NY, NC, WI
C: fourth-year doctoral student, CRC, one year of rehabilitation counseling and two years of disability specialist experience	FL, IN, MD, MA, MN
D: master's in Mental Health Counseling, National Certified Counselor, two years of experience as an intake worker for a youth addiction program, and six months of vocational training experience	NE, NC, OR, PA, TN

CHAPTER 4

RESULTS: PHASE I

The following chapter provided the results of psychometric properties of the rubric and policy comprehensiveness scores. Descriptive analyses were employed to address research questions.

Phase I: Research Question 1 Results

Reliability. The reliability of rubric scores was estimated with three types of commonly used indices: Intraclass Correlation Coefficients, percentages of agreement, and G(*q*,*k*). A preliminary inspection of the scores demonstrated similarities of the initial ratings across raters, and they generally reached agreement on final scores (See Appendix B for ratings). The Intraclass Correlation Coefficients (ICC) between the researcher and each rater were calculated to assess the reliability of scores. The single measures of ICC ranged from .50 to .72 for scores before the discussion, indicating modest to moderate inter-rater reliability (See Table 2). Although the ICC before the discussion was modest, the ICC after the discussion indicated very high inter-rater reliability. All raters also reported that the discussion had helped them better understand the rubric and the rating process. Please see Table 2 for the ICC.

Table 2

ICC Between the Researcher and Each Rater Before and After Discussion

Rater	Before		After	
pair	Single measures	Average measures	Single measures	Average measures

A-X	.50	.66	.95	.97
B-X	.59	.74	.99	.99
C-X	.65	.79	.99	1.00
D-X	.72	.84	.96	.98

* X refers to the researcher

Prior researchers used inter-rater agreement, or inter-rater consensus, to evaluate the reliability of rubric scores (e.g. East & Young, 2007; Jonsson & Svingby, 2007; Novak, Herman, & Gearhart, 1996). Percentages of absolute agreement and relative agreement were therefore calculated to provide additional information. The absolute agreement refers to each pair of raters have same ratings for an item. The relative agreement, or adjacent agreement, refers to each pair of raters have similar scores (e.g. ± 0.5, ± 1, or ± 2) for an item (e.g. East & Young, 2007; Novak et al., 1996). The results for the four raters and the researcher were summarized in Table 3. The ± 1 criterion was chosen for this study because it was widely used by prior researchers, and it meant within one category of ratings.

Table 3

Percentages of Agreement Between Rater Pairs Before and After Discussion

Rater pair	n	Before		After	
		Absolute agreement (± 0)	Relative agreement (± 1)	Absolute agreement (± 0)	Relative agreement (± 1)
A-X*	5	48%	90%	86%	100%
B-X	5	56%	82%	92%	100%
C-X	5	44%	72%	90%	100%

D-X	5	66%	90%	88%	100%

* X refers to the researcher

Although percentages of absolute agreement ranged from 44% to 66% prior to the discussion, percentages of the relative agreement among these raters were high, ranging from 72% to 90%. In a widely cited review of 75 studies on scoring rubrics, Jonsson and Svingby (2007) found most of the reported percentages of absolute agreement were under 70%, with a range of 4% to 100%. Jonsson and Svingby (2007) claimed that though these rubrics failed the traditional criterion of 70% or greater (Stemler, 2004), they presented good practical value. In addition, low-stake assessments have less stringent requirements for technical properties than high-stake assessments. The purpose of this study was to evaluate policy comprehensiveness and was low-stake, therefore, the practical value was privileged over agreement ratings. The raters received a range of materials (e.g. policy and procedure manuals, state plan, and state-wise needs assessment) to score, and the complexity of this task could impact the reliability of scores. This was also only a preliminary attempt to quantify these policies and procedures, rather than making high-stake decisions. Consequently, the reported inter-rater agreements were acceptable for the current study's purpose.

In this pilot study, the raters (i.e. A, B, C, D, and the researcher) and ratees (i.e. 25 states, including DC) were neither fully crossed nor nested. Putka, Le, Podney, and Tirso (2008) proposed using G(*q*,*k*) as an alternative reliability estimator for this type of designs, and provided corresponding SAS codes. The G(*q*,*k*) was a reliability measure grounded in the generalizability theory (G-theory). Putka et al. (2008) conducted a Monte Carlo

simulation, and the results demonstrated that it had as precise or more precise reliability estimates than Pearson correlations and ICC. As a new measure of inter-rater reliability, G(*q*,*k*) has started to receive attention from the academic community. It was reported by other researchers for designs that were neither fully crossed nor nested (e.g. Conklin, & Strunk, 2015; Hill et al., 2015). For this study, the G(*q*,*k*) was .89 for all five raters' scores prior to the discussion, and the G(*q*,*k*) approached 1 for final scores, indicating high inter-rater reliability.

Validity. Content validity was established in several ways. First, the researcher developed the indicators based on VR service procedures. Two indicators were added based on the construct this rubric proposed to measure and a pilot review of existing policy and procedure documents. Second, the researcher conducted a comprehensive review and coding of the policy and procedure documents. The content naturally fell into four categories: no policy, minimal policy, adequate policy, and comprehensive policy. Then the descriptions of the categories were developed based on a review of documents. Third, the raters provided feedback on the ease of use and applicability of the rubric for the states they scored. Fourth, feedback from experts in vocational rehabilitation and addiction was incorporated to confirm the validity of the rubric. An expert in scale development suggested providing explanations of the ten indicators.

All recruited raters confirmed that the rubric was applicable to the policies and procedures documents related to substance use disorders in the VR. For improvement purposes, two raters reported additional levels could be added to capture the nuances. Rater B proposed a "2.5" between *adequately* (i.e. rated as 2) and *comprehensively* (i.e. rated as 3).

He termed a score of 2.5 as “thorough”. Rater D proposed a “1.5” between *minimally* (i.e. rated as 1) and *adequately* (i.e. rated as 2). A rating of 1.5 means there is a brief description of one paragraph, but the information is inadequate. While Rater D did not have an exact wording to describe a “1.5”, she claimed that this would help address the gap between *minimally* and *adequately*. To explain their rationale for adding additional levels, they were also asked their understanding of the terms on a scale from 0% to 100% of the information. Rater B stated that a rating of zero meant 0-9%; a rating of one means 10-35%; a rating of two means 36-75%; and a rating of three means 76-100%. Rater D stated that “comprehensive” meant 100% ideally and 90% realistically. A comprehensive policy and procedure would “help someone just hired by the VR learn everything, and the person can start work tomorrow”. Rater D reported that “adequate” meant 75%, “minimal” meant 10-20%, and “no information” meant 0%. Rater A stated that the differences between *minimally* and *adequately* was vague, but she did not propose additional levels. Rater C reported the categories appropriate for the states she rated. Rater A and D stated that their understanding of the terms, such as “minimally” and “adequately” influenced ratings. They emphasized that people had their own ideas of what these terms meant. The researcher could improve the rubric through providing detailed explanations of the indicator terms. Overall, all raters agreed that they were able to identify relevant information and score states with the rubric.

Based on the reliability estimates and feedback from raters and experts, the researcher decided to add explanations of the ten indicators. This change is expected to unify definitions of indicators and make this rubric accessible to people without relevant expertise. This is a

preliminary attempt to quantify comprehensiveness of policies and procedures related to substance use disorders in the VR. Therefore, no new levels are added at this point, and additional rating attempts are needed before changing the levels.

Phase I: Research Question 2 Results

The VR Policy and Procedure Scoring Rubric was used to evaluate substance use disorders policy comprehensiveness of 50 states and DC. To account for possible updates after the first round of policy documents review in 2015, the researcher conducted a second round of policy document check in 2016 to include updates of policies and procedures online. These updates included documents released in 2016 and ones that were released prior to 2016 and recently became accessible. Twenty documents were excluded in the screening process prior to scoring the states. There were changes in the comprehensiveness scores for 13 states. The second round of policy check demonstrated no significant change in the comprehensiveness scores for most states (See Appendix D for the states with changed scores).

Overall VR Policy Comprehensiveness. State/Federal VR policies and procedures regarding substance use disorders were inconsistent and insufficient (See Table 4). Table 4 summarized the high and low policy comprehensiveness scores states. Conceptually, a total score less than 10 means no to minimal policies regarding substance use disorders, and a total score over 20 means adequate to comprehensive policies regarding substance use disorders. As of document review in 2015, most of the states (59%) had no to minimal policies regarding substance use disorders, and only a few states (18%) scored high. Two states (4%) had no information regarding substance, addiction, alcohol, or drug, except for

mentioning names of substance-related agencies. One state (2%) scored 30, which was the highest score possible. As of document review in 2016, the majority of states (57%) had no to minimal policies regarding substance use disorders, and only a few states (18%) scored high. The reviews of 2015 and 2016 documents revealed minimal changes from year to year for all states reviewed.

Table 4

High and Low Policy Comprehensiveness Scores States

Year	Ranges	N	States
2015	[0, 10)	30	AK, AL, CA, CO, CT, DE, FL, GA, HI, ID, IL, KS, LA, MA, ME, MN, MS, NE, NH, NM, OH, OR, PA, SD, TN, UT, VT, VW, WI, WY
	(20, 30]	9	AR, KY, MI, ND, NJ, NV, SC, VA, WA
2016	[0, 10)	29	AK, AL, CA, CO, CT, DE, FL, HI, ID, IL, KS, LA, MA, ME, MN, MS, NE, NH, NM, OH, OR, PA, SD, TN, UT, VT, VW, WI, WY
	(20, 30]	9	AR, KY, MI, ND, NJ, NV, SC, VA, WA

Overall, the rubric indicator scores for the 50 states and DC were low with small variations. Most rubric indicators were minimally addressed in VR policy documents. The following section outlined the policy comprehensiveness of each rubric indicator.

Application and intake. As of document review in 2015, very few (9.8%, $n = 5$) of the State/Federal VR offices comprehensively explained whether counselors should ask

about clients' substance use during intake, and major areas of consideration for such inquiry, such as explaining the agency substance free policy. These states also provided information regarding further screening or referral to be conducted with consultation on pertinent matters. The majority (58.8%, *n* = 30) of the State/Federal VR offices did not provide any information regarding substance-related inquires in the intake and application section. There were 11 states (21.6%) that minimally mentioned inquiry of substance use in the application and intake. There were five states (9.8%) adequately addressed guidelines and areas of consideration for counselors to inquire clients' substance use. As of document review in 2016, one state changed from no information (i.e. 0) to minimally (i.e. 1) mention inquiry of substance use in application and intake, a slight improvement.

Assessment and screening. According to the document review conducted in 2015, very few (15.7%, *n* = 8) of the State/Federal VR offices comprehensively emphasized assessment and screening for substance use, situations these tests might be initiated, and provided detailed information such as standardized instruments/tests for assessment, payment options, and referral guidelines for further assessment. The plurality of states (41.2%, *n* = 21) minimally mentioned substance assessment and screening. There were 15 states (29.4%) provided nothing on assessment and screening related to substance use disorders. The remaining seven states (13.7%) adequately addressed substance assessment and screening, and provided referral guidelines and/or resources for such assessment and screening. As of document review in 2016, two states changed from no information (i.e. 0) to minimally (i.e. 1) mention assessment and screening of substance use.

Eligibility determination. As of document review in 2015, about one-fourth (25.5%, *n* = 13) of the State/Federal VR offices comprehensively stated guidelines for major areas of consideration with detail, such as a documented substance use disorders diagnosis from a licensed professional, functional limitations related to employment, sobriety waiting period, treatment, current use, commitment to recovery, substance type, etc.. The plurality (31.4%, *n* = 16) of states and DC provided nothing on eligibility determination related to substance use disorders. There were 13 states (25.5%) minimally mentioned substance use as an area of consideration in eligibility determination process. The remaining nine states (17.6%) adequately addressed guidelines for clients with substance use disorders with limited detail.

As of document review in 2016, two states changed from no information (i.e. 0) to minimally (i.e. 1) mention eligibility determination related to substance use disorders; one state changed from adequately (i.e. 2) to comprehensively (i.e. 3) mention eligibility determination related to substance use disorders. Eligibility determination was the most comprehensively addressed rubric indicator. Please refer to Appendix E for a detailed discussion on this indicator.

Individualized plan for employment. As of document review in 2015, very few states (13.7%, *n* = 7) comprehensively emphasized detailed integration of substance use consideration into clients' IPE. These states also listed major areas to be considered, such as relapse, treatment, recovery group attendance, and abstinence. Four State/Federal VR offices (7.8%) adequately addressed the importance of clients' substance use and/or risks of not addressing. Thirteen states (25.5%) minimally mentioned substance use as an area of consideration in IPE. The majority of states (52.9%, *n* = 27) did not have any information

regarding substance use in their individualized plan for employment. Several states (e.g. TX) provided examples of behavioral statements that counselors could use as part of consumer responsibilities, such as meeting with a substance abuse counselor and attending self-help groups on a regular basis. As of document review in 2016, one state changed from no information (i.e. 0) to minimally (i.e. 1) mention IPE related to substance use disorders.

Due process/disciplinary actions. As of document review in 2015, very few State/Federal VR (7.8%, *n* = 4) comprehensively stated clients' responsibilities related to substance use, and specifics of violation of substance policy. They also provided detailed due process/disciplinary actions and how to resume service (i.e. exact to days). Ten states (19.6%) adequately addressed disciplinary actions to be taken for substance-related violations. Six states (11.8%) minimally mentioned due process/disciplinary actions would be taken for substance-related violations. The majority of states (60.8%, *n* = 31) did not have any information regarding substance-related due process/disciplinary actions. No change was found as of document review in 2016.

Release of information. As of document review in 2015, few states (11.8%, *n* = 6) comprehensively explained the release of information policy related to clients' substance use, parental access to children's substance use record, and situations that this confidentiality might be breached. These states also supported their policy through listing state and federal laws. There were seven state (13.7%) adequately addressed release of information policy, and supported their policy with state laws. No information regarding the release of information for children's substance use was provided. There were six states (11.8%) minimally mentioned confidentiality was protected, and consent was needed for the release

of information. The majority of State/Federal VR offices (62.7%, *n* = 32) did not have information regarding the substance-related release of information. It was possible that these offices apply general release of information policies for clients' substance use. As of document review in 2016, one state changed from no information (i.e. 0) to adequately (i.e. 2) mention release of information related to substance use disorders.

Case closure. As of document review in 2015, few State/Federal VR offices (9.8%, *n* = 5) comprehensively explained case closure decision making process related to clients' substance use. There were four state (7.8%) adequately addressed case closure decision making process related to substance use with limited detail. There were 11 states (21.5%) minimally mentioned substance-related case closure. The remaining states (60.8%, *n* = 31) did not have information regarding substance-related case closure. As of document review in 2016, one state changed from no information (i.e. 0) to minimally (i.e. 1) mention closure related to substance use disorders.

Referral. As of document review in 2015, very few states (11.8%, *n* = 6) comprehensive explained referral process for substance-related problems, and listed specific referral resources, such as licensed professionals and collaborating agencies. There were five states (9.8%) adequately addressed referral process and resources for substance-related problems with limited detail. The plurality of State/Federal VR offices (45.1%, *n* = 23) minimally mentioned referral for clients with substance use disorders. The remaining states (33.3%, *n* = 17) did not have information regarding substance-related referral. As of document review in 2016, four states changed from no information (i.e. 0) to minimally (i.e. 1) mention closure related to substance use disorders.

Cautions for substance use disorders. As of document review in 2015, few states (19.6%, *n* = 10) comprehensively explained cautions for clients with substance use disorders, such as transportation, legal services, co-occurring conditions, child care, inconsistent employment history, and etc.. These states also provided guidelines on how to integrate such cautions in service. There were nine states (17.6%) adequately addressed cautions for clients with substance use disorders with limited detail. There were nine states (19.6%) minimally mentioned complexity for clients with substance use disorders. The plurality of State/Federal VR offices (45.1%, *n* = 23) did not have information regarding cautions for substance use disorders. As of document review in 2016, there were several changes to cautions for substance use disorders: one state changed from no information (i.e. 0) to minimal (i.e. 1); two states changed from no information (i.e. 0) to adequate (i.e. 2); one state changed from minimal (i.e. 1) to adequate (i.e. 2); one state changed from adequate (i.e. 2) to comprehensive (i.e. 3).

Format. As of document review in 2015, few (23.5%, *n* = 12) of the state had a stand-alone comprehensive section or separate manual that covers major VR procedures related to substance use disorders (e.g. definition of substance use disorders, intake, eligibility, assessment, IPE consideration, disciplinary actions, release of information, etc.). These offices were also more likely to cover following criteria for comprehensiveness than those did not have a separate section. One state had a separate section on marijuana. This state was not included in comprehensive states, considering its limited applicability for other types of substances. The plurality of states (43.1%, *n* = 22) had brief sub-section(s) under other sections (e.g. eligibility, disciplinary actions) as special situations. There were 15 states

minimally mentioned substance, drug, alcohol or addiction (not just in the form of SMHSA or other agency names) with no concrete policy or procedure. Two states (3.9%) had no information and/or just mention agencies names. As of document review in 2016, two states changed from minimal (i.e. 1) to adequate (i.e. 2) for the format related to substance use disorders.

Other information. According to the Marijuana Policy Project (2015), the largest organization on the legalization of marijuana in the United States, there were 25 states, including DC Columbia, had legalized medical or recreational use of marijuana. In this search, NJ, CO, OR, and WA addressed issues related to marijuana in their VR policy and procedure. These states explained that since marijuana was illegal under federal law and VR was funded federally, VR would not support vocational services related to marijuana industry. Counselors should remind clients of potential barriers to employment, such as future drug testing and smaller employment pool. In a similar vein, NV VR (2015) would not approve self-employment services for business that sold alcohol or tobacco products.

CHAPTER 5

METHODOLOGY: PHASE II

The following section outlined the procedures for phase two of this study, an investigation of counselor variables believed to relate to service of clients with substance use disorders. Information about research design, procedures, participants, instruments, data analyses, and power analysis were included.

Research Design

Phase II of this study employed a non-experimental, correlational design in which investigators used the correlational statistics to illustrate and estimate the degree of association (or relationship) between two or more variables or sets of scores (Creswell, 2012). The primary goal of a correlational study was to discover relationships between variables. If a relationship exists, researchers could establish a regression equation that could be used to make predictions in a population. In bivariate correlational studies, researchers measured the relationship between two variables. The correlation statistics demonstrated a degree and a direction of the relationship.

Procedures

To obtain a representative sample of State/Federal VR counselors, the researcher purchased a random sample of 2000 emails from the CRCC. The participants in the sample were US members who identified as State/Federal VR counselors at the time they registered for the CRC. The CRCC is the main certification agency for rehabilitation practitioners, and the CRC is a preferred certificate for employment in the VR. This mailing list was chosen for this study, because it covered CRCs from all 50 states, DC, and US territories. Based on the

certification count by September 2015, this listserv had 11,927 members worldwide, including 11,761 members from 50 US states and DC, and 135 members from US territories. There were 2911 people who identified as working as State/Federal VR counselors at the time of registration. Therefore, the mailing list purchased by the researcher constituted a representative sample of 68.7% of the entire list of people who identified as VR counselors.

The counselor survey link was created through Qualtrics and sent to the mailing list. Participants were informed that they had the right to participate voluntarily in the research and discontinue at any time. The response was anonymous, and no identifying information was used in the analysis. The estimated time to complete the survey was about 25 minutes. Three follow-up reminders were sent out to participants, with an interval of two weeks for each reminder. The study was approved by the IRB of the Pennsylvania State University (see Appendix F). The IRB also informed this researcher that there was no need to apply for IRB for the data collection of the policy and procedure documents, since they were publicly available.

The researcher was authorized by the CRCC to approve one clock hour of CRC Continuing Education (CE). As required by the CRCC, participants interested in earning the CE unit were asked to enter their names and emails in a separate link after they submitted the survey. They were not required to submit their names and emails if they did not want to earn the CE unit. Participants were also encouraged to contact the principal investigator should they have any questions or comments about the study. The contact information of the principal investigator was provided.

Participants

In total, 2000 emails were sent to participants, 114 emails were not deliverable, resulting in 1886 potential working emails. In total, *N* = 320 participants took part in this study. The response rate for survey participation is 17.0%. Out of 320 participants who initiated the survey, 59 individuals submitted incomplete surveys (i.e. skipped most demographics or questionnaire items); resulting in a total of *N* = 261 completed surveys.

Only people who identified as State/Federal VR counselors with active caseloads (n > 0) were included in the analysis. Of the *N* = 261 individuals who completed the survey, 46 participants did not meet the screening criteria for State/Federal VR counselors with active client caseloads. These individuals were removed from the subsequent analysis, which resulted in a final sample of *N* = 215 (See Table 5). E-mail surveys have a lower response rate than mailed surveys but can still be considered a viable tool (Shih & Fan, 2009). In addition, most people who initiated the survey (*N* = 320) completed the instruments (*N* = 261; 81.3%). The inclusion criteria for participants were 1) above 18-year old, 2) currently work as State/Federal VR counselors, and 3) have an active caseload.

Table 5

Participants' Demographics (N = 215)

Age	22-73 years (*M* = 46.20; *SD* = 11.08)
Sex	
Male	14.0%
Female	81.4%
Transgender	0.5%
Other	0%
Missing	4.2%
Ethnicity	
White	68.3%
Black/African American	12.1%

Hispanic/Latino(a)	4.7%
American Indian or Alaska Native	0.5%
Asian	3.7%
Native Hawaiian or Pacific Islander	0.5%
Other (e.g. American)	0.9%
Multiracial	3.3%
White and Asian	0.9%
White and Hispanic/Latino(a)	1.4%
White and American Indian or Alaska Native	0.5%
White and Asian and Hispanic/Latino(a)	0.5%
Missing	6.0%
Professional Credentials	
Certified Rehabilitation Counselor (CRC)	95.8%
National Certified Counselor (NCC)	3.3%
Licensed Mental Health Counselor (LMHC)	0.5%
Licensed Marriage and Family Counselor (LMFT)	0.5%
Licensed Clinical Social Worker (LCSW)	0%
Master Addiction Counselor (MAC)	0.9%
Certified Alcohol and Drug Counselor (CADC)	0.9%
Certified Advanced Alcohol and Drug Counselor (CAADC)	0.5%
National Certified Addiction Counselor (NCAC)	0.5%
Licensed Professional Counselor (LPC)	10.7%
Licensed Professional Counselor Supervisor (LPC-S)	0.5%
Licensed Professional Clinical Counselor (LPCC)	3.3%
Licensed Psychologist	0%
Missing	4.2%
Degree Specialization	
Rehabilitation Counseling	79.3%
Mental Health Counseling	3.7%
Addictions Counseling	1.8%
Other Counseling (e.g. school counseling)	1.8%
Social Work	0.9%
Psychology	0.9%
Rehabilitation and Human Services	2.3%
Other	4.6%
Missing	4.6%
Employment Type at the VR	
Full-time	93.1%
Other	2.8%
Missing	4.1%
Caseload Type	

General	71.2%
Special	24.7%
Transition	4.2%
Cognitive, developmental, and intellectual	1.9%
Mental illnesses and substance use disorders	4.7%
Physical (e.g. TBI)	1.9%
Vision and hearing	6.5%
Other (e.g. Correction and veteran)	3.3%
Not specified	2.3%
Missing	4.7%
States participants work for	
Alabama	1.4%
Alaska	0.9%
Arizona	0.9%
Arkansas	0%
California	6.5%
Colorado	0.5%
Connecticut	0.5%
Delaware	0%
District of Columbia	0%
Florida	6.0%
Georgia	4.6%
Hawaii	0.5%
Idaho	1.8%
Illinois	1.4%
Indiana	0.5%
Iowa	1.4%
Kansas	0.5%
Kentucky	1.8%
Louisiana	1.8%
Maine	0.9%
Maryland	0%
Massachusetts	3.2%
Michigan	2.3%
Minnesota	3.7%
Mississippi	2.8%
Missouri	1.8%
Montana	2.3%
Nebraska	0.5%
Nevada	0.9%
New Hampshire	0.5%

New Jersey	1.4%
New Mexico	0.5%
New York	4.1%
North Carolina	3.7%
North Dakota	0.5%
Ohio	1.4%
Oklahoma	1.4%
Oregon	1.4%
Pennsylvania	5.5%
Rhode Island	1.4%
South Carolina	0.9%
South Dakota	0.9%
Tennessee	3.2%
Texas	7.8%
Utah	0.9%
Vermont	0%
Virginia	6.0%
Washington	0.5%
West Virginia	0%
Wisconsin	1.8%
Wyoming	0%
Missing	6.9%

Note: Percentages may not total 100 due to rounding or check all that apply options

Instruments

To assess VR counselors' attitude towards working with clients with substance use disorders, the ***Medical Condition Regard Scale*** was used. The Medical Condition Regard Scale (MCRS; Christison, Haviland, & Riggs, 2002) is an 11-item, six-point Likert-type instrument (*1* = strongly disagree; *6* = strongly agree) that measures medical students' attitude towards a given medical condition. It has also been used among nurses, psychiatrists, psychologists, physicians, and social workers. These studies cover a range of health topics, such as sickle cell disease (Haywood et al., 2007), substance use (Gilchrist et al., 2011; Van Boekel, Brouwers, Van Weeghel, & Garretsen, 2014), and Schizophrenia (Galletly & Burton,

2011). A sample item is *I prefer not to work with patients like this*. Scores range from 11 to 66, and higher scores indicate better attitude.

This instrument demonstrated good psychometric properties. The coefficient alpha was .87, and the test-retest reliability is .84, indicating high consistency (Christison et al., 2002). Exploratory factor analysis provided an 11-item uni-dimensional model, with all factor loadings exceeded .40. Confirmatory factor analysis (CFA) further supported this uni-dimensional model in a condition for major depression and a condition for alcohol dependence. For both CFA models, overall chi-square model fit was not significant, with χ^2(depression) = 50.05, df =41, p = .16, and χ^2(alcohol dependence) = 45.84, df = 34, p = .08. The CFI was .98 for both situations, and it was considered excellent based on the criterion of .90 (Christison et al., 2002). The MCRS also has good criterion validity, demonstrated by significant differences in the MCRS scores among students pre and post clerkship. The MCRS scores also differ across straightforward, psychiatric, complex, and somatoform medical conditions. As Christison et al. (2002) expected, patients with somatoform medical conditions (e.g. multiple visits and symptoms and no findings) received the least regard. Patients with intravenous drug use were near the bottom of the list. For my sample, the Chronbach's alpha is .84 for the modified scale scores, indicating high reliability.

This study focused on counselors' attitude towards clients with substance use disorders in the VR. Therefore, the researcher modified the items to capture terminologies and job descriptions used in the VR. The term *patients* was replaced by *clients*; the words *getting up on call nights* in item 7 were replaced by *traveling*; the term *medical* in item 11

was replaced by *VR* (See Table 6 for the modification example). A new item was added at the end: *In general, I trust clients like this about the same as other clients.*

Table 6

Modification Example of the MCRS

Survey	Description
MDRS	I prefer not to work with patients like this.
Modified	I prefer not to work with clients like this.
MDRS	I wouldn't mind getting up on call nights to care for patients like this.
Modified	I wouldn't mind traveling to care for clients like this.
MDRS	Treating clients like this is a waste of medical dollars.
Modified	Treating clients like this is a waste of VR dollars.

To assess VR counselors' self-efficacy in providing service to clients with substance use disorders, the ***Addiction Counseling Self-Efficacy Scale*** was used. The Addiction Counseling Self-Efficacy Scale (ACSES; Wendler, 2007) is a 31-item, six-point Likert-type instrument (*1* = no confidence, *6* = absolute confidence) that measures addiction counseling self-efficacy. A sample item is *Screen clients for co-occurring mental health disorders.* The ACSES demonstrated good psychometric properties. CFA using maximum likelihood estimation method demonstrated a good fit of the data with a re-specified five-factor model: specific addiction treatment skills (8 items), assessment and treatment planning skills (5 items), co-occurring disorders treatment skills (6 items), group counseling skills (6 items), and basic counseling microskills (6 items). Although the overall chi-square model fit was

significant, with $\chi^2 = 974.90$, df = 419, $p < .001$, the overall fit statistics demonstrated a good fit. The RMSEA was .053, which was smaller than the .06 criterion. The CFI and TLI were good (CFI = .91, TLI = .90). The model also demonstrated an acceptable component fit. All of the standardized factor loadings were high, based on a .6 criterion. An additional CFA supported a higher order model. This demonstrated the existence of an overarching addiction counseling self-efficacy higher-order factor with five first-order factors. The Cronbach's alpha for subscales ranged from .84 to .91. The overall ACSES has a coefficient alpha of .95, indicating high internal consistency. The test-retest reliability for subscales ranged from .88 to .98, and the overall test-retest reliability is .96. Convergent validity and discriminant validity were established respectively by proper correlations with a measure of general counseling self-efficacy (i.e. Counseling Self-Estimate Scale by Larson et al., 1992) and a measure of anxiety (i.e. Multidimensional Health Questionnaire by Snell & Johnson, 1997). The ACSES also has good criterion validity, demonstrated by significant differences in the ACSES scores among counselors of different levels of expertise (e.g. certification/license, education, and years of experience). For current sample, high reliability was detected for the modified scale scores ($\alpha = .95$).

The current iteration attempts to capture job functions and terminologies applicable to VR counselors. Following changes to the ACSES were conducted based on literature and an expert's critique: removing seven items, adding 13 new items, modifying two original items, and editing all of the item stem and the scaling wording. VR counselors typically do not conduct group counseling with clients (Leahy et al., 2003). This makes seven out of 31 items in the ACSES (Wendler, 2007) not relevant, and retaining these items may confound the

results. Therefore, the researcher decided to remove them. VR counselors also typically work with clients with primary disabilities besides their substance use, therefore, additional items on co-occurring disorders should be added. Items on VR-related addiction service skills should also be added, to account for obligations delineated in the policies and procedures related to substance use disorders in the VR. For instance, VR counselors are expected to address employment barriers, transportation barriers, and legal concerns related to substance use, to name just a few. Thus, the researcher created an item pool based on major job functions of VR counselors (Leahy et al., 2003) and a review of policies and procedures related to substance use disorders in the VR (e.g. Vermont VR, 2009). An expert with expertise in addiction and vocational rehabilitation screened and edited these items. As a result, 14 new items were added: one item on specific addiction treatment skills, one item on assessment and treatment planning skills, six items on co-occurring disorders treatment skills, and six items on VR-related addiction service skills.

Original items were modified. One item on specific addiction treatment skill was modified to represent the current recovery community. Another item on co-occurring disorders treatment skills was modified to specify types of trauma related to substance use. The item stems were amended to include *For clients eligible for VR services and exhibiting substance abusing problems, I am confident in my ability to*. The scaling wordings were also changed correspondingly (i.e. *1* = strongly disagree; *6* = strongly agree). The researcher conducted this change to make the ACSES more of a typical Likert-type instrument, and the items will be more straightforward to respondents. In addition, the researcher examined widely used self-efficacy and self-esteem scales, such as Counselor Self-Efficacy Scale

(Melchert et al., 1996), General Self-Efficacy Scale (Sherer et al., 1982), New General Self-Efficacy Scale (Chen, Gully, & Eden, 2001), and Self-esteem Scale (Rosenberg, 1965). The format of these scales confirmed the change in the item stem and the scaling wording (See Table 7). This results in a final scale of 38 items: two modified items, 14 new items, and 22 original items retained.

Table 7

Modification Example of the ACSES

Survey	Description
ACSES	Screen clients for co-occurring mental health disorders
Modified	For clients eligible for VR services and exhibiting substance abusing problems, I am confident in my ability to screen clients for co-occurring mental health disorders.
ACSES	Assess a client's previous experience with self-help groups like AA, NA, CA, etc.
Modified	For clients eligible for VR services and exhibiting substance abusing problems, I am confident in my ability to assess a client's previous experience with peer support groups like AA, NA, CA, SMART Recovery, etc.
ACSES	Work effectively with a client who has both substance use and trauma-related issues.
Modified	I am confident in my ability to work effectively with a client who has both a history of interpersonal trauma (e.g. child abuse or other forms of interpersonal violence) and substance abusing problems.

To assess VR counselors' service to clients with substance use disorders, the ***Frequency of Procedural Practices*** instrument was used. The frequency of procedural practices related to substance use disorders was measured by a seven-item, five-point Likert-type (*1* = never, *5* = almost always) section of the AOD-VRC (Christensen et al., 2004). Since these questions do not capture a latent construct, psychometric properties are not essential (Pedhazur & Schmelkin, 1991). A sample item is *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?* For my sample, the Cronbach's alpha is .85, indicating good internal consistency.

To assess participants' inclination to report socially desirable responses, the ***Marlowe-Crowne Form C*** was used. The Marlowe-Crowne Form C (MC-C; Reynolds, 1982) is a 13-item instrument that measures respondents' inclination to report socially desirable responses. The MC-C was a short form version of the 33-item Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1960). Participants answer true or false to each item. A sample item is *No matter who I'm talking to, I'm always a good listener*. Higher scores indicated greater socially desirable response tendency. The MC-C demonstrated sufficient psychometric properties. Reynolds (1982) reported an acceptable reliability ($r_{KR\text{-}20} = .76$). Concurrent validity was established with a correlation of .41 with the Edwards Social Desirability Scale (Edwards, 1957) and a correlation of .93 with the 33-item Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1960). For my sample, the Cronbach's alpha is .71, indicating adequate internal consistency.

To provide concurrent validity evidence for the modified addiction counseling self-efficacy scale, the ***New General Self-Efficacy Scale*** was used. The New General Self-Efficacy Scale (NGSE; Chen et al., 2001) is an eight-item, five-point Likert-type instrument (*1* = strongly disagree, *5* = strongly agree) that measures an individual's belief in one's capacity to perform across different situations. A sample item is *I will be able to achieve most of the goals that I have set for myself*. The NGSE demonstrated good psychometric properties. The Cronbach's alpha ranged from .85 to .90, indicating high internal consistency (Chen et al., 2001). Test–retest reliability coefficients across several American samples ranged from .60 to .74, indicating consistency over time. Convergent and discriminant validity of NGSE scores were established through expected correlations to relevant measures such as self-esteem (Chen, Gully, & Eden, D., 2004). For my sample, the Cronbach's alpha is .91, indicating high internal consistency.

Participants were also asked to complete the ***Demographics***, such as gender, age, education background, credentials, years of VR experience, caseload size, and caseload type. These demographic questions can help identify variables that contribute to the differences in attitude and self-efficacy related to substance use disorders. Craig and Sprang (2010) found that years of experience was a significant, positive predictor of burnout; it was a significant, negative predictor of compassion satisfaction. Other demographic questions are informed by prior research, such as barriers to service (Gunderson et al., 2005). A question on counselors' awareness and evaluation of policies and procedures in the VR was included to add internal validity information for the rubric. Nine master's level students in an Addictions Counseling

class and three current State/Federal VR counselors reviewed the survey items and provided additional feedback (See Appendix L for the survey).

Data Analyses

Correlational Analyses. Two types of correlation statistics were employed to answer the research question. Pearson correlation was conducted to investigate relationships among continuous variables (i.e. counselor attitude, addiction counseling self-efficacy, frequency of procedural practices, caseload size, and years of experiences). Spearman's rho correlation was conducted to investigate relationships between policy variables (i.e. policy comprehensiveness measured by the rubric, self-reported policy comprehensiveness, and self-reported policy awareness) and counselor service variables (i.e. counselor attitude, addiction counseling self-efficacy, and frequency of procedural practices).

Pearson correlation was recommended to measure the association between two continuous variables. The Spearman's rho correlation was recommended to test the correlation between two ordinal variables, or one ordinal variable and one continuous variable, with treating the continuous variable as ranked (McDonald, 2009). Further evidence was needed to assume equal intervals for the ranked policy variables. Counselor attitude, addiction counseling self-efficacy, and frequency of procedural practices were measured using Likert-type scales and were appropriate to be converted to ranks. Therefore, two separate correlation analyses were conducted to answer the research question.

Preliminary Analyses. After entering data, scales were re-coded in order to score certain instruments using the SPSS. Data from the Medical Condition Regard Scale (MCRS) were recoded to create an overall dimension of a positive attitude. Negative items were

reversely scored, and a total score was calculated. In a similar vein, data from the Marlowe-Crowne Form C (MC-C) were recorded to create an overall dimension of social desirability. Higher scores mean stronger social desirable responses.

Statistical assumptions for correlational analysis were examined prior to the data analyses (Myers, Well, & Lorch, 2010). Linearity and homoscedasticity were examined using scatterplots. Weak linear relationships were detected between policy comprehensiveness, caseload size, years of experience and other variables of interest. Normality of variables was examined through inspection of the Normal Q-Q plots and histograms. Years of experience, caseload size, self-reported policy awareness, and self-reported policy comprehensiveness were skewed. Univariate normality of counselor attitude, addiction counseling self-efficacy, frequency of procedural practices and general self-efficacy was assumed. One participant reported a caseload size of 798. Examinations of this participant's response to other items indicated no clear reason for the extremely large caseload. This cell was deleted and other responses were retained for the subsequent analysis. Other outliers were also examined and no further removal of data was conducted. Please see Appendix G, H, and I for graphs and plots.

Missing value analysis was conducted to test the patterns of missing data for the following variable items: counselor attitude, addiction counseling self-efficacy, and frequency of procedure practices. Little's MCAR test demonstrated that the data was missing completely at random, with $\chi^2 = 314.55$, df = 400, $p > .05$. The missing values accounted for 0.2% of the total values. An inspection of the data revealed no error in data entering. Multiple researchers claimed that modern methods such as multiple imputation (MI) should

be used instead of mean substitution, which did not estimate imputation errors and often resulted in biased variance and covariance estimations (Graham, 2009; Little, & Rubin, 2014; Schlomer, Bauman, & Card, 2010; Soley-Bori, 2013). As recommended, five imputations were used for Markov chain Monte Carlo imputation method, linear regression model for scale variables, and after setting appropriate constraints, and comparing original and pooled dataset, the imputed dataset was then deemed viable for subsequent analysis.

The majority of participants (N = 214) completed the MC-C scale. Mean social desirability scores were positively correlated with counselor attitude (r = .172, p < .05) and addiction counseling self-efficacy (r = .280, p < .001), indicating a small effect size (3.0% and 7.8% of the variance explained respectively; Sink & Stroh, 2006). VR counselors with higher scores on counselor attitude and addiction counseling self-efficacy also responded in a more socially desirable manner. Prior researchers used the MC-C among undergraduate students (M = 5.67, SD = 3.20; Reynolds, 1982). The high social desirability scores for the current study (M = 9.49, SD = 2.62) could probably be explained by participants' background in counseling and human services. In addition, the social desirability scale items were forced-response items. The high social desirability scores of the participants meant that counselors were helpers, pleasers, and when forced to make choices, they were likely to respond in socially desirable ways. The researcher also inspected responses to attitude, self-efficacy, and frequency of procedure practices scales of participants with high social desirability scores. The decision was made that the researcher did not remove any cases.

Power Analysis

A priori Correlation: Bivariate normal model power analysis was conducted using G*Power 3.1 (Faul, Erdfelder, Buchner, & Lang, 2009). A medium effect size of .3, an alpha level of .05, and a power of .8 were used. Power analyses suggested that a minimum sample of $N = 84$ was necessary to provide adequate statistical power for a two-tailed correlation. The final sample consisted of $N = 215$ participants was, therefore, sufficient for this study.

CHAPTER 6

RESULTS: PHASE II

The following chapter provided results of the correlational analyses of the sample (*N* = 215) and addressed the research question on relationships among policy comprehensiveness, counselor attitude, addiction counseling self-efficacy, frequency of procedural practices, caseload size, and years of experience. Significant correlations were found among counselor attitude, addiction counseling self-efficacy, and frequency of procedural practices. Policy comprehensiveness was not significantly associated with any variable of interest. Descriptive statistics of relevant variables were also provided.

Phase II: Research Question 1 Results

Descriptive statistics. The majority of participants received substance use disorders training from a graduate course (60.9%), followed by workshops provided by VR (58.1%), continuing education units (50.7%), an undergraduate course (28.4%), other (10.2%), and a certificate in addictions counseling (4.2%). About 4.2% of participants reported no substance use disorders training. A substantial percent (45.1%) reported that their current VR office does not provide substance use disorders training, while 33.5% of participants acknowledged that their office does. About 16.7% of participants reported not sure if their office provides such training, and 4.7% of participants did not respond. Most of the participants (59.1%) also reported that they or their loved ones previously and/or

currently live(d) with substance use disorders. About 32.6% of participants reported no, 3.7% of participants were not sure, and 4.7% of participants did not respond. In addition, more than half of the participants (53.5%) had more than three years of experience in substance abuse related work, followed by none (15.8%), one to three years (14.4%), and zero to one year (12.1%). About 4.2% of participants did not report their substance abuse related work experience. Participants' caseload sizes ranged from 5 to 450, *M* = 115.92, *SD* = 69.99. Table 8 illustrates descriptive statistics for all variables.

Table 8

Descriptives for all Variables

Variable	N	Min	Max	Mean	Std Dev.
Counselor Attitude	215	24	72	51.40	9.12
Addiction Counseling Self-efficacy	215	2.84	6	4.78	0.57
Frequency of Procedural Practices	215	1.57	5	3.34	0.76
Caseload Size	213	5	450	115.92	69.99
General Self-efficacy	203	1.13	5	4.25	0.52
Policy Comprehensiveness	200	0	30	11.17	7.72
Self-reported Policy Awareness	198	0	24	18.48	5.74
Self-reported Policy Comprehensiveness	184	0	24	16.30	5.87
Years of Experience	205	0.20	32.50	9.84	6.61

Social Desirability	214	2	13	9.49	2.62

Two-tailed correlations. Pearson correlation was employed to investigate correlations among continuous variables, with the alpha value set at .05, and adjusted alpha value set at .005. The adjustment of alpha value was made to address the inflation of type I error when conducting multiple comparisons at the same time, which could lead to an erroneous rejection of the null hypothesis (Shaffer, 1995). Therefore, the widely used Bonferroni adjustment was made based on the number of comparisons conducted (Bland & Altman, 1995). Spearman's rho correlation was employed to investigate correlations between policy scores and other variables of interest. In a similar vein, the alpha value was set at .05, and adjusted alpha value was set at .003. Significant correlations were found among counselor attitude, addiction counseling self-efficacy, and frequency of procedural practices. Caseload size, years of experience, and policy comprehensiveness were not significantly associated with any variable of interest (See Table 9 and Table 10).

There was a moderate, positive correlation between counselor attitude and addiction counseling self-efficacy ($r = .448$, $p < .001$), indicating that participants who reported better attitude also reported higher levels of addiction counseling self-efficacy. There was a non-significant, positive correlation between counselor attitude and frequency of procedural practices related to substance use disorders ($r = .154$, $p > .005$). There was also a moderate, positive correlation between addiction counseling self-efficacy and the frequency of

procedural practices related to substance use disorders ($r = .484$, $p < .001$), indicating that participants who reported higher levels of addiction counseling self-efficacy reported a higher frequency of procedural practices related to substance use disorders. There was no statistically significant relationship between policy comprehensiveness and counselor attitude ($r = .024$, $p > .003$), addiction counseling self-efficacy ($r = .06$, $p > .003$), or frequency of procedural practices ($r = .082$, $p > .003$). There was a non-significant, positive correlation between policy comprehensiveness measured by the policy rubric and self-reported policy comprehensiveness ($r = .186$, $p > .003$). There was a moderate, positive correlation between self-reported policy comprehensiveness and self-reported policy awareness ($r = .551$, $p < .001$).

To account for the effect of social desirability, partial correlations were conducted. There was a moderate, positive correlation between counselor attitude and addiction counseling self-efficacy, controlling for social desirability, $r = .423$, $p < .001$. An inspection of the zero order correlation ($r = .448$) suggested that controlling for socially desirable responding had very little effect on the strength of the relationship between these two variables. There was a non-significant, positive correlation between counselor attitude and frequency of procedural practices, controlling for social desirability, $r = .147$, $p > .005$. An inspection of the zero order correlation ($r = .154$) suggested that controlling for socially desirable responding had very little effect on the strength of the relationship between these

two variables. There was a moderate, positive correlation between addiction counseling self-efficacy and frequency of procedural practices, controlling for social desirability, $r = .489$, $p < .001$. An inspection of the zero order correlation ($r = .484$) suggested that controlling for socially desirable responding had very little effect on the strength of the relationship between these two variables. The partial correlation coefficient tested the association between two variables when controlling for one or multiple other variables (De La Fuente, Bing, Hoeschele, & Mendes, 2004). It examined the association between two variables that were not correlated with the controlled variable. Results of the partial correlations demonstrated that controlling for social desirability had little influence on the relationship between variables of interest.

In addition to the aforementioned correlation analyses, several statistically significant correlations were found between other variables. As expected, there was a moderate positive correlation between general self-efficacy and addiction counseling self-efficacy ($r = .301$, $p < .001$), suggesting that participants with higher general self-efficacy also reported higher levels of self-efficacy in providing addiction counseling. There was also a positive, significant correlation between general self-efficacy and frequency of procedural practices ($r = .154$, $p < .05$). Moderate, positive correlations were found between self-reported policy awareness and addiction counseling self-efficacy ($r = .346$, $p < .001$), as well as frequency of procedural practices ($r = .398$, $p < .001$). This indicated

participants with a higher awareness of policies related to substance use disorders also reported higher addiction counseling self-efficacy and greater frequency of providing procedural practices related to substance use disorders. There were significant, positive correlations between self-reported policy comprehensiveness and addiction counseling self-efficacy ($r = .288$, $p < .001$), as well as frequency of procedural practices related to substance use disorders ($r = .295$, $p < .001$). There was a significant, positive correlation between self-reported policy comprehensiveness and general self-efficacy ($r = .165$, $p < .05$).

Table 9:

Two-tailed Pearson Correlations among Variables

Scale	1	2	3	4	5
1. Counselor Attitude	1	.448**	.154	-.069	-.032
2. Addiction Counseling Self-efficacy		1	.484**	-.003	-.052
3. Frequency of Procedural Practices			1	.124	-.062
4. Caseload Size				1	.002
5. Years of Experience					1

Note: * $p < .005$ (2-tailed); ** $p < .001$ (2-tailed)

Table 10:

Two-tailed Spearman rho's Correlations among Variables

Scale	1	2	3	4	5	6
1. Policy Comprehensiveness	1	.123	.186	.024	.060	.082

2. Self-reported Policy Awareness	1	.551**	.084	.346**	.398**
3. Self-reported Policy Comprehensiveness		1	.142	.288**	.295**
4. Counselor Attitude			1	-	-
5. Addiction Counseling Self-efficacy				1	-
6. Frequency of Procedural Practices					1

Note: * $p < .003$ (2-tailed); ** $p < .001$ (2-tailed); - denotes results do not apply in this analysis

CHAPTER 7

DISCUSSION

Phase I: Systematic Review of VR Substance Use Disorders Policy and Procedure

Results of the rubric development demonstrated sufficient psychometric properties of the VR Substance Use Disorders Policy and Procedure Scoring Rubric. This rubric was a viable, preliminary tool for research and policy comprehensiveness evaluation. It could be used in program evaluation and facilitate inquires on VR services to clients with substance use disorders. For example, researchers could formulate their interview questions based on the rubric indicators and corresponding definitions of the levels. Researchers could also use one or several rubric indicators to focus their studies on specific areas of VR service. To improve the rubric, researchers should include more rounds of discussions and more raters, especially VR counselors. Additional levels could be explored with evidence from multiple rating attempts. Researchers should also use a fully-crossed design, which will allow the use of the G-coefficient. Validation studies in other languages can also be conducted.

Results of the systematic review provided evidence to the insufficiency and inconsistency in policies related to substance use disorders in State/Federal VR. Consistent with prior researchers' findings (Moore et al., 2008; Sprong et al., 2014), State/Federal VR minimally addressed substance use disorders in the policy and procedure documents. Eligibility determination was the most comprehensively addressed workflow rubric indicator. There was a great variation of comprehensiveness of state VR policy and procedures regarding substance use disorders across different states.

Indeed, practical reasons may explain the inconsistency and insufficiency of substance use disorders policy in the VR. Each state has its regional needs, interests, and priorities. Flexibility in interpreting legal guidelines and implementing federal grants were therefore needed and usually supported (Grogan & Rigby, 2009). Policy adaptation was also required at the practitioner level so that they could address characteristics of the practice environment and the service recipient (Maynard-Moody, Musheno, & Palumbo, 1990). In addition, each State VR also had different positions in the administrative hierarchy, which could influence the VR funding, administration mechanism, and policies (See Appendix J). Most of the VR was housed in the Department of Human/Children and Families/Social/Health and Human Services (*n* = 16, 31.4%), followed by Department of Education/Board of Education (*n* = 12, 23.5%), Department of Workforce/Employment/Labor/Economic (*n* = 12, 23.5%), Department of Rehabilitation/Disability Services (*n* = 8, 15.7%), and there were two state VR not housed in specific department (i.e. GA, OH, and SC) in this search. The Georgia VR and Ohio VR were not found to be housed in any department. The South Carolina VR was a department itself, which indicated possible reasons that it could afford to own two residential treatment centers for clients with substance use disorders.

This was not to suggest that improving current VR policies regarding substance use disorders was unnecessary or unimportant. Overall, there was a low level of formalization in VR regarding services to clients with substance use disorders. There were no written national application protocols for clients with substance-related problems, no written national tests for different types of substances, no written national definition of eligibility for clients with

substance use disorders, no written national standard for referral personnel, and no written national principles for disciplinary actions and closures, to name just a few. Most importantly, the insufficiency and inconsistency in VR policies regarding substance use disorders could undermine accountability on service to clients with this condition. Although flexibility was needed at the state and practitioner level, results of this study demonstrated that there were minimal VR policies related to substance use disorders existed for adaptation, and existing policies varied greatly across states. This apparent void of baseline service guidelines could place clients with substance use disorders at a disadvantage and even keep them in the loop of being under-served and vulnerable to relapse.

The VR service was centralized to protect people with disabilities as a minority group (Porter & Olsen, 1976). The inconsistency and insufficiency in policies regarding substance use disorders contradicted with its centralization tradition. Porter and Olsen (1976) also cautioned that the effectiveness of service would diminish should regions rather than the federal government assume policy-making functions. To illustrate, the participation of service providers was likely to be fluid and superficial without a unanimously clear-defined policy (Matland, 1995; McCreadie et al., 2007). Partnering agencies may have unclear roles and create competing agendas that incur conflicts (McCreadie et al., 2007). Therefore, more actions need to be taken to close the policy loophole for this chronically under-served population.

Phase II: VR Counselor Survey

Overall, VR counselors in my sample reported a positive attitude ($M = 51.40$, $SD = 9.12$) and high self-efficacy ($M = 4.78$, $SD = 0.57$) towards working with clients with

substance use disorders, which were consistent with prior findings (Rodger-Bonaccosory, 2010). VR counselors sometimes provide procedural practices related to substance use disorders to their clients (M = 3.34, SD = 0.76). These results also echoed prior findings (Rodger-Bonaccosory, 2010). Participants also reported a high general self-efficacy (M = 4.78, SD = 0.52) and social desirability (M = 9.49, SD = 2.62). Participants reported a moderate level of awareness of policies regarding substance use disorders (M = 18.48, SD = 5.74), and they also considered these policies adequate (M = 16.30, SD = 5.87).

The results of the VR counselor survey confirmed correlations among variables of interest. Not surprisingly, addiction counseling self-efficacy was significantly correlated with frequency of procedural practices related to substance use disorders in expected directions. Participants in my current sample with higher addiction counseling self-efficacy had a higher frequency of procedural practices. The non-significant correlation between counselor attitude and frequency of procedural practices aligned with Rodger-Bonaccosory's findings (2010). There was also a significant, positive relationship between counselor attitude and addiction counseling self-efficacy, indicating that a more positive attitude is associated with an increased confidence to provide service to clients with substance use disorders. This was also consistent with prior research indicating that a positive attitude is associated with better self-efficacy in service provision (Sung, Huang, & Lin, 2015).

As expected, there was a positive correlation between policy comprehensiveness scores measured by the rubric and self-reported policy comprehensiveness scores. Although not reaching significance using the adjusted alpha value, this correlation provided further evidence to the internal validity of the rubric. The following reasons could explain the

modest correlation (r = .186). The researcher reviewed policies from 50 states and DC, and defined policy comprehensiveness accordingly. Participants were probably only familiar with policies of their local office, and their definitions of policy comprehensiveness differ from that of the researcher's. In addition, there may exist procedural manuals reserved for office use, and therefore, the rubric scores do not account for these internal documents.

Surprise findings. To my surprise, policy comprehensiveness scores measured by the rubric were not significantly correlated with counselor attitude, addiction counseling self-efficacy, or frequency of procedural practices. One possible explanation was that policies regarding substance use disorders were not actively communicated or implemented so that policies barely influence counselors. Therefore, policy comprehensiveness would not associate with counselor attitude, self-efficacy or frequency of procedural practice. On a scale from 0 to 100, participants rated their level of agreement to statements that VR policies regarding substance use disorders in their current VR offices make sense to them and most staff follow these policies. Participants moderately agreed on the policies making sense, M = 61.45, SD = 30.22. This was also true for their perception on most staff follow these policies, M = 68.41, SD = 29.08. In addition, the nature of the variables of interest provides possible explanations why they did not associate with policy comprehensiveness. The attitude was a relatively stable disposition (Ajzen, 1987). Addiction counseling self-efficacy was a function of experience with a special skill set (Murdock et al., 2005). Researchers also claimed that in an institutional domain, such as education, there was a tendency of disconnecting structure or rules from actual service activity (Meyer & Rowan, 1977). Additionally, significant, positive correlations were found between self-reported policy comprehensiveness and addiction

counseling self-efficacy (r = .288, p < .001) and frequency of procedural practices (r = .295, p < .001). There was also a gap between self-reported policy comprehensiveness (M = 16.30, SD = 5.87) and policy comprehensiveness measured by the rubric (M = 11.17, SD = 7.72). This contrast between counselors' subjective perceptions and objective evaluations of policy comprehensiveness warranted further investigations of policy implementation and counselors' perception of substance use disorders policy and practice

Counselor attitude was not significantly correlated with frequency of procedural practices, aseload size, years of experience, or any policy variables. As mentioned above, the attitude was an enduring disposition (Azjen, 1987). Years of experience was also not significantly correlated with any variables. It was possible that addiction counseling requires specialized techniques not readily captured by full-time employment length at the VR. For reasons above, post-hoc analyses were conducted to further the investigation.

Post-hoc Analyses. The ***Independent Samples t-Tests*** were conducted to compare the counselor attitude, addiction counseling self-efficacy, and frequency of procedural practices scores for states with the top and bottom five policy comprehensiveness scores measured by the rubric (See Table 11). The Levene's test revealed that the equality of variances assumptions were met for all three variables of interest. There were no significant differences in scores for the top and bottom five policy comprehensiveness scores states: counselor attitude [t (81) = .71, p = .94], addiction counseling self-efficacy [t (81) = -.51, p = .61], and frequency of procedural practices [t (81) = -1.35, p = .18]. Although not statistically significant, the top five policy comprehensiveness scores states have higher

mean scores on addiction counseling self-efficacy and frequency of procedural practices, and lower mean scores on counselor attitude.

Table 11

Descriptives for Top and Bottom Five Policy Comprehensiveness Scores States

Variable	Group	Policy Scores	N	Mean	Std Dev.
Counselor Attitude	Bottom	[0, 5]	54	50.86	7.73
	Top	[22, 30]	29	50.72	9.72
Addiction Counseling Self-efficacy	Bottom	[0, 5]	54	4.69	0.53
	Top	[22, 30]	29	4.75	0.53
Frequency of Procedural Practices	Bottom	[0, 5]	54	3.15	0.75
	Top	[22, 30]	29	3.38	0.71

The ***One-way Between-groups Analysis of Variance*** was conducted to explore the impact of years of substance abuse related work experience on levels of counselor attitude, addiction counseling self-efficacy, frequency of procedural practices, self-reported policy awareness, and self-reported policy comprehensiveness. The Levene's *F* test revealed that the homogeneity of variance assumption was not met for addiction counseling self-efficacy ($p < .05$). As such, the Welch's *F* test was used. An alpha level of .05 was used for all subsequent analyses. Statistical significant differences were detected for addiction counseling self-efficacy, Welch's F (3, 59.99) = 8.15, $p < .05$; frequency of procedural practices, F (3, 202) = 10.03, $p < .05$; and self-reported policy awareness, F (3, 194) = 4.39,

$p < .05$. There were no statistically significant differences of mean counselor attitude scores, F (3, 202) = 1.88, $p > .05$ and mean self-reported policy comprehensiveness scores across levels of substance abuse work experience, F (3, 180) = 22.70, $p > .05$. Please refer to Appendix K for the means plots.

Post-hoc comparisons using the Tukey HSD test were conducted. Results demonstrated that the mean addiction counseling self-efficacy score for counselors who reported having more than three years of experience (M =4.94, SD = .48) was significantly higher than counselors who reported having 0 to 1 year of experience (M = 4.59, SD = .56) or no experience (M = 4.41, SD = .67). Mean addiction counseling self-efficacy score for counselors with 1 to 3 years of experience (M = 4.76, SD = .61) was significantly higher than counselors with no experience (M = 4.41, SD = .67). Mean frequency of procedural practices score for counselors who having over three years of substance use disorders experience (M = 3.56, SD = .67) was significantly higher than counselors who reported having 0 to 1 year of experience (M = 3.10, SD = .75) or no experience (M = 2.87, SD = .82). Mean self-reported policy awareness score for counselors who reported having over three years of substance use disorders experience (M = 19.35, SD = 5.54) was significantly higher than counselors who reported having 0 to 1 year of experience (M = 18.50, SD = 4.39) and no experience (M = 15.33, SD = 6.48).

A one-way between-groups analysis of variance was conducted to explore the impact of the personal experience of substance use disorders on levels of counselor attitude, addiction counseling self-efficacy, frequency of procedural practices, self-reported policy

awareness, and self-reported policy comprehensiveness. No statistically significant differences were found.

The one-way between-groups analysis of variance demonstrated that counselor attitude scores were consistently high across different levels work and personal experiences, whereas addiction counseling self-efficacy and frequency of procedural practices differ at levels work experiences. Although not statistically significant, counselors with 0 to 1 years of substance abuse work experience had the lowest counselor attitude scores and the highest self-reported policy comprehensiveness scores. This was probably explained by the great challenge counselors experienced in the first year and a novice understanding of substance abuse work. In general, counselors with over one year of substance abuse work experience or personal experience had a better attitude, higher addiction counseling self-efficacy, and a higher frequency of procedural practices related to substance use disorders.

Implications for Policy

A strong need was signaled for State/Federal VR policy-makers to evaluate their current policies regarding substance use disorders and consider developing a universal baseline service guideline that addresses each of the indicator. For example, procedural practices such as inquiry of substance use, screenings and referrals, and inclusion of recovery plans in IPE could be required in the VR process. Given the degree of inconsistency and insufficiency of current VR policies regarding substance use disorders, clients with this condition were likely underserved or unserved, though counselors reported a positive attitude and high addiction counseling self-efficacy. In addition, policy templates on substance use disorders were already implemented in some VR offices. For example, DC and AR appeared

to have used the same template of substance free policy. Therefore, a national baseline service guideline was needed and feasible. This guideline should address each of the rubric indicators and be accessible to the public.

Implications for Practice

There was a need for State/Federal VR counselors to improve their current service to clients with substance use disorders. Considering the high prevalence rate of substance use disorders on participant's caseload (M = 29.96%), it was concerning that VR counselors reported only sometimes providing procedural practices related to substance use disorders (M = 3.34, SD = 0.76). In addition, access to VR information should be improved. The information on some of the VR website was outdated. For example, one state posted a 2002 version of their policy manual online. The staff was surprised that it was so when inquired, but had to confirm with the researcher that the 2002 version should be credible to reference.

More training on substance use disorders should be provided and better communicated in the VR office. Most participants (45.1%) reported that their current VR offices did not provide training related to substance use disorders, and another 16.7% of participants were not sure if their current offices provided any training related to substance use disorders. In addition, most participants (83.3%) who reported that their current offices provide training have attended workshops provided by VR. This indicated that VR counselors were willing to attend training related to substance use disorders, despite their high workload. Based on VR counselors' self-report in the survey, training is needed to address employers' bias, relapse prevention, transportation, and legal problems. Results from

this study also indicated that training could have a focus on improving frequency of procedural practices.

Implications for Research

Validation of the rubric should be conducted with more raters. In the current study, two raters reported that additional categories might be added to address nuances in policy comprehensiveness. In addition, VR counselors' feedback of the rubric was needed to provide information from the practitioner's perspective. The rubric validation can also be conducted in a different language and extend current findings to a wider audience of researchers and practitioners.

Policy implementation and client outcome should also be addressed in future studies. In the current study, policy comprehensiveness measured by the rubric has a modest correlation with self-reported policy comprehensiveness, and it was not significantly correlated with variables of interest. Additional investigations on counselors' implementation of policies were needed to understand how policies influence service. For example, a qualitative inquiry can be conducted to investigate counselors' implementation of VR policies regarding substance use disorders. The client outcome also needed to be integrated into future studies to connect the entire service line of policy, practice, and outcome.

Limitations and Additional Research Directions

The results of this study must be interpreted within the context of its limitations. There were several directions for further research on service to clients with substance use disorders in State/Federal VR.

More rigorous qualitative and quantitative methods could be implemented to strengthen the rubric development process. Consensus methods with more rounds of discussions, such as the Delphi study, can be used to guide the discussions of rating scores. In the future, a study on rubric validation with a fully-crossed design is needed, which allows analysis of variance at the item level using the G-coefficient.

In the VR counselor survey study, participants voluntarily and self-selected to participate in the research project. The cross-sectional design of the study prohibited making any causal inferences. The survey participation response rate was only 17%, and therefore, undermined the representativeness of the sample. Importantly, since my sample was a subset of people identified as VR counselors at the time they register for the CRC, my results might not generalize to VR counselors who were not CRCs. One respondent indicated in an email to the researcher that the VR counselors were experiencing extra pressure due to an end of the year evaluation and new changes in the Workforce Innovation and Opportunity Act. Several respondents emailed the researcher stating that their office had a strict research participation policy, and they were not allowed to complete a counselor survey unless approved by their supervisors. Replication using larger samples from VR offices at counselors' time of convenience was needed to confirm my preliminary findings.

Another limitation of this study was the instrumentation and measurement of the participants' addiction counseling self-efficacy and their frequency of procedural practices. Two of the three instruments used in this study needed additional psychometric validation. The researcher combined the items for frequency of procedural practices into a single scale to improve the overall reliability of the measure, though it did not measure a latent construct.

Prior researchers indicated that psychometric validations were not necessary when items were not measuring a latent construct (Pedhazur & Schmelkin, 1991). The current study provided concurrent validity evidence for the addiction counseling self-efficacy scale, as demonstrated by a significant, positive correlation between general self-efficacy and addiction counseling self-efficacy ($r = .302$, $p < .001$). Future studies should investigate psychometric properties of the addiction counseling self-efficacy scale using Exploratory Factor Analysis and Confirmatory Factor Analysis, since considerable changes were conducted to capture VR counselors' characteristics (Dimitrov, 2014).

Conclusions

The purpose of this study was to conduct a systematic review of State/Federal VR policies related to substance use disorders, and explore relationships among policy comprehensiveness, counselor attitude, addiction counseling self-efficacy, frequency of procedural practices related to substance use disorders, years of experience, and caseload size. Correlational statistics demonstrated significant correlations among many variables of interest. Strengths of this study included the comprehensive review of State/Federal VR policies and procedures, random selection of 25 states in the rubric development process, and a national survey of VR counselor.

In the Phase I of this study, the VR Substance Use Disorders Policy and Procedure Scoring Rubric was developed and demonstrated as a viable tool for VR educators, researchers, and practitioners. Based on descriptive statistics provided by this rubric, State/Federal VR policies and procedures regarding substance use disorders were insufficient and inconsistent. The findings emphasized the need to further investigate VR policies and

procedures related to substance use disorders and establish a national baseline service guideline that addresses each of the rubric indicators.

In the Phase II of this study, significant correlations were found among counselor attitude, addiction counseling self-efficacy, and frequency of procedural practices. VR counselors should provide more procedural practices related to substance use disorders to their clients. Although policy comprehensiveness measured by the rubric was not found to be significantly correlated with variables of interest, future studies on policy implementation and client outcome were needed to further the investigation. VR counselors should provide more procedural practices related to substance use disorders to better serve this population. More VR training on substance use disorders should be provided and better communicated.

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APPENDIX A: VR SUBSTANCE USE DISORDERS POLICY AND PROCEDURE SCORING RUBRIC

	0	**1**	**2**	**3**
Application and intake Initial contact with clients and inquiry of clients' reasons for service, with consideration of substance use.	No information	Minimally mention inquiry of substance use in intake.	Adequately address guidelines and areas of consideration for counselors to inquire clients' substance use.	Comprehensively explain whether counselors ask about clients' substance use during intake, and major areas of consideration for such inquiry, such as explaining the agency substance free policy. Provide information regarding further screening or referral to be conducted with consultation on pertinent matters.
Assessment and screening Evaluation of clients' substance use, and the	No information	Minimally mention substance assessment and screening.	Adequately address substance assessment and screening, and provide referral guidelines and/or resources for such	Comprehensively emphasize assessment and screening for substance use, situations these tests might be

availability of instruments or other resources to use.			assessment or screening.	initiated, and provide detailed information such as standardized instruments/tests for assessment, payment options, and referral guidelines for further assessment.
Eligibility determination Determine whether clients with substance use problems can receive VR services, and conditions that clients need to meet.	No information	Minimally mention substance use as an area of consideration in eligibility determination processes.	Adequately address guidelines for clients with substance use disorders with limited detail.	Comprehensively state guidelines for major areas of consideration with detail, such as documented SUD diagnosis from a licensed professional, functional limitations related to employment, sobriety waiting period, treatment, current use, commitment to recovery, substance type, etc..
Individualized Plan for Employment	No information	Minimally mention substance use as an area of consideration in IPE.	Adequately address importance of clients' substance use and/or risks	Comprehensively emphasize detailed integration of substance

A comprehensive plan for clients to obtain or retain a job, with consideration for their substance use.			of not addressing.	use consideration into clients' IPE. List major areas to be considered, such as relapse, treatment, recovery group attendance, and abstinence.
Due process/disciplinary actions Punitive actions and service restoration related to clients' substance use.	No information	Minimally mention due process/disciplinary actions would be taken for substance-related violations.	Adequately address disciplinary actions to be taken for substance-related violations. No detailed information regarding resuming service is provided.	Comprehensively state clients' responsibilities related to substance use, and specifics of violation of substance policy. Provide detailed due process/disciplinary actions and how to resume service (i.e. exact to days).
Release of information Disclosing clients' information related to substance use, such as substance use disorders	No information	Minimally mention confidentiality is protected and consent is needed for release of information regarding clients' substance use.	Adequately address release of information policy, and supported with state laws. No confidentiality information regarding children's substance use	Comprehensively explain release of information policy related to clients' substance use, parental access to children's substance use record, and situations that this

treatment records and drug offense history.			record is provided.	confidentiality might be breached. Supported by listing state and federal laws.
Case closure Termination and closure of a VR case related to substance use.	No information	Minimally mention substance-related case closure.	Adequately address case closure decision making process related to substance use with limited detail.	Comprehensively explain case closure decision making process related to clients' substance use.
Referral Referring clients to programs or agencies for substance-related problems, such as a substance abuse treatment center.	No information	Minimally mention referral for clients' with substance-related problems.	Adequately address referral process and resources for substance-related problems with limited detail.	Comprehensive explain referral process for substance-related problems, and list specific referral resources, such as licensed professionals and collaborating agencies.
Cautions for substance use disorders Special considerations for	No information	Minimally mention complexity for clients with substance use disorders.	Adequately address cautions for clients with substance use disorders with limited detail.	Comprehensively explain cautions for clients with substance use disorders, such as transportation, legal services,

clients with substance use related problems.				co-occurring conditions, child care, inconsistent employment history, and etc.. Provide guidelines on how to integrate such cautions in service.
Format How substance use disorders related information is organized.	No information and/or just mention agencies names	Minimally mention substance, drug, alcohol or addiction (not just in the form of SMHSA or other agency names) with no concrete policy or procedure.	Brief sub-section(s) under other sections (e.g. eligibility, disciplinary actions) as special situations.	A standalone comprehensive section or separate manual that covers major vr procedures (e.g. definition of substance use disorders, intake, eligibility, assessment, IPE consideration, disciplinary actions, release of information, etc.)

APPENDIX B: POLICY AND PROCEDURE COMPREHENSIVENESS SCORES FOR FIFTY STATES AND DC

X - Researcher
A - Rater A
B - Rater B
C - Rater C
D - Rater D
→ - Change post discussion
=> - Change post final review
? - missing

The 25-state (including DC) sample used in the rubrics development												
States/DC	rater	intake	assessment	eligibility	IPE	due process	release of info	closure	referral	cautions	format	sum
Alaska	X	0	1	2	1	0	0	0	0	0	2	6
Arkansas	X	3	3	3	1	3	0	3	2	1	3	22
Colorado	X	1	1	1→0	0	0→1	0	1	0	3	2	9
	A	1	2→1	0	1	2→1	0	0→1	1→0	1→3	1	9
District of	X	3	3	0	2	3	0	3	1	0	3	18

Columbia												
Florida	X	0	1	2	0	0	0	0	0	2	2	7
	C	1	?→1	2	2→0	3→0	3→0	3→0	3→0	2	?→2	8
Indiana	X	0	2	2	0	1	0	1	0	2	2	10
	C	?→0	0→2	3→2	0	1	0	0→1	1	2	?→2	11
Louisiana	X	0	0	0	0	0	0	0	0	0	1	1
Maine	X	0	0	0	0	0	0	0	0	0	0	0
Maryland	X	3	2	3	1	0	3	0	1	3	3→2	18
	C	2→3	3	3	0→1	1→0	3	0	1	2	?→2	18
Massachusetts	X	0	0	0	0	0	0	0	0	0	1	1
	C	0	0	0	0	0	0	0	0	0	?→1	1
Michigan	X	2	3	3	3	2	1	1	2	2	3	22
Minnesota	X	0	0	0	0	2	0	1	0	0→1	2→1	5

	A	0	1	0	0	1→2	0	0→1	0	1	0→1	6
	B	0	0	0	0	2	0	0→1	0	0→1	0→1	5
	C	0	0	1→0	0	1→2	0	0→1	1→0	2	?→1	6
Nebraska	X	0	0	0	0	0	0	0	0	0	1	1
	A	0	0	0	1→0	0	0	0	0	0	0→1	1
	B	0	0	0	0	0	0	0	0	0	0→1	1
	D	0	0	0	0	0	0	0	0	0	0→1	1
New Jersey	X	3	3	3	3	3	3	3	3	3	3	30
New York	X	2	2	2	1→2	2→1	0→2	2	0→1	3	3	20
	B	0→2	0→1	1→2	0→2	0→1	2	0→1	1	1→3	0→3	18
North Carolina	X	2→1	2	3	1	1	1	0	2→3	3	3→2	17
	B	0→1	2	2→3	1	0→1	0→1	0	1→2	2	2	15

	D	0→1	1→2	2	1	1	1	0	1→2	1→2	1→2	14
Ohio	X	1	0→1	0	0	0	0	1	0→1	0	1	5
	A	1	1	1	3→0	0	0	2→1	1	1	0→1	7
Oregon	X	0	0	0	0	0	2	0	0	0	0=>1	3
	D	0	0	0	0	0	1	0	1→0	0	0=>1	2
Pennsylvania	X	1	0→1	0→1	0	0	2	0	1	0	1→2	8
	A	1	2→1	1	0	0	1→2	0	1	1	1	8
	D	1	1	1	1	0	0→2	1	0→1	0	3→2	10
Tennessee	X	0	0	0→1	0	0	0	0	0	0	1	2
	D	0	0	1	0	0	0	0	0	0	1	2
Virginia	X	2	3	3	3	3	3	3	3	3	3	29
Washington	X	2	3	2	2	2	3	1	3	2	3	23
West Virginia	X	0	1	2	0	0	0	0	1	2	2	8

Wisconsin	X	0	0	0=>1	0	0	0	0	0→1	0=>1	1	4
	B	0	0	0=>1	0	0	0	0	1	0=>1	0→1	4
Wyoming	X	0	0	1	0	0	0	0	1	0	2	4
Additional 26 states												
states	rater	intake	assessment	eligibility	IPE	due process	release of info	closure	referral	cautions	format	sum
Alabama	X	0	0	0	0	0	0	0	0	2	1	3
Arizona	X	0	1	3	1	0	1	0	0	2	3	11
California	X	1	1	1	0	0	2	0	0	1	2	8
Connecticut	X	0	0	1	1	0	2	0	1	0	2	7
Delaware	X	1	1	1	0	0	0	0	1	0	2	6
Georgia	X	0	1	3	0	0	0	0	2	1	2	9
Hawaii	X	0	0	0	0	0	0	0	0	0	0	0

Idaho	X	0	1	0	0	0	0	0	0	2	1	4
Illinois	X	0	1	0	0	2	1	1	1	0	2	8
Iowa	X	0	1	1	1	0	3	0	1	1	2	10
Kansas	X	0	1	1	1	0	0	0	2	1	2	8
Kentucky	X	1	2	3	3	2	0	2	3	3	3	22
Mississippi	X	1	0	1	0	0	0	0	1	0	1	4
Missouri	X	0	2	2	3	0	0	0	1	1	2	11
Montana	X	1	1	2	1	2	0	2	1	0	2	12
Nevada	X	1	3	3	1	2	3	2	2	3	3	23
New Hampshire	X	0	0	0	0	0	0	0	0	0	1	1
New Mexico	X	0	1	0	0	0	0	0	1	1	1	4
North Dakota	X	3	3	3	3	2	1	3	1	3	3	25

Oklahoma	X	0	1	3	1	1	2	1	1	2	2	14
Rhode Island	X	0	1	1	0	2	2	1	1	0	2	10
South Carolina	X	2	2	3	1	2	1	1	3	3	3	21
South Dakota	X	0	0	0	0	0	0	0	1	0	1	2
Texas	X	1	1	1	3	1	0	1	1	0	2	11
Utah	X	0	1	1	1	0	0	0	1	0	1	5

APPENDIX C: DISCUSSION RECORD

Rater A Background

Rater A is a third-year doctoral candidate in the Counselor Education and Supervision program at Penn State University. She has a master's degree in Rehabilitation Counseling, and she is a Certified Rehabilitation Counselor. Rater A has over three years of experiences working with college students with disabilities as a disability specialist, and over two years of working experiences at a hospital as a rehabilitation counselor. Rater A has a research interest in dual diagnosis of mental health and substance use disorders. She also has extensive training on statistics and research design.

Discussions

Rater A and the researcher discussed the scores on 5/10/2016 via Google hangout at EST 10PM-11PM. The researcher emailed Rater A a copy of the summary scores (See Initial ratings) and the rubrics prior to the discussion. The researcher first thanked the rater for her time. The researcher then explained that the goals for this discussion were to address the differences in scores, to gain feedback, and to improve the rubrics. The researcher also stated that the rater did not have to change her scores to be the same as the researcher's after their discussion. The rater was only expected to change scores when she felt necessary. The researcher then went through each state and discussed the scores they have differences in one by one.

CO

Rater A shared that she counted verbal inquiries as assessment, rather than using instruments. The researcher stated that there was no information regarding assessment guidelines, such as license requirements for assessment professionals. This was required for a rating of two for assessment. Rater A then decided to change her score from two to one.

Rater A pointed out that the eligibility determination related to substance use disorders was not specifically talked about in the documents. The researcher thought it was implied from the services that clients could get. The researcher then decided to change her score from one to zero.

Rater A reported that VR counselors in CO obviously need to consider clients' substance use disorders in their IPE, since there were extensive discussions on Marijuana. The researcher pointed out that this is implicit information, and the rater agreed. The researcher decided to change her score from zero to one. Rater V decided to change her score from two to one.

The researcher explained that CO counselors might close the case as a success if clients found positions in the marijuana industry. Rater A decided to change her score from zero to one.

Rater A agreed with the researcher that there was no information regarding referring clients for substance use disorders. Rater A decided to change her score from one to zero.

The researcher pointed out that there were extensive legal case examples and explanation of the differences between state and federal marijuana policies. Rater A agreed and decided to change her score from zero to three.

Rater A decided to keep her score of one for the format, since there were no concrete policies and procedures. The researcher kept her score of two, considering that there was an independent section for marijuana.

MN

Rater A considered it was implied from the documents that VR counselors in MN would conduct inquiries of clients' substance use as a form of assessment, since there were mandatory reporting policies regarding prenatal substance use. The researcher considered this was indirect information, rather than standardized assessment procedures. Rater A decided to keep her rating of one, and the researcher decided to keep her rating of zero.

The researcher pointed out that the policy documents specified the consequences and protocols of disruptive behaviors, which include substance abuse. The rather agreed and decided to change her score from one to two.

The researcher pointed out that clients with disruptive behaviors, such as substance abuse, may result in termination of services. The researcher considered this a form of closure. Rater A agreed and then changed her score from zero to one.

Rater A explained that the documents discussed consequences of substance abuse, which indicated the complexities of substance use. The researcher decided to change her score from zero to one.

The researcher shared that a state would be rated zero only when there is no information or only agency names regarding substance in the documents. Since MN has information regarding disruptive behaviors, such as substance abuse, it should not be rated zero. Rater A then agreed to change her ratings from zero to one for the format. The researcher changed her score from two to one.

NE

Rater A re-examined her rating for IPE of one, and she could not identify the rationale of her rating. She decided to change her rating from one to zero.

The researcher shared that a state would be rated zero only when there is no information or only agency names regarding substance in the documents. Since NE has a history of serving clients with substance abuse according to the policy documents, it should not be rated zero. Rater A then agreed to change her ratings from zero to one for the format.

OH

Rater A stated again there was inquiry regarding clients' substance use, and it should be counted as a form of assessment. To illustrate, the counselors in OH VR are obligated to

identify if clients' current residence is a substance abuse treatment facility. The researcher then agreed to change her score from zero to one.

Rater A rated IPE as three, but she could not identify the rationale for her rating after re-examination of OH policy documents. She decided to change it to zero.

The researcher explained that the closure has to be directly substance abuse related to be rated two, according to the rubrics. Rater A then decided to change her score from two to one.

Rater A reported that OH VR collaborated with addictions services to serve mutually eligible individuals. In addition, counselors need to identify if clients are from substance abuse treatment facilities. It is implied that there were referral mechanisms. The researcher decided to change her rating from zero to one.

Rather V explained that it was implied from the documents that there were substance abuse related closure. The researcher considered that there were no direct closure information regarding substance use, thought there were general closure requirements. Rather V decided to keep her rating of one. The researcher decided to keep her rating of zero.

The researcher shared that a state would be rated zero only when there is no information or only agency names regarding substance in the documents. Since OH has

assessments and referrals for clients with substance use disorders, it should not be rated zero. Rater A then agreed to change her ratings from zero to one for the format.

PA

Rater A pointed out that drug screening is recommended to identify appropriate candidate to hire. There were also inquiries of past treatment experiences in the document specifically for clients with substance abuse. The researcher explained that there was no information regarding assessment resources or guidelines, such as assessed by a certified addictions personnel. Rater A agreed to change her score from two to one. The researcher agreed and changed her score from zero to one.

Rater A explained that the document for clients with substance abuse in VR has a section on eligibility determination. The context should be given a score of one, though the content was general. The researcher agreed and changed her score from zero to one.

The researcher explained that there were specific state laws related to release of information, and it should be rated as two based on the rubrics. Rater A agreed, and changed her score from one to two.

Rater A pointed out that it is implied from the documents that substance abuse is a complicated issue among VR clients. The researcher considered that there was no direct information about the specific complexities, such as relapse. Rater A decided to keep her score of one, and the researcher decided to keep her score of zero.

Additional feedback

Rater A reported that the rubric is applicable to the state policy documents she read. She stated that it was easy to distinguish zero and three, but the differences between one and two are vague. She also said that people have own ideas about what “minimally” and “adequately” entail. Rater A also shared that she’s likely to rate “adequately” if the documents have more than one sentence for the section. Rater A shared that she felt much clearer after this discussion. She suggested training raters with specific examples would be a good idea for future research endeavors related to this rubric.

Initial ratings

A-Rater A

X-Researcher

State	Rater	Intake	Assessment	Eligibility	IPE	Due process	Release of Info	Closure	Referral	Cautions	Format
CO	A	1	2	0	1	2	0	0	1	1	1
	X	1	1	1	0	0	0	1	0	3	2
MN	A	0	1	0	0	1	0	0	0	1	0
	X	0	0	0	0	2	0	1	0	0	2
NE	A	0	0	0	1	0	0	0	0	0	0
	X	0	0	0	0	0	0	0	0	0	1
OH	A	1	1	1	3	0	0	2	1	1	0
	X	1	0	0	0	0	0	1	0	0	1
PA	A	1	2	1	0	0	1	0	1	1	1
	X	1	0	0	0	0	2	0	1	0	1

Final ratings

A-Rater A

X-Researcher

State	Rater	Intake	Assessment	Eligibility	IPE	Due process	Release of Info	Closure	Referral	Cautions	Format
CO	A	1	1	0	1	1	0	1	0	3	1
	X	1	1	0	0	1	0	1	0	3	2
MN	A	0	1	0	0	2	0	1	0	1	1
	X	0	0	0	0	2	0	1	0	1	1
NE	A	0	0	0	0	0	0	0	0	0	1
	X	0	0	0	0	0	0	0	0	0	1
OH	A	1	1	1	0	0	0	1	1	1	1
	X	1	1	0	0	0	0	1	1	0	1
PA	A	1	1	1	0	0	2	0	1	1	1
	X	1	1	1	0	0	2	0	1	0	1

Rater B Background

Rater B has a master's degree in Mental Health Counseling, and he is a Licensed Clinical Mental Health Counselor. He is currently a doctoral candidate in the Counselor Education and Supervision program at the Penn State University. He worked for almost two years as a crisis counselor with individuals with co-occurring disorders. His work in this position included assessing safety, psychosis, type of substance used and the amount and duration of use. This helped determine whether referral to a detox program was appropriate, if a voluntary dual diagnosis was appropriate, or if involuntary dual diagnosis placement was needed. After this work, Rater B worked for approximately two years on an NIAAA-funded research grant conducting brief motivational interventions with Emergency Room patients who were identified as high alcohol use and risky sexual behavior. They used the Audit to assess current and lifetime diagnosis of substance abuse/dependence according to the DSM-IV-TR. Upon completion of the baseline assessment, they would utilize motivational interviewing in conjunction with feedback from the baseline in an intervention. He has been trained in Motivational Interviewing as well. Rater B has extensive training in counseling and research.

Discussions

Rater B and the researcher discussed the scores on 6/1/2016 via Google hangout at EST 10AM-11:40AM. The researcher emailed Rater B a copy of the summary scores (See

Initial ratings) and the rubrics before the discussion. The researcher first thanked the rater for his time. The researcher then explained that the goals for this discussion were to address the differences in scores, to gain feedback, and to improve the rubrics. The researcher also stated that the rater did not have to change his scores to be the same as the researcher's after their discussion. The rater was only expected to change scores when he felt comfortable to do so. The researcher then went through each state and discussed the scores they have differences in one by one.

NE

The researcher shared that a state would be rated zero only when there is no information or only agency names regarding substance in the documents. Since NE has a history of serving clients with substance abuse according to the policy documents, it should not be rated zero. Rater B then agreed to change his ratings from zero to one for the format. The researcher kept her rating of one.

NC

The researcher pointed out that there were extensive discussions on drug screening services for clients. It is implied from the document that the VR counselors would inquire about clients' use. Rater B agreed, and he decided to change his score from zero to one. The researcher kept her rating of one.

The researcher pointed out that there was much information on eligibility, such as diagnosis, program Caramore, severity of substance use disorders. Rater B agreed that information was detailed, but he considered it more than adequate and less than comprehensive. He eventually decided to change his score from two to three, since he considered it closer to comprehensive. The researcher kept her rating of three.

The researcher pointed out that individuals refuse to attend drug screening as required may result in suspension of service. Rater B agreed and changed his rating from zero to one for due process. The researcher kept her rating of one.

The researcher pointed out that according to the *Casework and service* document, clients with substance use disorders need to sign a release of confidential information to allow any release of such information from VR to a treating physician. Rater B agreed and changed his rating from zero to one.

The researcher pointed out that there were extensive discussions on release of information guidelines, referral resources, and reports write-up. Rater B explained that he didn't find the information when he searched for the key word referral. Rater B stated that he also examined "if information is organized in a way that makes it easy to find". He considered it "not clear enough for clients and employees". (This is further discussed in the the *Additional feedback* section.) Rater B decided to change his rating from one to two for the referral. The researcher kept her rating of three.

The researcher explained that in the *Statewide assessment* document, there were extensive discussions on the cautions for people with substance use disorders. There was also real-life stories from counselors (i.e. Clients did not go to a scheduled interview because they would fail the drug test). Rater B acknowledged this and he believed it was a "2.5" to him again, and this time it is closer to a two. Rater B then decided to keep his rating of two for the cautions. They researcher kept her rating of three.

The researcher acknowledged that the information related to substance use disorders was provided in subsections and an appendix. The researcher gave a rating of three for the format from a general perspective. Rater B stated that though there was an appendix, it was brief with limited information. For him, it would be more comprehensive if the page number was indicated for this appendix, so that "individuals don't have to hunt for the information". The researcher agreed with this and changed her rating from three to two for the format. Rater B kept his rating of two.

NY

The researcher pointed out that there was a section in the technical brief document for substance use disorders, which includes information on the inquiry of substance use in application. For example, VR counselors need to access if clients would be discharged in a reasonable amount of time from their treatment facilities. Substance use inquires were also discussed for other types of disabilities, such as acquired brain injury, HIV/AIDS, and

mental illnesses. Rater B agreed and reported that he did not find relevant information when he searched for intake. He decided to change his rating from zero to two for intake. The researcher kept her rating of two.

The researcher pointed out that there were extensive discussions on readiness for VR service, a list of considerations, and there was a section on assessment policy. Rater B decided on change his rating from zero to one for assessment. The researcher decided to keep her rating of two.

The researcher pointed out that there were discussions on the eligibility of clients with substance use disorders, time line consideration for discharge from treatment facilities, period of abstinence, and certified addiction professionals' endorsement. There was also an eligibility determination section in the technical brief for substance use disorders. Rater B then agreed and changed his rating from one to two for eligibility. The researcher kept her rating of two.

The researcher pointed out the there were discussions on developing an individualized plan in the technical brief for clients with substance use disorders. Much of the information was about assessment needed for developing a plan, but not specific recovery activities, such as going to meetings several times a week. Therefore, the rater would like to change her score from one to two. Rater B agreed and decided to his rating from zero to two for IPE. The researcher changed her rating from one to two.

The researcher pointed out in the *Technical assistance brief* document, it was stated that “a slip” would not constitute a relapse automatically and counselors need to assess the situation and provide treatment as appropriate. Since this wasn’t directly stated as discussions on violation of drug policies and due process, the researcher decided to change her rating from two to one. Rater B then agreed and changed his rating from zero to one for due process.

The researcher acknowledged that there were discussions on laws for the release of information. She decided to change her ratings from zero to two for the release of information. Rater B kept his rating of two.

The researcher pointed out that “a slip” would not constitute a relapse automatically, and even if clients relapsed, the termination decision should be made in consultation with a treatment team. Rater B considered it more than zero, but not adequate to be rated as two. Rater B decided to change his rating from zero to one. The researcher kept her rating of two.

The researcher explained that she gave it a zero because she didn’t find specific referral information regarding substance use disorders. She wanted to change her score from zero to one because there were extensive discussions on treatment facilities and diagnosing professionals, which implied referral mechanisms related to substance use disorders in the VR. There was also a section on referral for substance use disorders in the *Technical assistance brief* document. Rater B it was a “1.5”, but it was closer to one. This was because

the information was not adequate enough to be rated as two. Rater B then decided to keep his rating of one for the referral. The researcher changed her rating from zero to one.

The researcher pointed out that the *Technical assistance brief* provided comprehensive information regarding substance use disorders, such as relapse prevention, childcare needs, legal considerations, employment history, and co-occurring conditions, which represented the complexities of substance use disorders. Rater B acknowledged it and stated that there were medical conditions related to substance use disorders. Rater B changed his rating from one to three for the cautions. The researcher kept her rating of three.

The researcher explained that she rated the format as three because there was a comprehensive technical brief for substance use disorders, which should be rated as three based on the rubrics. Rater B agreed and changed his rating from zero to three for the format. He explained that he gave it a zero because he was not able to locate the information. The researcher kept her rating of three.

MN

The researcher pointed out that clients with disruptive behaviors, such as substance abuse, may result in the termination of services. The researcher considered this a form of closure. Rater B agreed and then changed his score from zero to one.

The researcher pointed out that there was a discussion on the prenatal use of substances, which constituted a form of cautions for clients with substance use disorders.

Rater B agreed and changed his rating from zero to one for the cautions. The researcher kept her rating of one.

The researcher shared that MN has information regarding disruptive behaviors, such as substance abuse, it should not be rated zero based on the rubric. Rater B agreed to change his ratings from zero to one for the format. The researcher kept her score of one.

WI

The researcher acknowledged that it was implied from the documents that referral related to substance use disorders are included in VR services, since there were collaborations between VR and addictions agencies. Rater B kept his score of one. The researcher decided to change her rating from zero to one.

The researcher shared that a state would be rated zero only when there is no information or only agency names regarding substance in the documents. Since WI VR provides information on legal guidelines for clients with addiction, it should not be rated zero. Rater B then agreed to change his ratings from zero to one for the format. The researcher kept her rating of one.

Additional feedback

Rater B reported that he struggled with the difference between adequate and comprehensive. He considered that there are several items “more than two and less than three”. He struggled with how to rate a “2.5”. On a scale from zero to 100 percent of

information, he stated that a rating of zero means 0-9% of information; a rating of one means 10-35% of information; a rating of two means 36-75% of information; and a rating of three means 76-100% of information. Rater B stated that "adequate" (a rating of two) means some information, and "comprehensive" (a rating of three) means very detailed and thorough. He proposed the wording for a rating of 2.5 should be "thorough".

Rater B said that the rubric is applicable for the states that he rated. He found the rubric helpful for identifying relevant information and scoring. Rater B also stated that his scores might be conservative due to his background of crisis work. He said that when he worked as a crisis counselor, he had to complete a two-page check list for clients' substance use. He stated that he might have "stricter filter with that lenses".

Rater B reported that he used the search of the item title (e.g. intake, assessment, and IPE) rather than key words (i.e. substance, addition, drug, and alcohol), which made him miss some of the information he needed to rate. For example, he typed in referral, but he didn't get any relevant information. He found more relevant information when he looked at other sections. Rater B reported several times during the discussion that he had difficulty finding relevant information, so that his scores were compromised. Rater B pointed out that accessibility of information should also be considered as a criterion for the format, besides general organization of information. He noticed that a lot of the information was scattered and not easily accessible, and "that took it down much". Rater B highlighted it important to

consider how easy people can access the information. He said the information regarding substance use disorders would be difficult to locate for clients and counselors in some states.

Initial ratings

B-Rater B

X-Researcher

State	Rater	Intake	Assessment	Eligibility	IPE	Due process	Release of Info	Closure	Referral	Cautions	Format
NE	B	0	0	0	0	0	0	0	0	0	0
	X	0	0	0	0	0	0	0	0	0	1
NC	B	0	2	2	1	0	0	0	1	2	2
	X	1	2	3	1	1	1	0	3	3	3
NY	B	0	0	1	0	0	2	0	1	1	0
	X	2	2	2	1	2	0	2	0	3	3
MN	B	0	0	0	0	2	0	0	0	0	0
	X	0	0	0	0	2	0	1	0	1	1
WI	B	0	0	0	0	0	0	0	1	0	0
	X	0	0	0	0	0	0	0	0	0	1

Final ratings

B-Rater B

X-Researcher

State	Rater	Intake	Assessment	Eligibility	IPE	Due process	Release of Info	Closure	Referral	Cautions	Format
NE	B	0	0	0	0	0	0	0	0	0	1
	X	0	0	0	0	0	0	0	0	0	1
NC	B	1	2	3	1	1	1	0	2	2	2
	X	1	2	3	1	1	1	0	3	3	2
NY	B	2	1	2	2	1	2	1	1	3	3
	X	2	2	2	2	1	2	2	1	3	3
MN	B	0	0	0	0	2	0	1	0	1	1
	X	0	0	0	0	2	0	1	0	1	1
WI	B	0	0	0	0	0	0	0	1	0	1
	X	0	0	0	0	0	0	0	1	0	1

Rater C Background

Rater C is a fourth-year doctoral candidate in the Counselor Education and Supervision program at Penn State University. At the time of this discussion, she has passed her dissertation defense. C has a master's degree in Rehabilitation Counseling, and she is a Certified Rehabilitation Counselor. Rater C has over one year of experience working as a rehabilitation counselor at a rehabilitation agency, over two years of experiences working with college students with disabilities as a disability specialist, and over one year of research/clinical experience at an HIV/AIDS project operated by the Department of Health. Rater C has a research interest in vocational rehabilitation and HIV/AIDS. She also has extensive training in statistics and research design.

Discussions

Rater C and the researcher discussed the scores on 6/06/2016 face-to-face at EST 3PM-4PM. The researcher emailed Rater C a copy of the summary scores (See Initial ratings) and the rubric prior to the discussion. The researcher also sent the policy documents and rater C's rating responses as requested. The researcher first thanked the rater for her time. The researcher then explained that the goals for this discussion were to address the differences in scores, to gain feedback, and to improve the rubric. The researcher also stated that the rater did not have to change her scores to be the same as the researcher's after their discussion. The rater was only expected to change scores when she felt necessary. The

researcher then went through each state and discussed the scores they have differences in one by one.

FL

The researcher stated that there was no direct information related to substance use disorders in the intake. Rater C stated that it was implied that VR counselors would address substance use disorders in the intake since there was a preliminary assessment form with such topic. Rater C decided to keep her ratings of one. The researcher kept her rating of zero.

The researcher stated that current assessment was needed for substance use disorders. Rater C then agreed to score it as one. The researcher kept her rating of one.

The researcher pointed out that there was no information related to substance use disorders for IPE. Rater C reported that she rated it as two for the general IPE. She then agreed to change her rating from two to zero. The researcher kept her rating of zero.

The researcher pointed out that there was no information related to substance use disorders for due process. Rater C reported that she rated it as three for the general due process. She then agreed to change her rating from three to zero. The researcher kept her rating of zero.

The researcher pointed out that there was no information related to substance use disorders for the release of information. Again, Rater C reported that she rated it as three for

the general release of information. She then agreed to change her rating from three to zero. The researcher kept her rating of zero.

The researcher pointed out that there was no information related to substance use disorders for closure. Rater C reported that she rated it as three for the general closure. She then agreed to change her rating from three to zero. The researcher kept her rating of zero.

The researcher pointed out that there was no information related to substance use disorders referral. Rater C reported that she rated it as three for the general referral. She then agreed to change her rating from three to zero. The researcher kept her rating of zero.

The researcher pointed that the information related to substance use disorders was provided in subsections, which should be rated as two based on the rubric. C then agreed to rate it as two. The researcher kept her rating of two.

IN

The researcher pointed out that there was no information related to substance use disorders for intake. C then agreed to rate it as zero. The researcher kept her rating of two.

The researcher pointed out that screening procedure is required. VR counselor in IN needs to inquire the frequency and degree of substance use, and to require participation in a supervised alcohol or drug rehabilitation program as appropriate. Rater C then agreed to change her score from zero to two.

The researcher pointed out that though much information was provided for eligibility, no detailed guidelines such as a documented substance use disorders diagnosis from a licensed professional were available. Rater C then agreed to change her score from three to two. The researcher kept her rating of two.

Rater C explained that her rating should be zero for information related substance use disorders for IPE. She wasn't sure about how to rate, so that she also gave a rating for the general IPE. The researcher kept her her rating of zero.

Rater C explained that her rating should be one for information related substance use disorders for due process. She wasn't sure about how to rate, so that she also gave a rating for the general due process. The researcher kept her her rating of one.

Rater C explained that her rating should be zero for information related substance use disorders for the release of information. She wasn't sure about how to rate, so that she also gave a rating for the general release of information. The researcher kept her her rating of zero.

Rater C explained that her rating should be zero for information related substance use disorders for closure. She wasn't sure about how to rate, so that she also gave a rating for the general due process. The researcher pointed out that refusal to screening might result in termination of service. Rater C then agreed to change her score from zero to one. The researcher kept her her rating of one.

The researcher stated that there was no direct information related to substance use disorders referral. Rater C stated that it was implied that VR counselors would organize such referral since there was information regarding forming a treatment team for clients with substance use disorders. Rater C decided to keep her ratings of one. The researcher kept her rating of zero.

The researcher pointed that the information related to substance use disorders was provided in subsections, which should be rated as two based on the rubric. C then agreed to rate it as two. The researcher kept her rating of two.

MA

The researcher pointed that the information related to substance use disorders was minimally mentioned, which should be rated as one based on the rubric. C then agreed to rate it as one. The researcher kept her rating of one.

MD

The researcher stated that there was extensive information related to substance use disorders in the intake, such as substance use information sheet, and definition of recovery. Rater C then agreed to change her ratings from two to three. The researcher kept her rating of three.

The researcher stated that there was extensive information related to substance use disorders in the intake, such as substance use information sheet, and definition of recovery.

Rater C then agreed to change her ratings from two to three. The researcher kept her rating of three.

The researcher pointed out that though much information was provided for assessment, no detailed information such as lists of instruments was provided. Rater C considered it to be comprehensive enough to be rated as three. The researcher kept her score of two.

Rater C explained that her rating should be zero for information related substance use disorders for IPE. She wasn't sure about how to rate, so that she also gave a rating for the general IPE. The researcher pointed out that the counselors need to make sure that treatment/recovery activities are included on the IPE. Rater C then agreed to change her score from zero to one. The researcher kept her rating of one.

Rater C explained that her rating should be one for information related substance use disorders for due process. She wasn't sure about how to rate, so that she also gave a rating for the general due process. The researcher pointed out that there was no information related to specific disciplinary actions for violation of drug policies. Rater C then agreed to change her score from one to zero. The researcher kept her rating of zero.

Rater C explained that her rating should be zero for information related substance use disorders for the release of information. She wasn't sure about how to rate, so that she also gave a rating for the general release of information. The researcher pointed out that there

were specific procedures related to release of information for substance use disorders among adults and children. Relevant state laws are also provided. This should be rated as three based on the rubric. Rater C then agreed to change her score from zero to three. The researcher kept her rating of three.

Rater C explained that her rating should be zero for information related substance use disorders for closure. She wasn't sure about how to rate, so that she also gave a rating for the general closure. The researcher kept her rating of zero.

Rater C explained that her rating should be one for information related substance use disorders referral. She wasn't sure about how to rate, so that she also gave a rating for the general closure. The researcher kept her rating of one.

The researcher explained that there was extensive information related to co-occurring conditions. The rater, therefore, rated it as three. Rater C considered not comprehensive enough to be rated as three. Rater C kept her rating of two. The researcher kept her rating of three.

The researcher pointed that the information related to substance use disorders was provided in subsections, which should be rated as two based on the rubric. C then agreed to rate it as two. The researcher kept her rating of two.

MN

The researcher stated that there was no direct information related to substance use disorders in eligibility. Rater C stated that it was implied that VR counselors would address substance use disorders in eligibility since there was mandated reporting policy for substance use and disciplinary actions for violation of drug policies. Rater C decided to keep her ratings of one. The researcher kept her rating of zero.

The researcher pointed out that there was information related to mandated reporting policy for substance use and disciplinary actions for violation of drug policies. Therefore, the researcher gave a rating of two for due process. Rater C agreed and decided to change her score from one to two.

The researcher pointed out that violation of drug policies may result in termination of VR services. Therefore, the researcher gave a rating of one for closure. Rater C agreed and decided to change her score from zero to one.

The researcher pointed out that there was no information related to substance use disorders referral. Rater C agreed and changed her score from one to zero.

The researcher pointed out that it was only mentioned that counselors need to attend to prenatal substance use. Rater C decided to keep her rating of two for the cautions. The researcher kept her rating of one.

The researcher pointed that the information related to substance use disorders was minimally mentioned, which should be rated as one based on the rubric. C then agreed to rate it as one. The researcher kept her rating of one.

Additional feedback

Rater C reported that the rubric is applicable to the state policy documents she read. The level of ratings (i.e. 0 to 3) is applicable to the states she rated. She stated that it would be better to have explanations from the researcher before rating the states. The researcher could help raters through introducing the background and study-context, so that raters would not misunderstand. C also said that she wasn't sure about how to rate, so that she gave several states two rating scores per item. That is, she gave these states a score on general procedures and a score on procedures related to substance use disorders. She suggested training raters with a specific example of a state would be a good idea.

Initial ratings

C-Rater C

X-Researcher

State	Rater	Intake	Assessment	Eligibility	IPE	Due process	Release of Info	Closure	Referral	Cautions	Format
FL	C	1		2	2	3	3	3	3	2	
	X	0	1	2	0	0	0	0	0	2	2
IN	C		0	3	0 & 2?	1 & 3?	0 & 3?	0 & 3?	1	2	
	X	0	2	2	0	1	0	1	0	2	2
MA	C	0	0	0	0	0	0	0	0	0	
	X	0	0	0	0	0	0	0	0	0	1
MD	C	2	3	3	0 & 2?	1 & 3?	0 & 3?	0 & 3?	1 & 3?	2	
	X	3	2	3	1	0	3	0	1	3	3
MN	C	0	0	1	0	1	0	0	1	2	
	X	0	0	0	0	2	0	1	0	1	1

Final ratings

C-Rater C

X-Researcher

State	Rater	Intake	Assessment	Eligibility	IPE	Due process	Release of Info	Closure	Referral	Cautions	Format
FL	C	1	1	2	0	0	0	0	0	2	2
	X	0	1	2	0	0	0	0	0	2	2
IN	C	0	2	2	0	1	0	1	1	2	2
	X	0	2	2	0	1	0	1	0	2	2
MA	C	0	0	0	0	0	0	0	0	0	1
	X	0	0	0	0	0	0	0	0	0	1
MD	C	3	3	3	1	0	3	0	1	2	2
	X	3	2	3	1	0	3	0	1	3	2
MN	C	0	0	0	0	2	0	1	0	2	1
	X	0	0	0	0	2	0	1	0	1	1

Rater D Background

Rater D has a master's degree in Mental Health Counseling, and she is a National Certified Counselor. She worked in a non-profit vocational training program for over six months, which partnered with the state VR office in Louisiana. She has also worked as the intake worker for a youth addictions program for over two years. Rater D has a research interest in people with substance use disorders. She also has extensive training in counseling and research.

Discussions

Rater D and the researcher discussed the scores on 5/20/2016 face-to-face at EST 11AM-12PM. The researcher emailed Rater D a copy of the summary scores (See Initial ratings) and the rubric before the discussion. The researcher first thanked the rater for her time. The researcher then explained that the goals for this discussion were to address the differences in scores, to gain feedback, and to improve the rubric. The researcher also stated that the rater did not have to change her scores to be the same as the researcher's after their discussion. The rater was only expected to change scores when she felt comfortable to do so. The researcher then went through each state and discussed the scores they have differences in one by one.

NE

The researcher shared that a state would be rated zero only when there is no information or only agency names regarding substance in the documents. Since NE has a history of serving clients with substance abuse according to the policy documents, it should not be rated zero. Rater D then agreed to change her ratings from zero to one for the format. The researcher kept her rating of one.

NC

The researcher pointed out that there were extensive discussions on drug screening services for clients. It is implied from the document that the VR counselors would inquire about clients' use. Rater D pointed out that from the wording of the document, the drug screening was not necessarily performed for intake "into OVR", but more so "placing them" at the later stage of OVR services. Rater D decided to change her score from zero to one. The researcher decided to change her score from two to one.

The researcher stated that were screening guidelines, such as certified professionals for diagnosis, periodic screening, and preliminary assessments. According to the rubric, NC should receive a score of two. Rater D shared that her reservation was due to the wording of "adequate" for a rating of two. The assessment information was not adequate from her perspective. It is somewhere between minimal and adequate (i.e. "a 1.5"). (This is further explained in the *Additional feedback* section.) Rater D decided to change her score from one to two. The researcher kept her rating of two.

The researcher stated that there was a list of potential referral resources for clients with substance use disorders, such as peer support meetings, and counseling. The researcher shared that she wanted to change the rating from two to three. Rater D explained that she did not think the information was comprehensive. Although there is a list, there is no detailed information regarding referral process. Rater D changed her score from one to two. The researcher decided to change her score from two to three.

The researcher explained that there was much information about the complexities of people with substance use disorders, especially in the comprehensive state-wide assessment report. For example, counselors shared they scheduled clients for an interview, but clients did not go due to substance use. Rater D rated "comprehensive" on the cautions. She believed there should be explanations of "why it's important for the population" and "not just listing", thought this might not be realistic. Rater D decided to change her score from one to two. The researcher kept her rating of three.

Rater D shared that she struggled with format during her rating. The researcher explained that format was the organization of information. Some states have a separate technical aid handbook for clients with substance use disorders, and some states include substance use disorders in the subsection as special considerations. The format is also a widely used indicator in rubrics. Therefore, the researcher used the format as a way to measure comprehensiveness. The researcher explained that her rating of three was an overall

consideration that there were a separate appendix and several subsections within the policy documents regarding for substance use disorders. Rater D decided to change her score from one to two. The researcher kept her rating of three.

OR

The researcher stated that there was state law regarding the release of information. According to the rubric, OR should receive a score of two. Rater D stated that the release of information was not adequate. Rater D kept her rating of one. The researcher kept her rating of two.

The researcher pointed out that there was no referral information regarding substance use disorders. It was only mentioned that the OR OV collaborated with substance-related agencies. Rater D agreed and changed her rating from one to zero. The researcher kept her rating of zero.

PA

Rater D explained that she gave a rating of one to IPE due to the context of the document. That is, the document was named *Transition from substance abuse to recovery and work*. The researcher stated that though the context was substance-related, the IPE information in the document was general. There is no specific information regarding substance use disorders, such as recovery planning, abstinence, or reduction of use. Rater D decided to keep her rating of one. The researcher decided to keep her rating of zero.

The researcher explained that there were state laws regarding the release of information. According to the rubric, PA should receive a rating of two. Rater D stated that the information was more than minimal but not yet adequate. Since there is no option of 1.5 on the scale, Rater D decided to change her rating from zero to two. The researcher kept her rating of two.

Rater D again explained that she gave a rating of one to closure due to the context of the document. The researcher pointed out that there is no specific information regarding substance use disorders related closures. For example, clients may be terminated with their services for substance use violations. In Colorado VR, clients could receive a successful closure if there were hired in the marijuana industry. Rater D decided to keep her score of one. The researcher decided to keep her rating of zero.

The researcher pointed out that referral was mentioned along with the release of information. Rater D decided to change her rating from zero to one. The researcher kept her rating of one.

Rater D explained that she rated format three points because there was a separate brochure for substance use disorders. The researcher stated that there were limited specific policies and procedures in the brochure. Rater D agreed and changed her rating from three to two. The rater changed her rating from one to two.

TN

Rater D pointed out that supported employment services were eligible for clients with co-occurring disorders of mental illnesses and substance use disorders. In addition, TN OV cooperated with addictions agencies. The researcher agreed and changed her rating from zero to one. Rater D kept her rating of one.

Additional feedback

Rater D reported that she struggled with the wording of comprehensive, adequate, and minimal. On a scale from zero to 100 percent of information, she stated that "comprehensive" means 100% ideally and 90% realistically. A comprehensive policy and procedure would "help someone just hired by the VR learn everything, and the person can start work tomorrow". Rater D reported that "adequate" means 75%, "minimal" means 10-20%, and "no information" means 0%. She, therefore, believed that there should be something between "adequate" and "minimal". At the time, she did not have an ideal wording for it.

Rater D used assessment as an example to describe her scaling. A rating of zero means no information. A rating of one means there is only agency names or very minimal information. A rating of 1.5 means there is a brief description of one paragraph, but there is not adequate information. A rating of two means there is a thorough plan for assessment with "some holes". A rating of three means there is a "step-by-step" procedure, which answers "all questions".

Initial ratings

D-Rater D
X-Researcher

State	Rater	Intake	Assessment	Eligibility	IPE	Due process	Release of Info	Closure	Referral	Cautions	Format
NE	D	0	0	0	0	0	0	0	0	0	0
	X	0	0	0	0	0	0	0	0	0	1
NC	D	0	1	2	1	1	1	0	1	1	1
	X	2	2	3	1	1	1	0	2	3	3
OR	D	0	0	0	0	0	1	0	1	0	0
	X	0	0	0	0	0	2	0	0	0	0
PA	D	1	1	1	1	0	0	1	0	0	3
	X	1	1	1	0	0	2	0	1	0	1
TN	D	0	0	1	0	0	0	0	0	0	1
	X	0	0	0	0	0	0	0	0	0	1

Final ratings

J-Rater D
A-researcher

State	Rater	Intake	Assessment	Eligibility	IPE	Due process	Release of Info	Closure	Referral	Cautions	Format
NE	D	0	0	0	0	0	0	0	0	0	1
	X	0	0	0	0	0	0	0	0	0	1
NC	D	1	2	2	1	1	1	0	2	2	2
	X	1	2	3	1	1	1	0	3	3	3
OR	D	0	0	0	0	0	1	0	0	0	0
	X	0	0	0	0	0	2	0	0	0	0
PA	D	1	1	1	1	0	2	1	1	0	2
	X	1	1	1	0	0	2	0	1	0	2
TN	D	0	0	1	0	0	0	0	0	0	1
	X	0	0	1	0	0	0	0	0	0	1

APPENDIX D: STATES WITH POLICY AND PROCEDURE COMPREHENSIVENESS SCORES CHANGE

states	year	sum	states	year	sum
Alabama	2015	3	New Hampshire	2015	1
	2016	4		2016	7
Alaska	2015	6	Oregon	2015	3
	2016	8		2016	6
Florida	2015	7	South Dakota	2015	2
	2016	8		2016	3
Georgia	2015	9	Tennessee	2015	2
	2016	10		2016	4
Indiana	2015	10	Vermont	2015	8
	2016	13		2016	9
Louisiana	2015	1	Wisconsin	2015	4
	2016	3		2016	5
Nebraska	2015	1			
	2016	3			

APPENDIX E: ELIGIBILITY DETERMINATION

Among states that have substance use disorders eligibility determination policy and procedures, virtually all states require evidence of some form of recovery dedication and achievement (e.g. consecutive sobriety, completion of treatment, participation in a self-help group, drug testing results, or recommendation from other health professionals or sponsors). These states also do not allow current use, and current use may result in ineligibility and/or disciplinary actions if the service has started. For example, WY VR (2015) explicitly stated that individuals with a disability did not include a person based on "psychoactive substance use disorders resulting from current illegal use of drugs" (p. 63). NV VR (2015) stated that a current user of illegal drugs without other disability conditions was not covered as a person with a disability. FL VR (2015) excluded people with active drug abuse from service. This demonstrated the VR rational of serving clients who were ready to benefit from the services provided. NJ VR (2015) stated that clients were expected to be abstinent at the time of referral or application, though no minimum sobriety period is required. This indicated VR's emphasis on service-readiness.

Among states with eligibility determination policy related to substance use disorders, several of them listed specific *sobriety waiting period* expectation or recommendations. AR (2015) and NC (2016) asked for six months of sobriety, VA (2016) recommended a 90-day abstinence prior to any fee-based services, WA (2014) also recommended a 90-day abstinence prior to full-time employment or training, NV (2015) required "reasonable belief the participant is abstinent and has completed thirty (30) consecutive days of abstinence at the time of the eligibility determination" (p. 104). ND (2013) has recommended sobriety for

different types of substances: six months for alcohol dependence, and six to nine months for illicit/illegal drugs. The SC VR (2014) has two treatment centers that integrate vocational service and substance use disorders treatment. Applicants are expected to have at least a three-day sobriety, stable health, and a four-week treatment commitment. AK (2014), MI (2015) and VT (2016) stated specifically it was federally prohibited to use an arbitrary, universal sobriety waiting period. AZ (2016) also refrained counselors from using arbitrary sobriety waiting period as general standards. KY (2016) stated that there was no specific length of sobriety requirement, but counselors should assess clients' functional limitations that would impede employment. Clients with stable abstinence are expected to have less functional limitations required to be eligible (KY, 2016). MI (2015) encouraged counselors to work with substance abuse professionals to determine appropriate abstinence requirement for each client. Counselors may also use extended assessment to evaluate clients when necessary. NY (2015) encouraged their counselors to determine eligibility based on individual cases. The remaining 22 of the 35 states did not mention sobriety waiting period.

Several states had *severity consideration* for clients with substance use disorders: MD (2016) stated clients must have impairments to be eligible, rather than a mere diagnosis; NC (2016) stated substance use disorders in mild range might not be eligible, and further inspection was required; SC (2014) stated clients' substance use disorders should cause a current and "severe enough" impairment to be eligible, rather than a history of the disorders. PA (2007) and OR (2015) stated that they had an order of selection mechanism, and they would need to serve clients with the most severe disabilities first. These criteria demonstrated the VR rationale of serving clients with the most severe disabilities and

impairments. MA (2015) had a cause of disability consideration: clients with a brain injury caused by drug overdose would not be covered by the statewide specialized community services.

Several states discussed relapses for clients with substance use disorders. IN VR (2016) acknowledged that relapse was common in the recovery process, and one episode did not make clients ineligible. VA (2016) had a guidance of reconsidering clients' ability to benefit from service should the person relapse more than once in six months. WI (2016) noted that clients with alcohol addiction, relapses every 2-3 months, and drink heavily had limited self-direction to participate in employment.

Some states discussed substance use disorders as a disability. For example, MI (2013) stated in the *Six steps to Vocational Rehabilitation* brochure that substance abuse is a type of impairment or mental disorders. The Michigan Career and Technical Institute would not reject students with a primary disability or diagnosis of substance abuse automatically, and these students should sign and obey a substance free contract. VT (2016) stated that clients might be eligible for service based on a primary or secondary disability of substance abuse/dependence, considering the impact on functioning and employment. NV (2015) explained in their policy and procedure manual the distinction between substance use disorder as a sole disability and substance use in conjunction with another qualifying disability. People may be eligible for services based on other conditions, even if their condition of substance use disorders are not. This state also provided the legal endorsement for this distinction.

While the Rehabilitation Act as Amended indicates an individual currently engaging in illegal drug use is not considered an individual with a disability, the Act also indicates an individual currently using illegal drugs shall not be excluded if otherwise entitled to services. [NV VR, 2015]

APPENDIX F: IRB APPROVAL

PENNSTATE

IRB Program

Vice President for Research
The Pennsylvania State

Phone : (814) 865-1775
Fax: (814) 863-8699

EXEMPTION DETERMINATION

Date: November 18, 2016 **From:** Joyel Moeller, IRB Analyst **To:** Yi Xiao

Type of Submission:	Initial Study
Title of Study:	Review of Policies Regarding Substance Use Disorders in Vocational Rehabilitation: Counselor Attitude, Self-efficacy, and Frequency of Procedural Practices
Principal Investigator:	Yi Xiao
Study ID:	STUDY00006226
Submission ID:	STUDY00006226
Funding:	Not Applicable
Documents Approved:	• HRP-591 (11/18/16 version), Category: IRB Protocol • Instruments (11/18/16), Category: Data Collection Instrument

The Office for Research Protections determined that the proposed activity, as described in the above-referenced submission, does not require formal IRB review because the research met the criteria for exempt research according to the policies of this institution and the provisions of applicable federal regulations.

Continuing Progress Reports are **not** required for exempt research. Record of this research determined to be exempt will be maintained for five years from the date of this notification. If your research will continue beyond five years, please contact the Office for Research Protections closer to the determination end date.

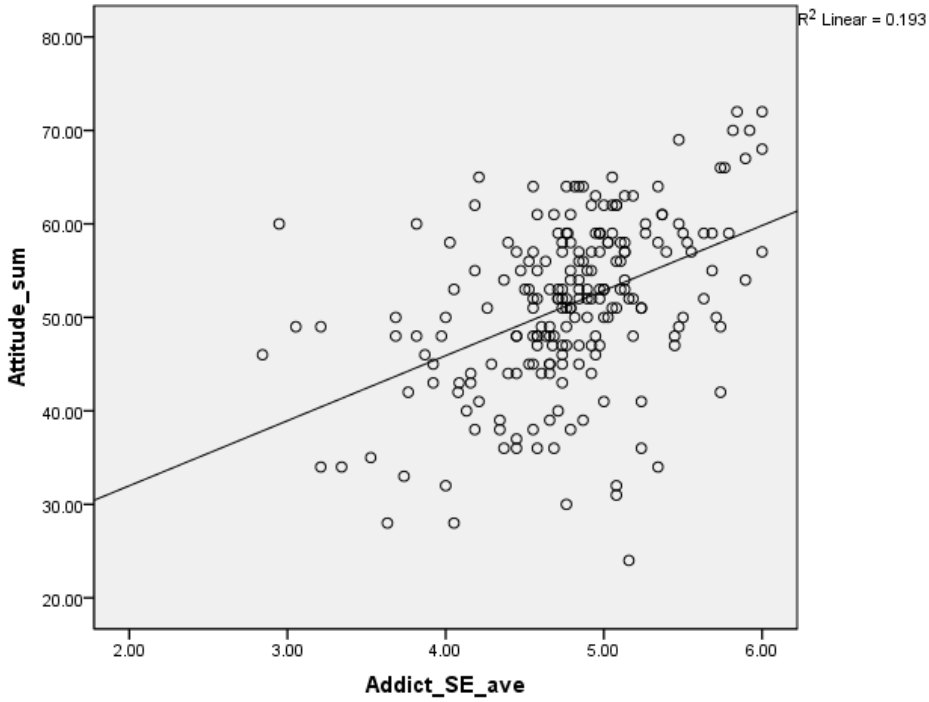
Changes to exempt research only need to be submitted to the Office for Research Protections in limited circumstances described in the below-referenced Investigator Manual. If changes are being considered and there are questions about whether IRB review is needed, please contact the Office for Research Protections.

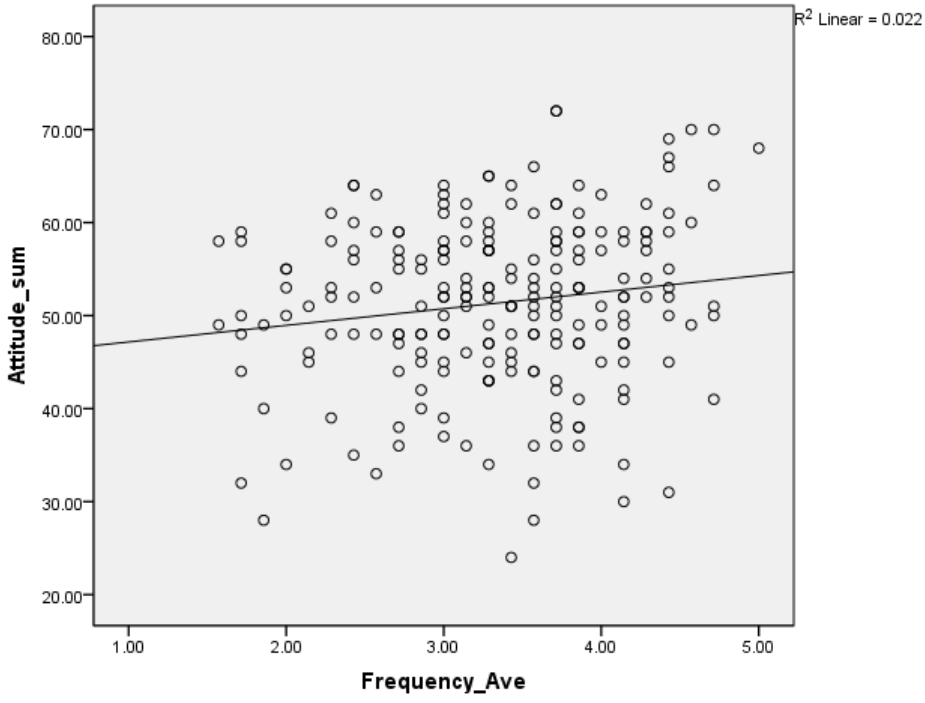
Penn State researchers are required to follow the requirements listed in the Investigator Manual (HRP-103), which can be found by navigating to the IRB Library within CATS IRB (http://irb.psu.edu).

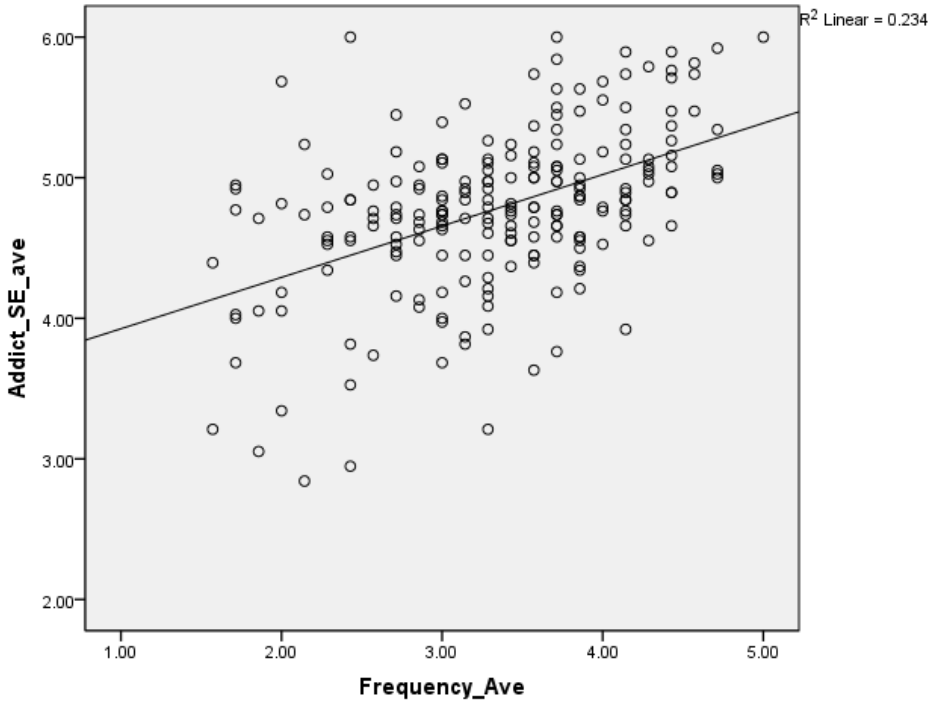
This correspondence should be maintained with your records.

ID00000027

APPENDIX G: SCATTER PLOTS FOR VARIABLES OF INTEREST



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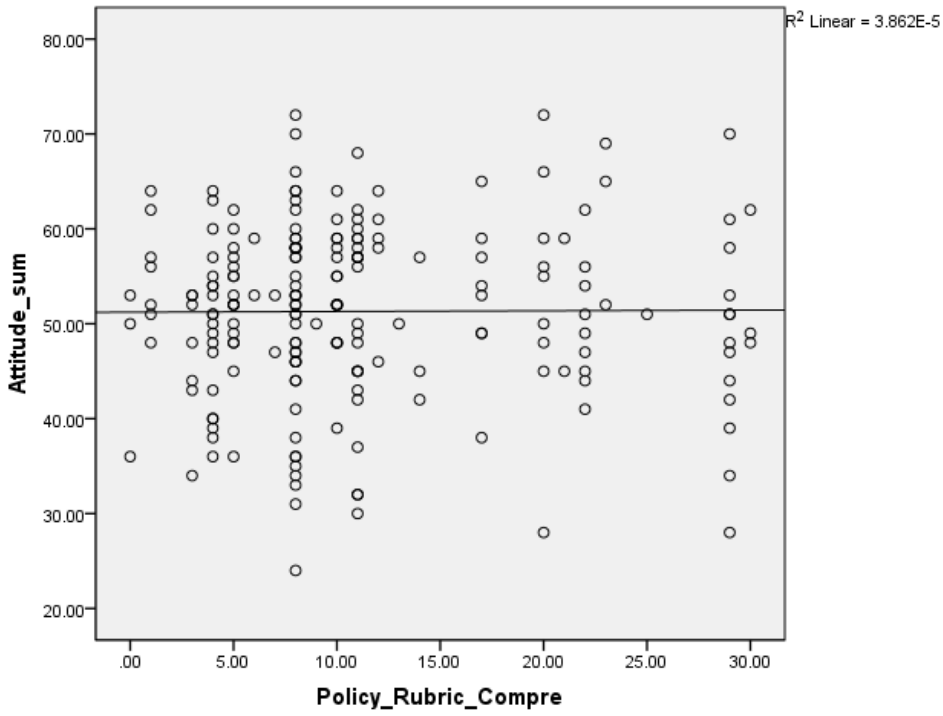
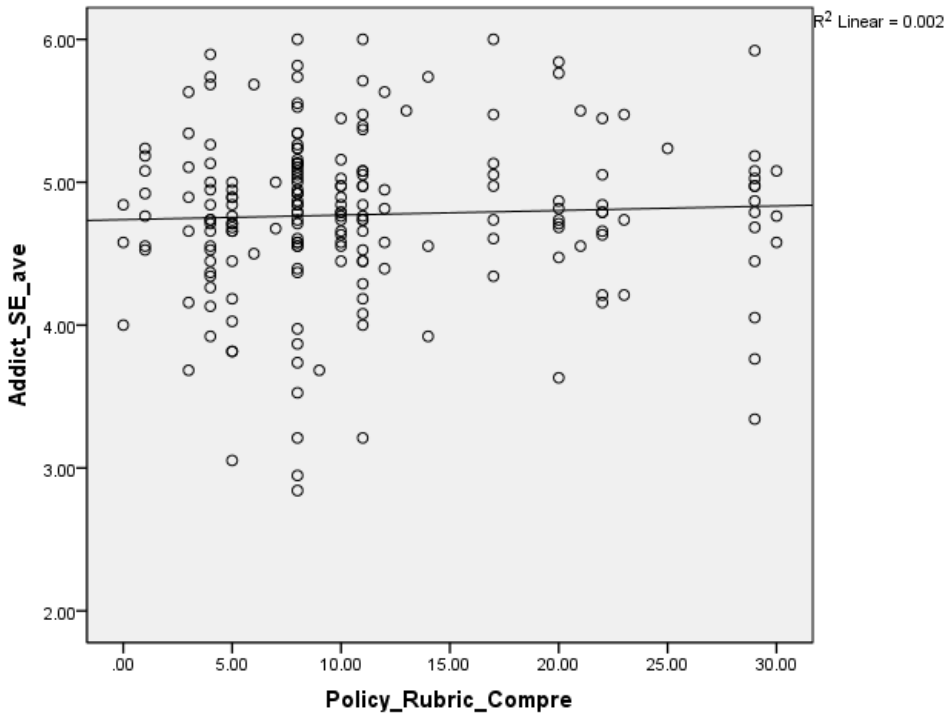
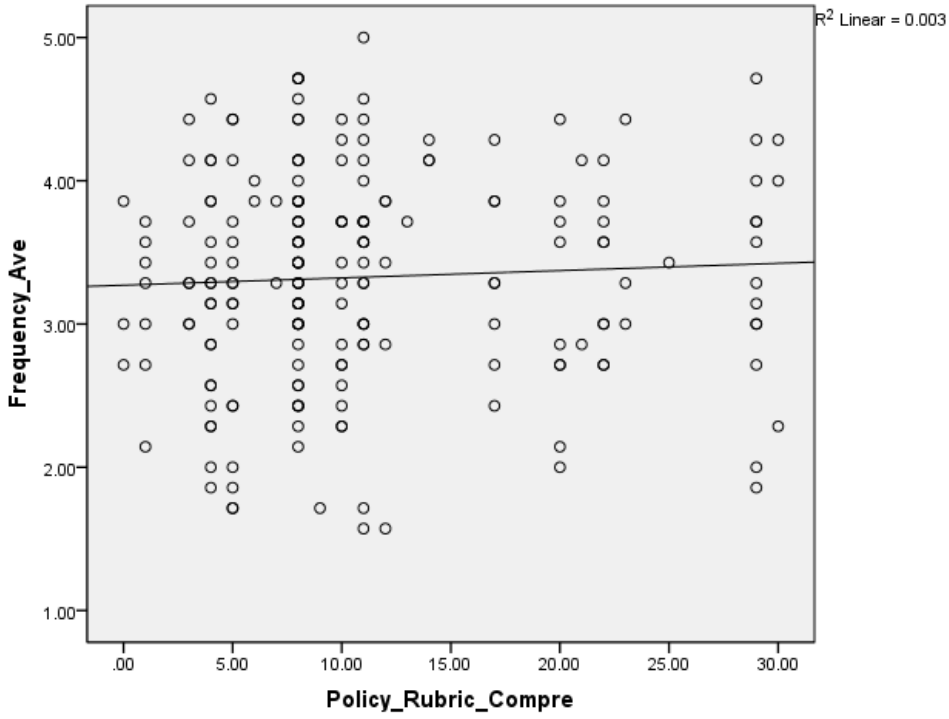
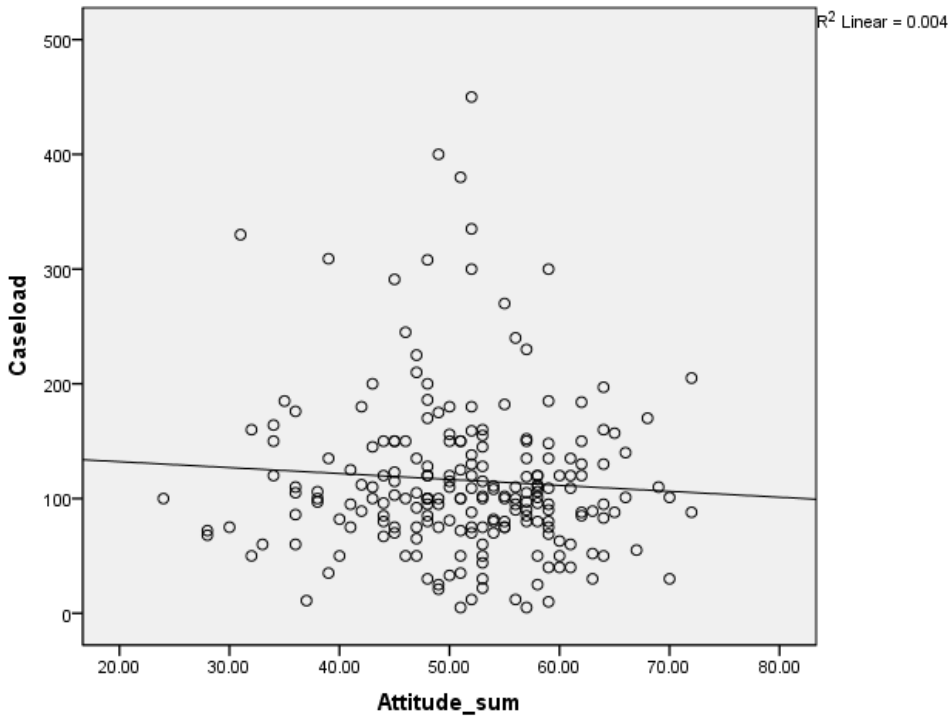
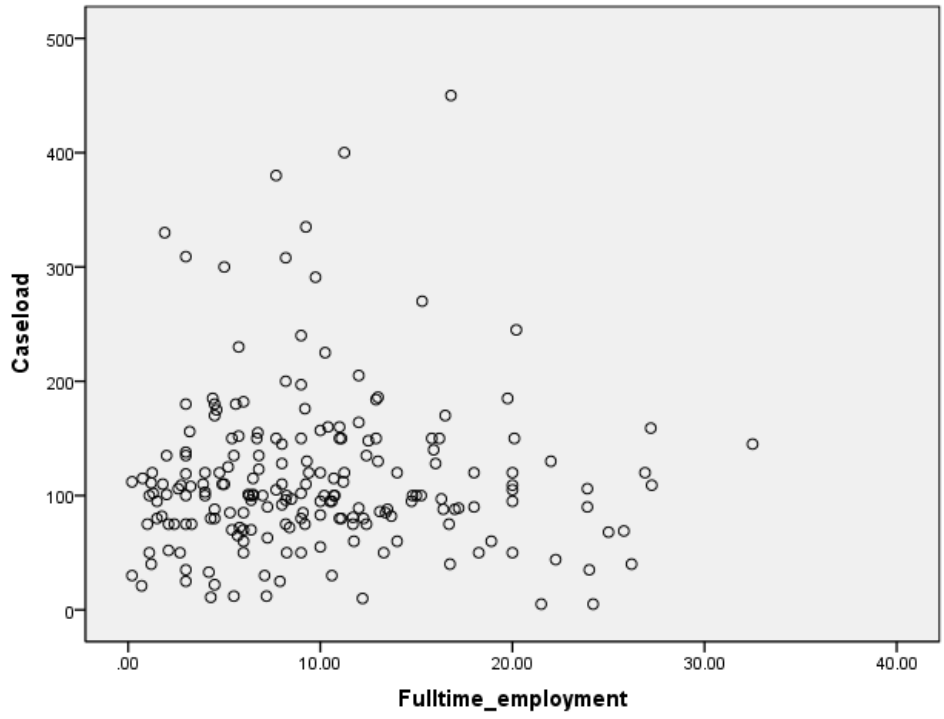
Addict_SE_ave
6.00
5.00
4.00
3.00
2.00
1.00
2.00
3.00
4.00
5.00
Frequency_Ave

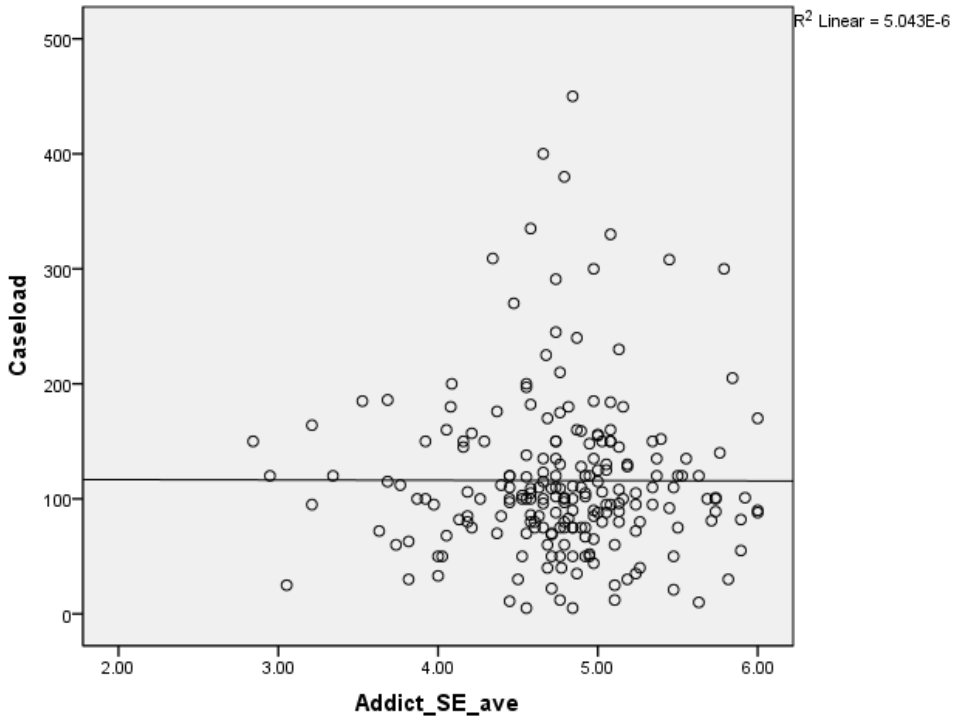

R² Linear = 3.862E-5
Attitude_sum
80.00
70.00
60.00
50.00
40.00
30.00
20.00
.00
5.00
10.00
15.00
20.00
25.00
30.00
Policy_Rubric_Compre

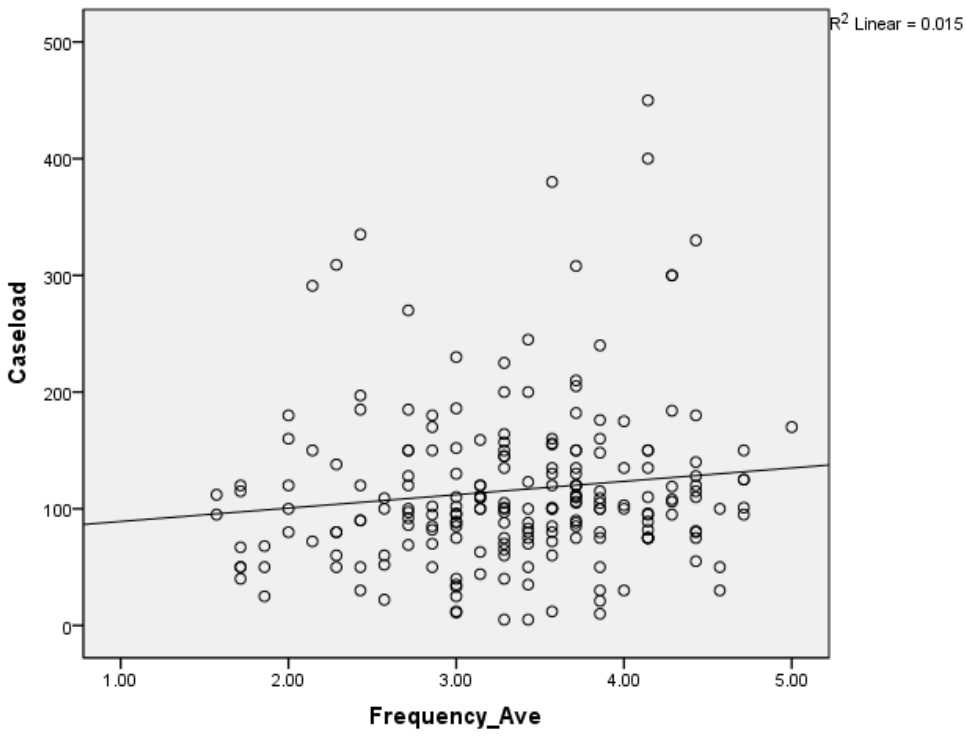

R2 Linear = 0.002
Addict_SE_ave
6.00
5.00
4.00
3.00
2.00
.00
5.00
10.00
15.00
20.00
25.00
30.00
Policy_Rubric_Compre

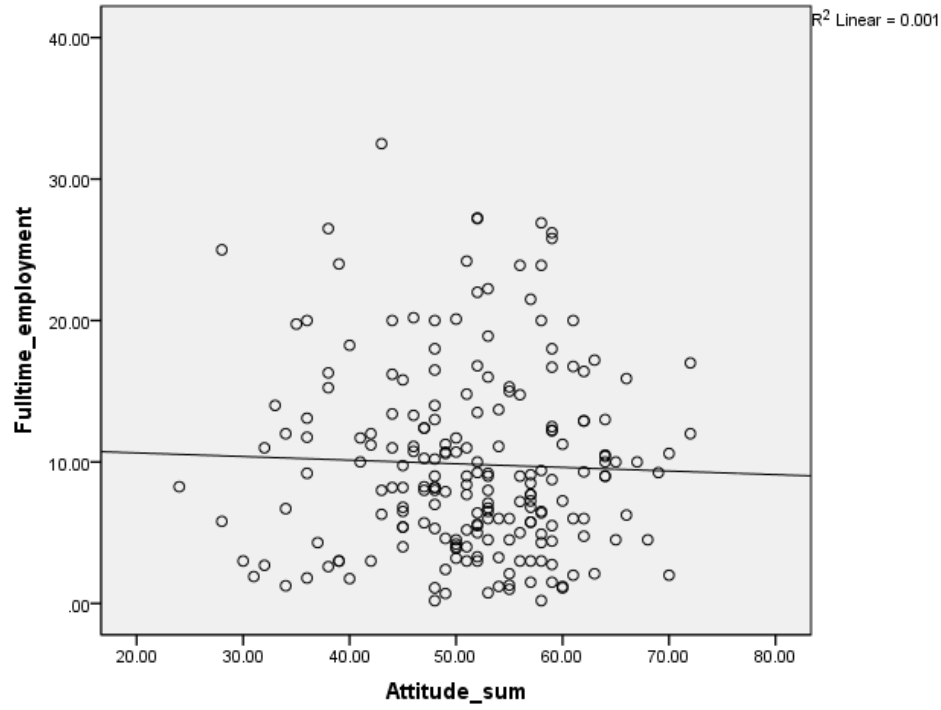

R2 Linear = 0.003
Frequency_Ave
5.00
4.00
3.00
2.00
1.00
.00
5.00
10.00
15.00
20.00
25.00
30.00
Policy_Rubric_Compre

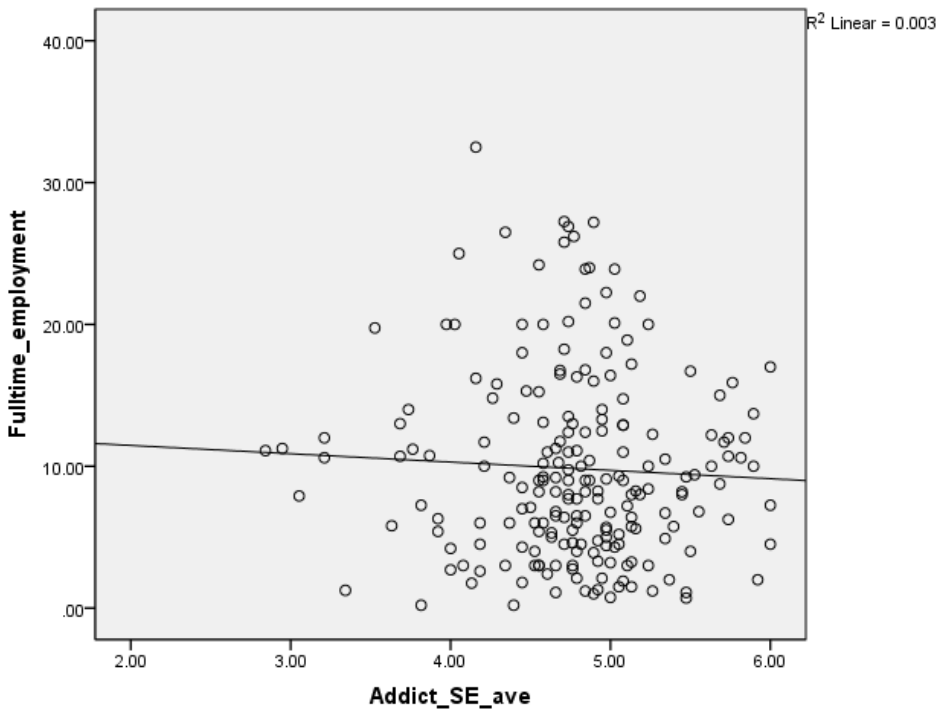

R^2 Linear = 0.004
Caseload
500
400
300
200
100
0
20.00
30.00
40.00
50.00
60.00
70.00
80.00
Attitude_sum

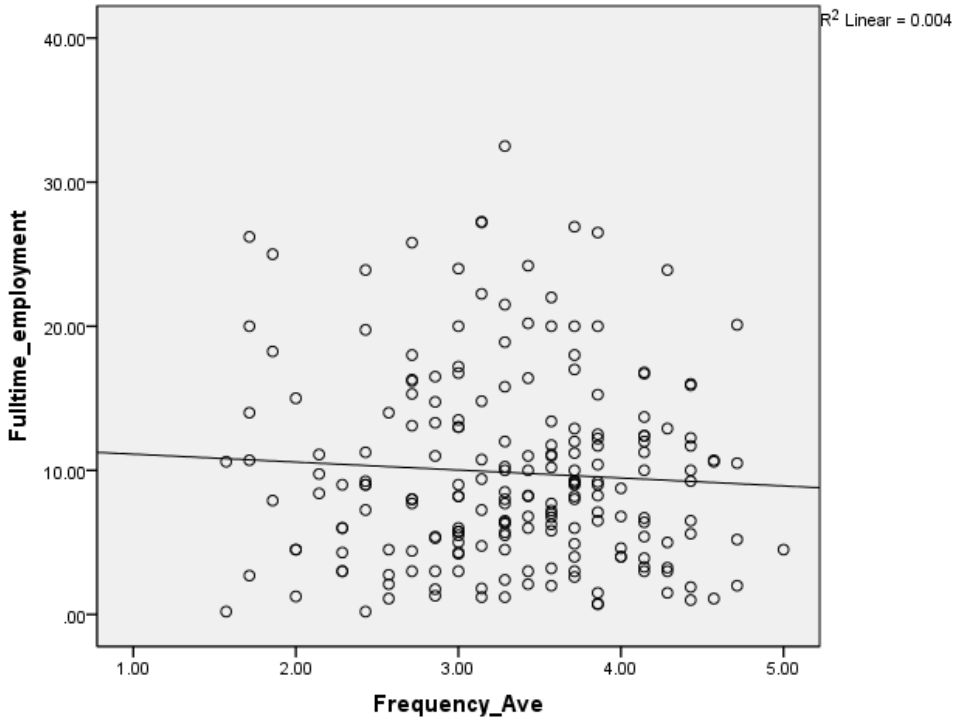

Caseload
500
400
300
200
100
0
.00
10.00
20.00
30.00
40.00
Fulltime_employment


R2 Linear = 5.043E-6
Caseload
500
400
300
200
100
0
2.00
3.00
4.00
5.00
6.00
Addict_SE_ave

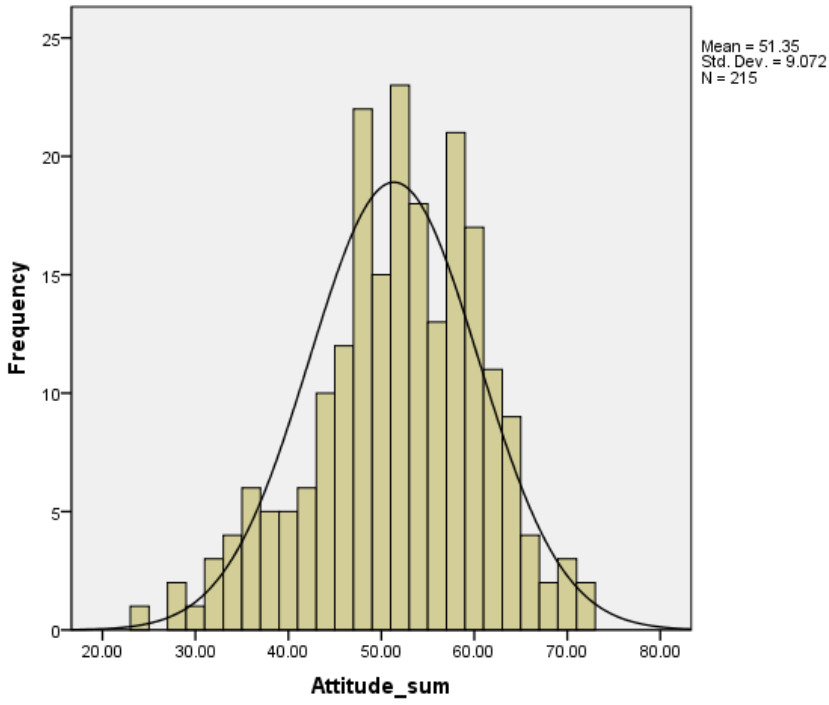

R2 Linear = 0.015
Caseload
500
400
300
200
100
0
1.00
2.00
3.00
4.00
5.00
Frequency_Ave

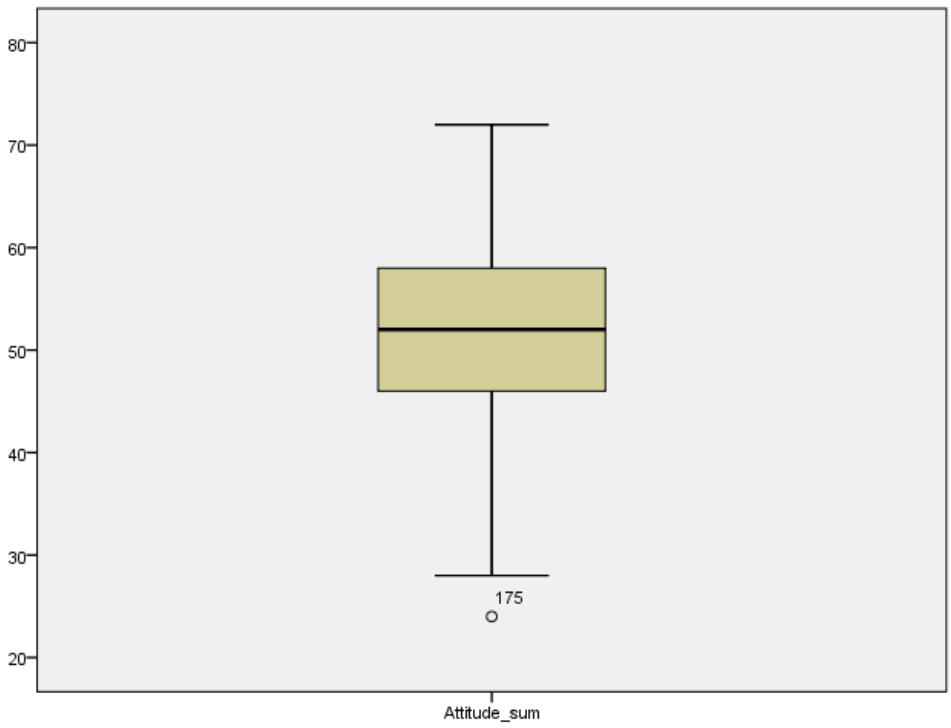

R2 Linear = 0.001
Fulltime_employment
40.00
30.00
20.00
10.00
.00
20.00
30.00
40.00
50.00
60.00
70.00
80.00
Attitude_sum

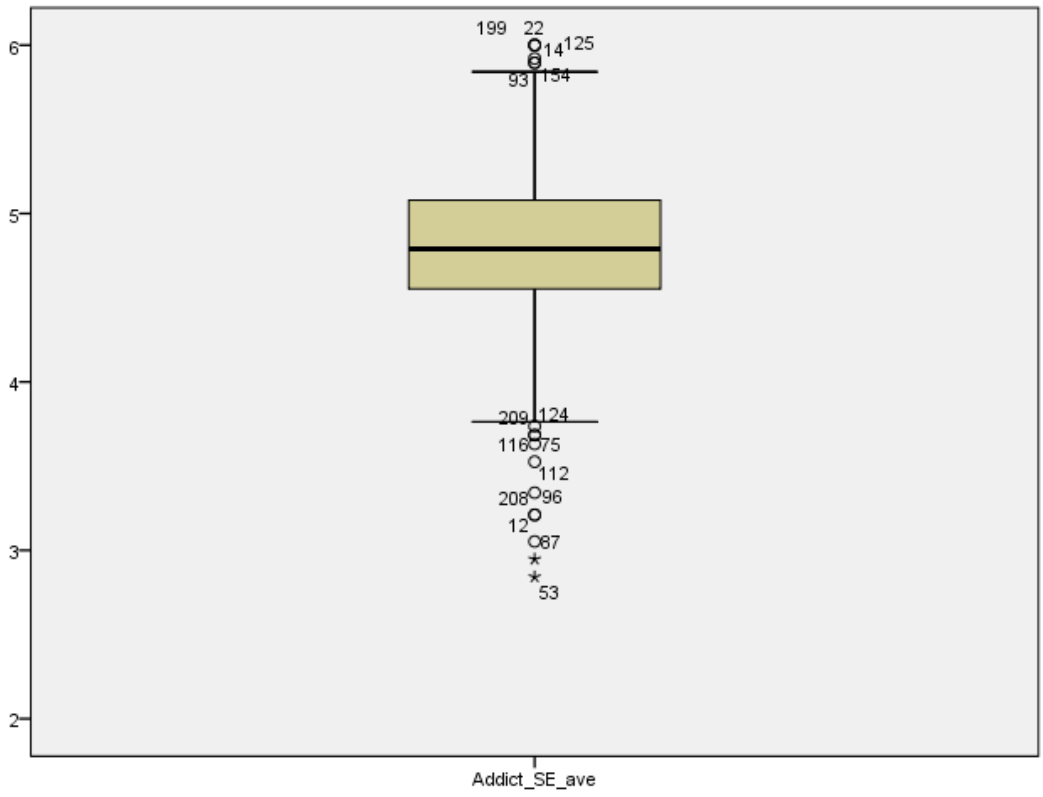

R2 Linear = 0.003
Fulltime_employment
40.00
30.00
20.00
10.00
.00
2.00
3.00
4.00
5.00
6.00
Addict_SE_ave

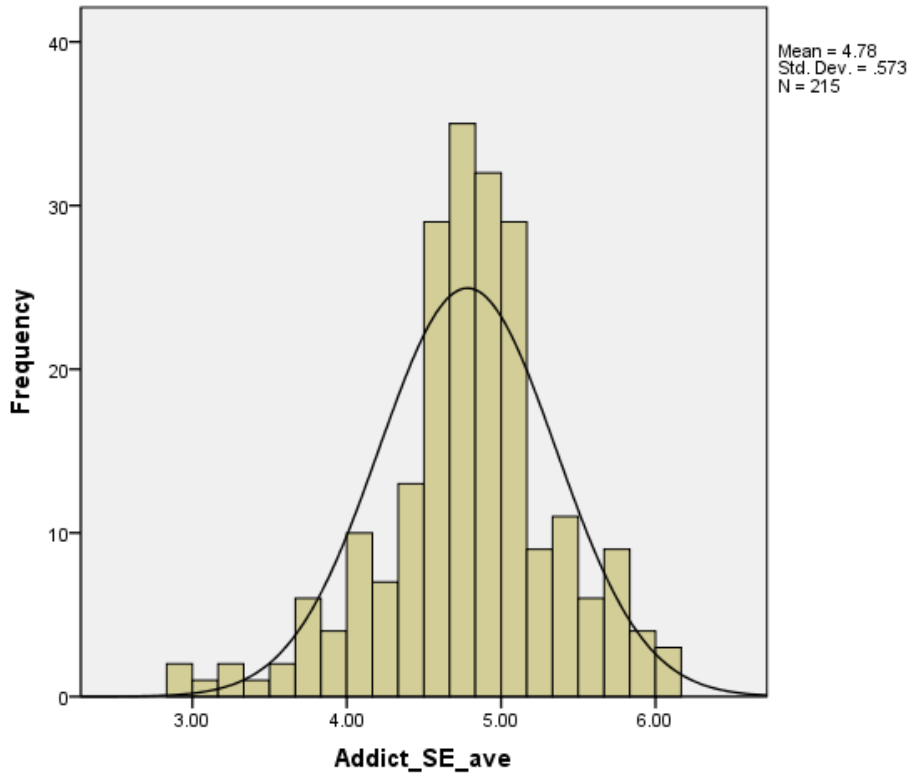

R2 Linear = 0.004
40.00
30.00
20.00
10.00
.00
Fulltime_employment
1.00
2.00
3.00
4.00
5.00
Frequency_Ave

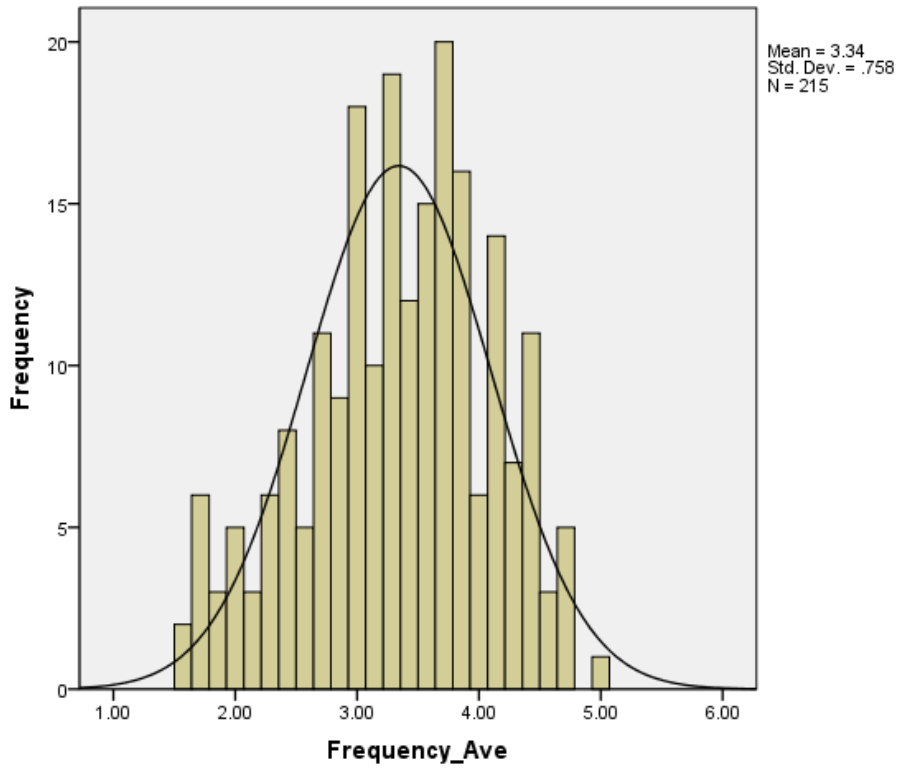
APPENDIX H: HISTOGRAMS AND BOX PLOTS FOR VARIABLES OF INTEREST

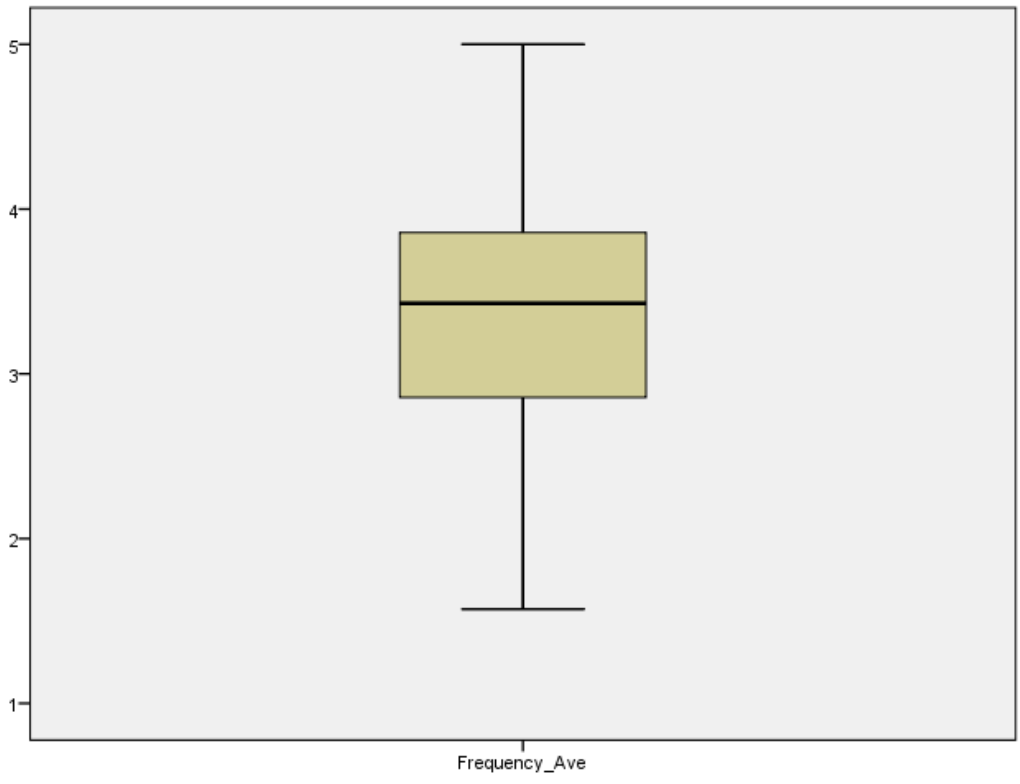


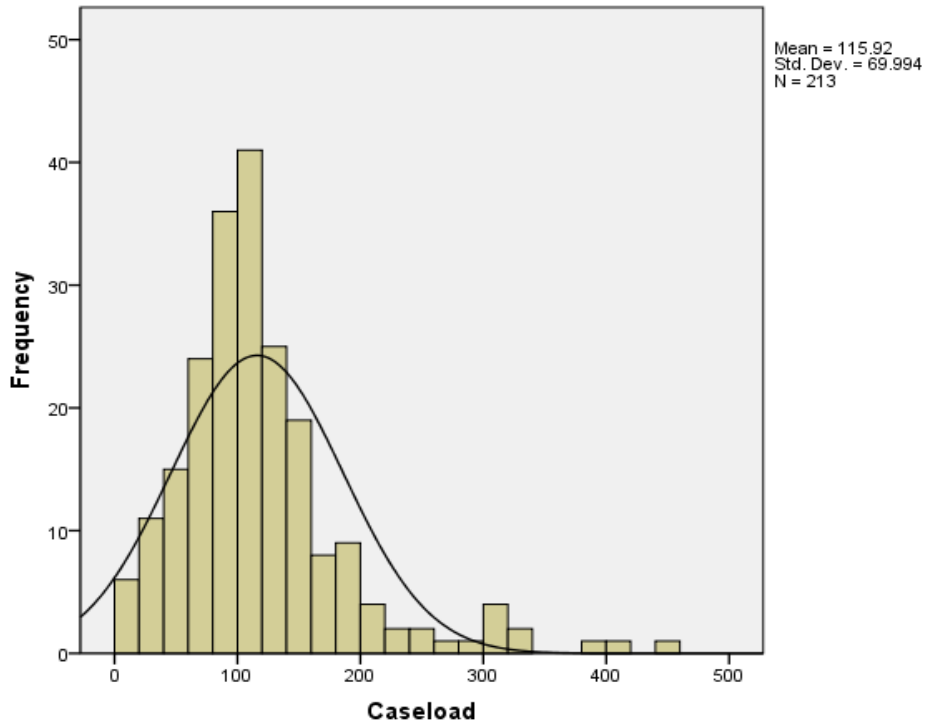


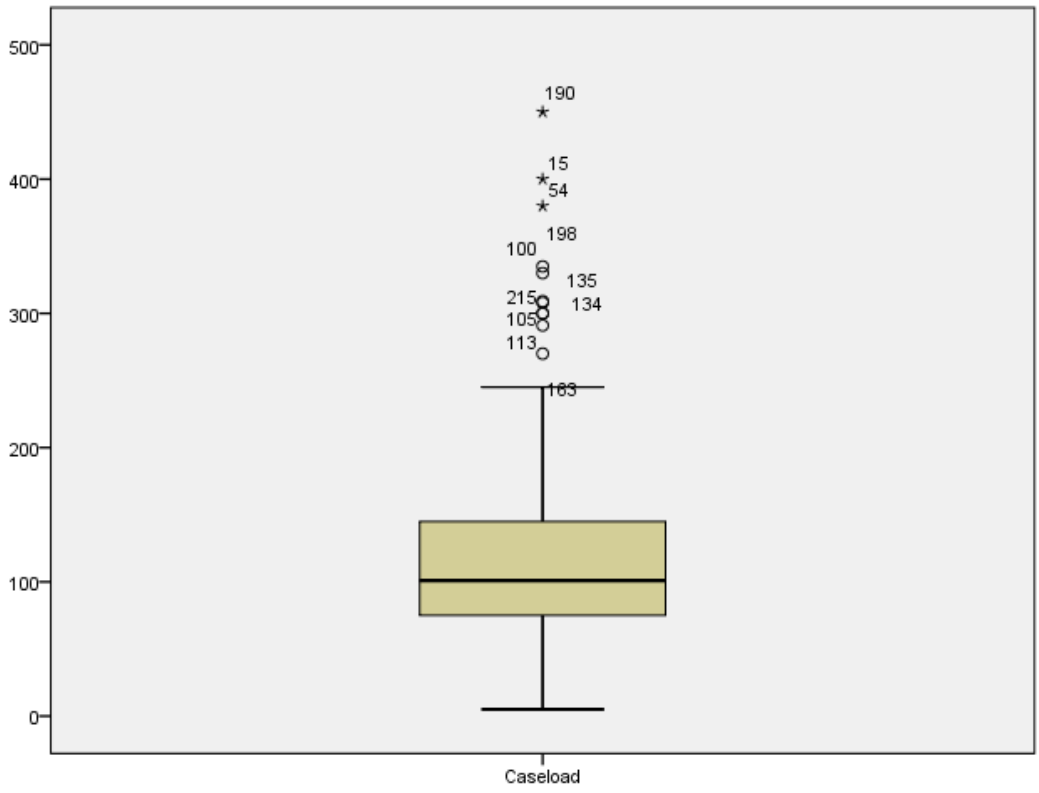

199
22
14
125
93
154
209
124
116
75
112
208
96
12
87
53
6
5
4
3
2
Addict_SE_ave

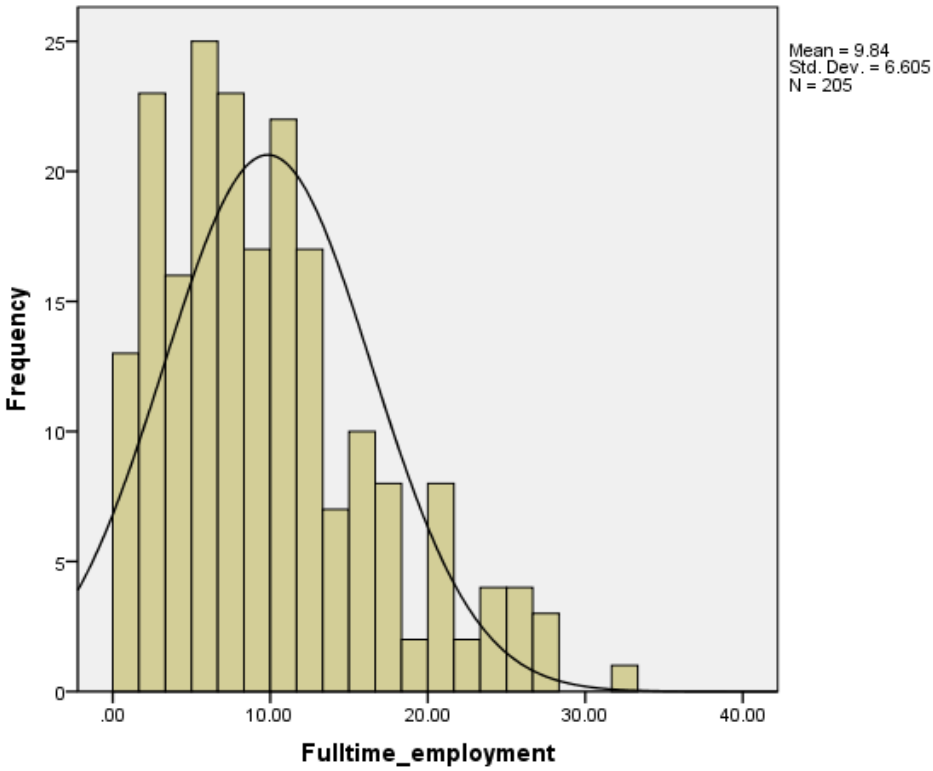

Mean = 4.78
Std. Dev. = .573
N = 215
Frequency
40
30
20
10
0
3.00
4.00
5.00
6.00
Addict_SE_ave

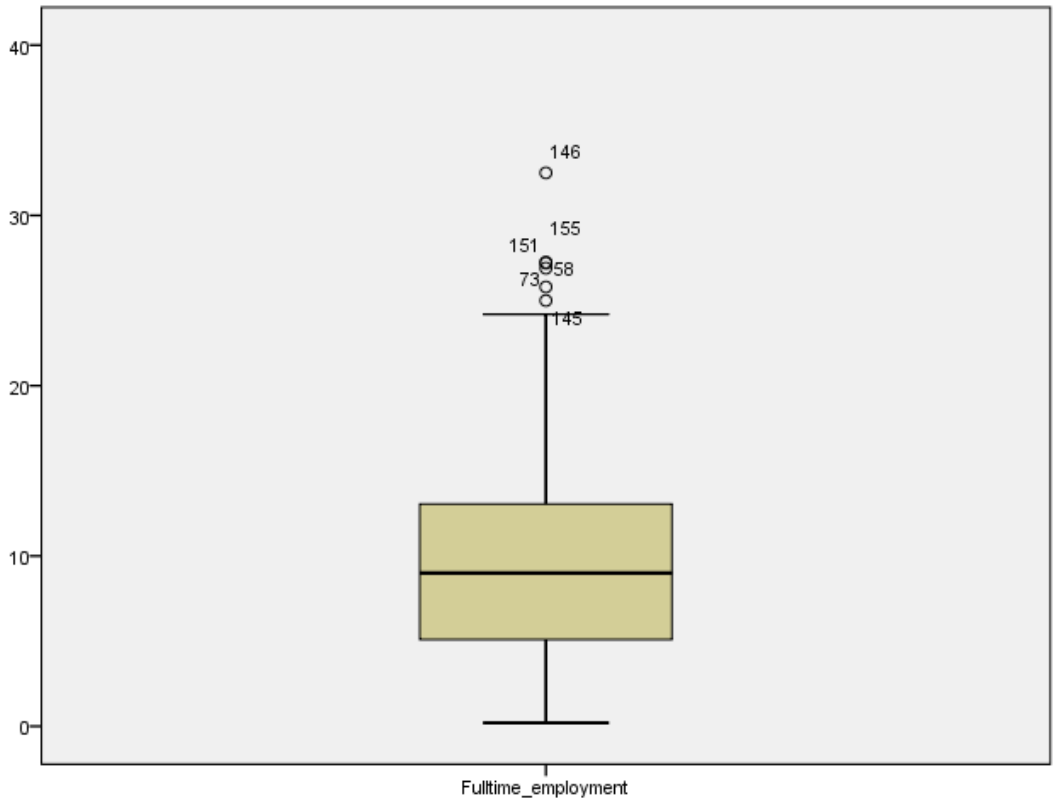

Mean = 3.34
Std. Dev. = .758
N = 215
Frequency
Frequency_Ave
0
5
10
15
20
1.00
2.00
3.00
4.00
5.00
6.00

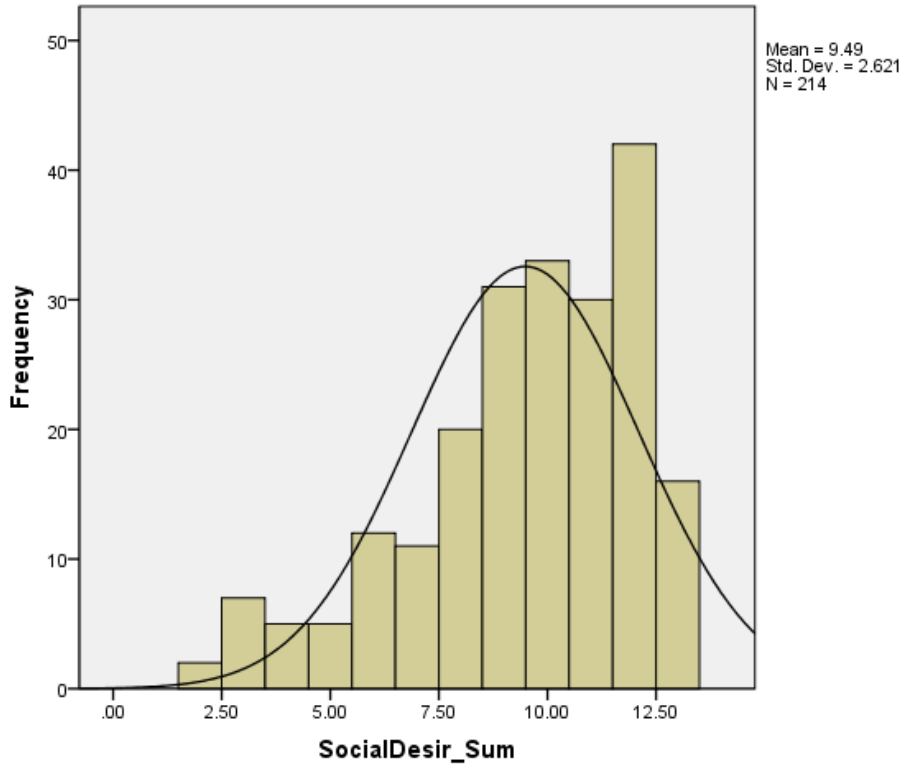

1
2
3
4
5
Frequency_Ave

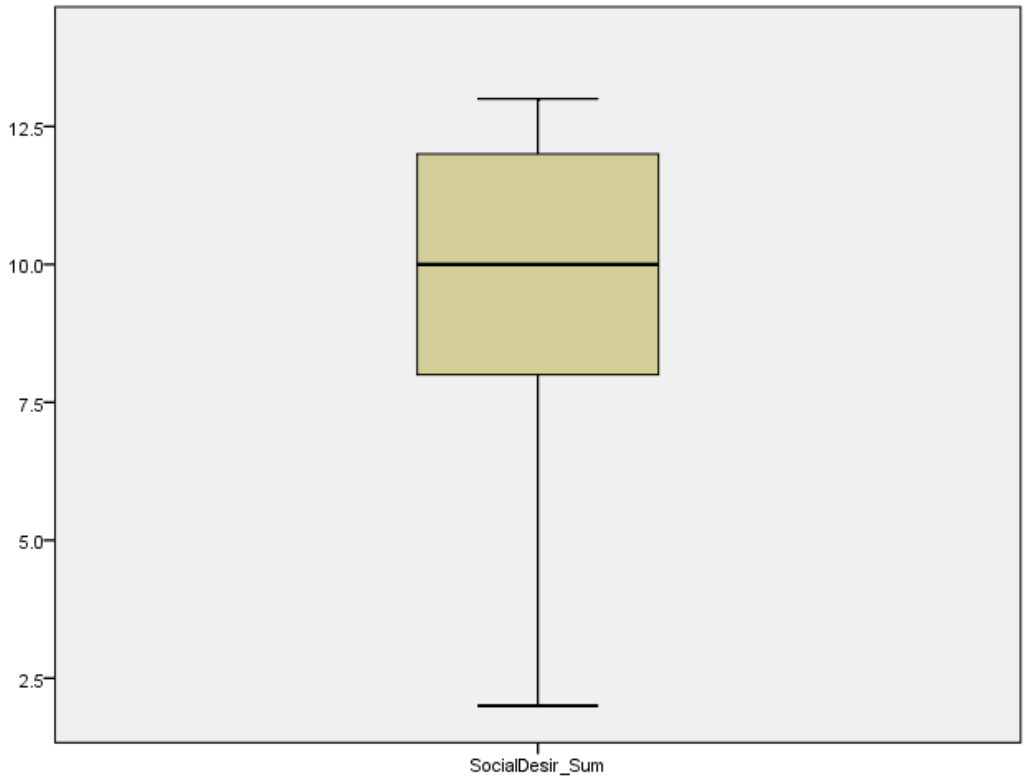

Mean = 115.92
Std. Dev. = 69.994
N = 213
Frequency
Caseload
0
10
20
30
40
50
0
100
200
300
400
500

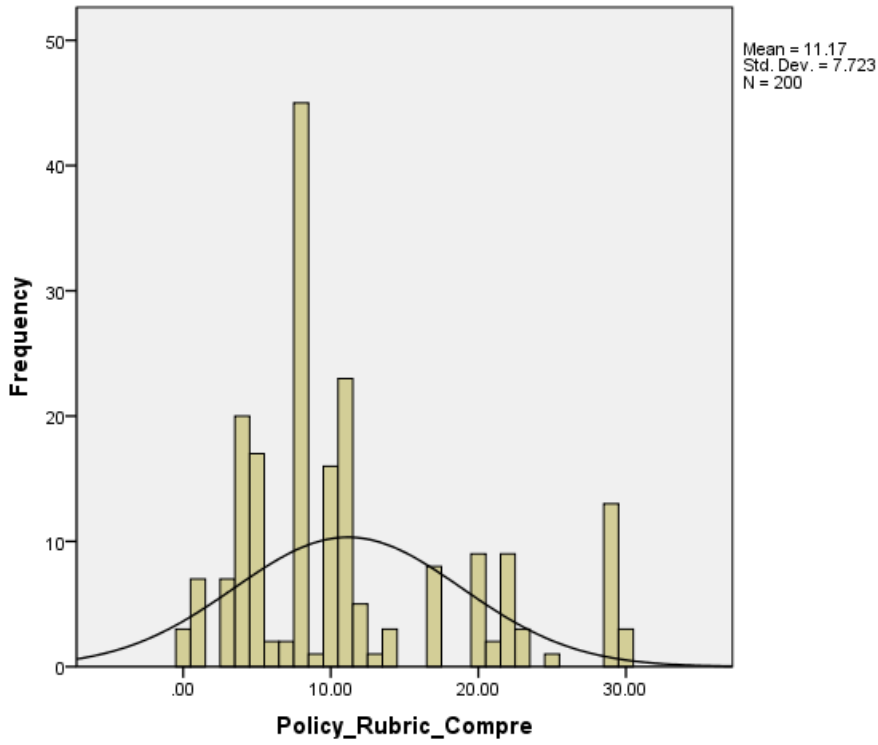

190
15
54
198
100
135
215
134
105
113
183
Caseload
0
100
200
300
400
500

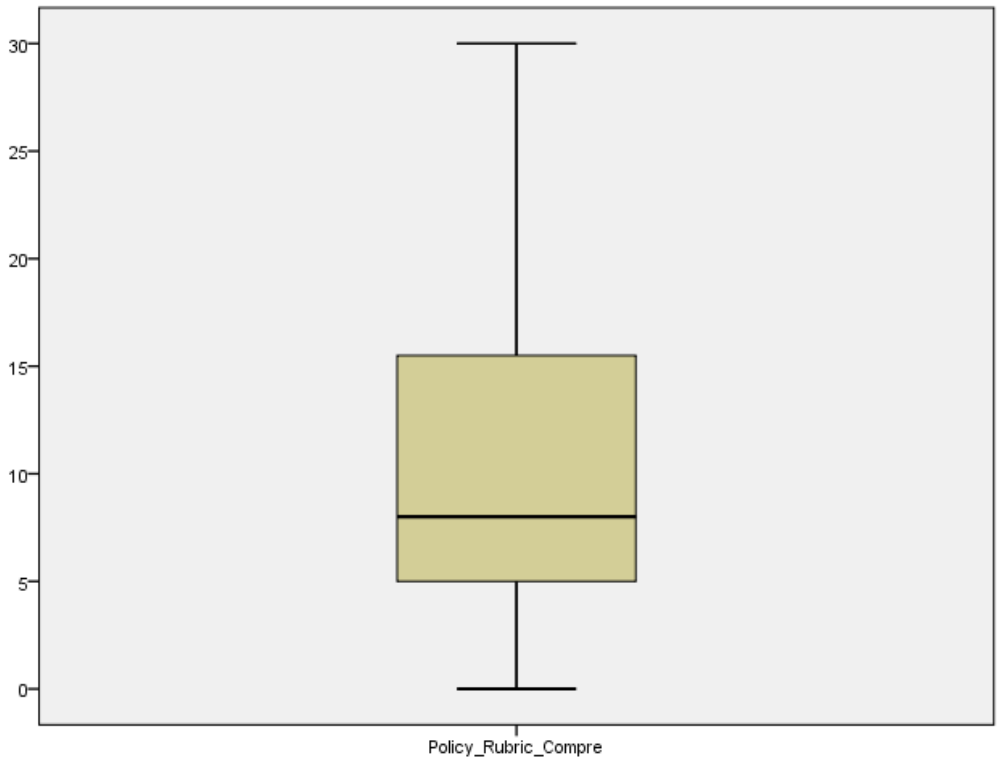

Mean = 9.84
Std. Dev. = 6.605
N = 205
Frequency
Fulltime_employment
0
5
10
15
20
25
.00
10.00
20.00
30.00
40.00

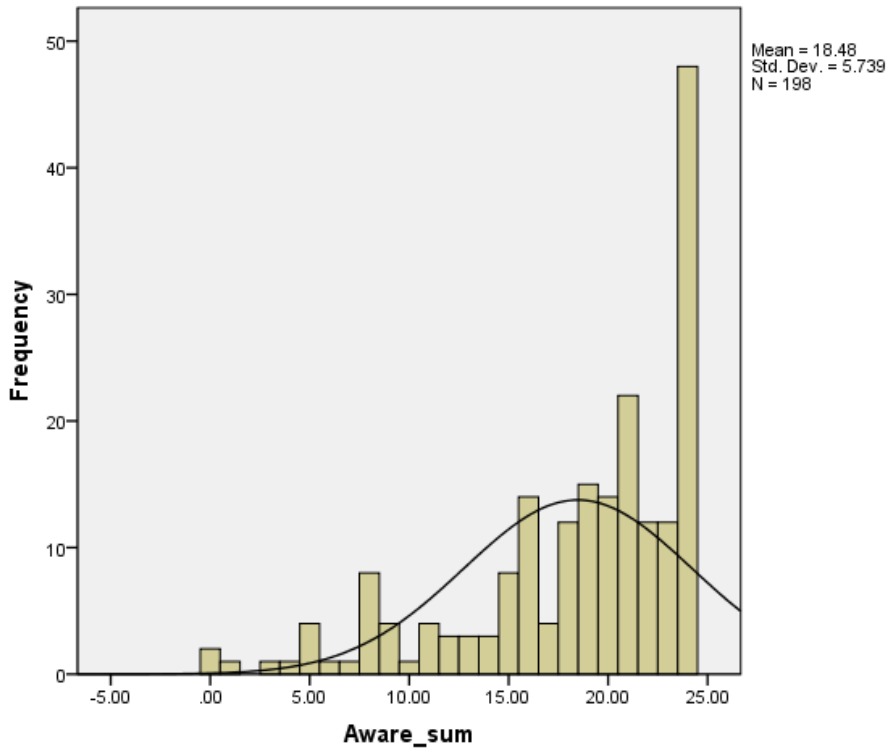

146
155
151
158
73
145
0
10
20
30
40
Fulltime_employment

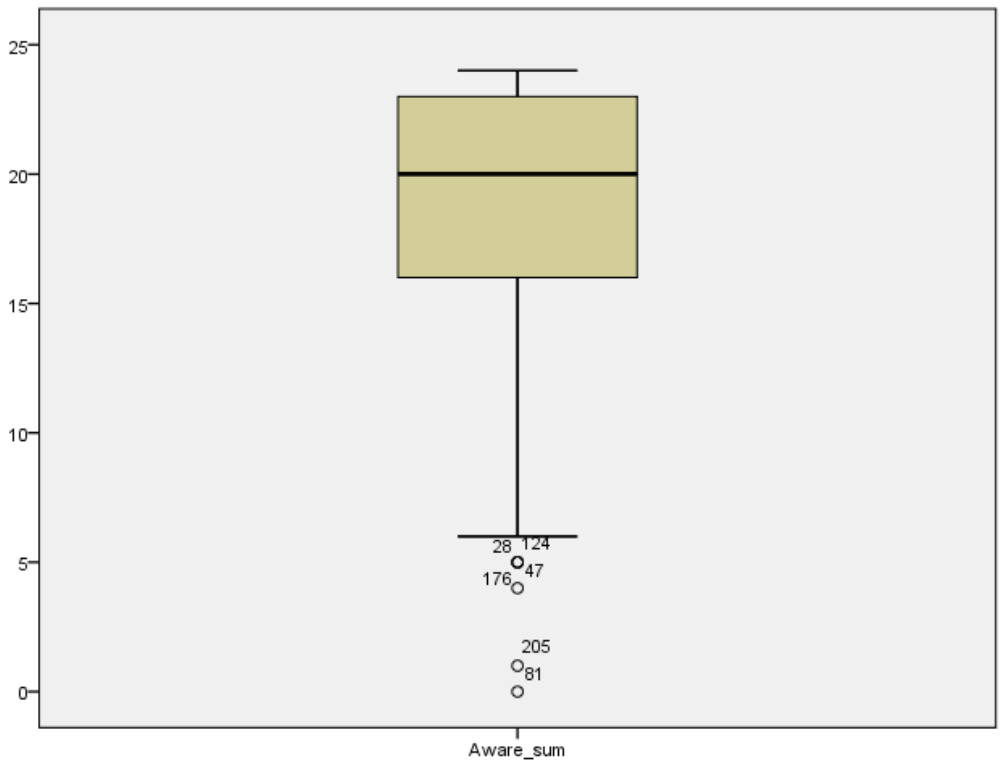

Mean = 9.49
Std. Dev. = 2.621
N = 214
Frequency
50
40
30
20
10
0
.00
2.50
5.00
7.50
10.00
12.50
SocialDesir_Sum

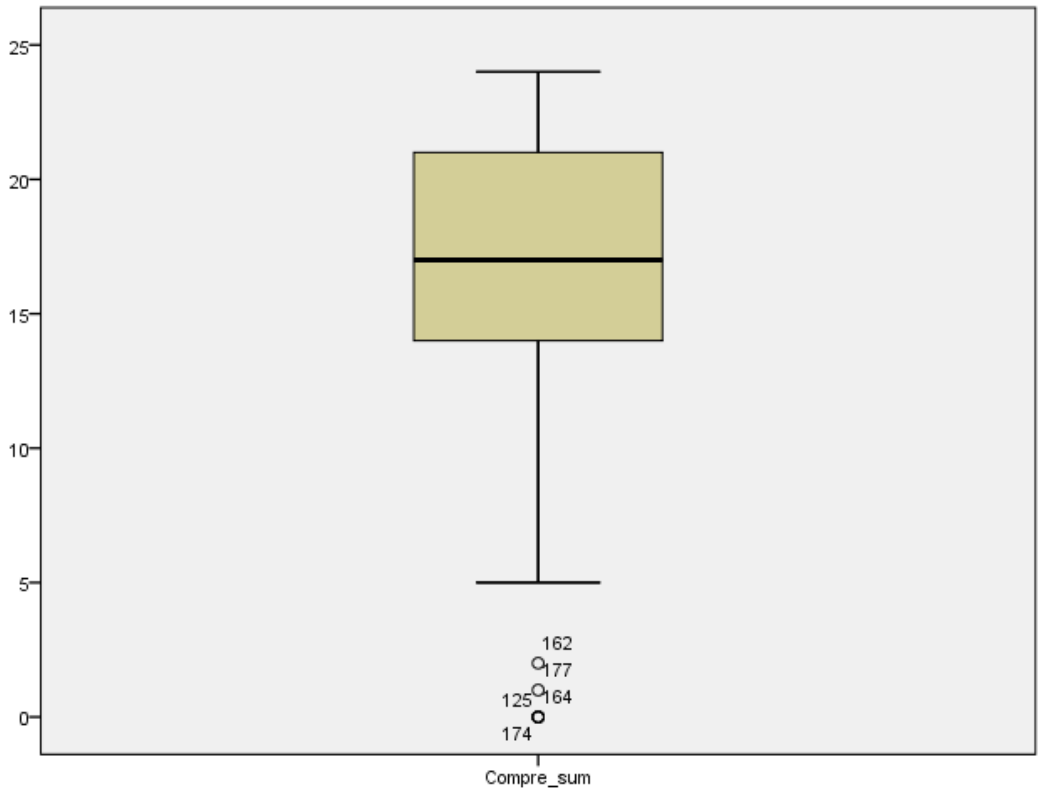

12.5
10.0
7.5
5.0
2.5
SocialDesir_Sum

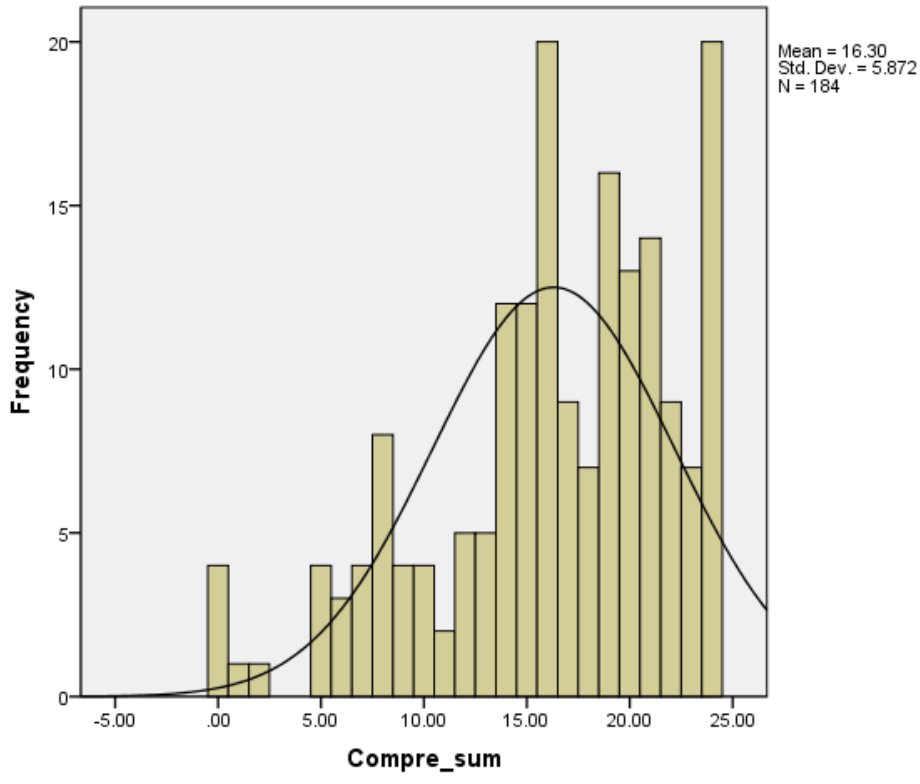

Mean = 11.17
Std. Dev. = 7.723
N = 200
Frequency
50
40
30
20
10
0
.00
10.00
20.00
30.00
Policy_Rubric_Compre

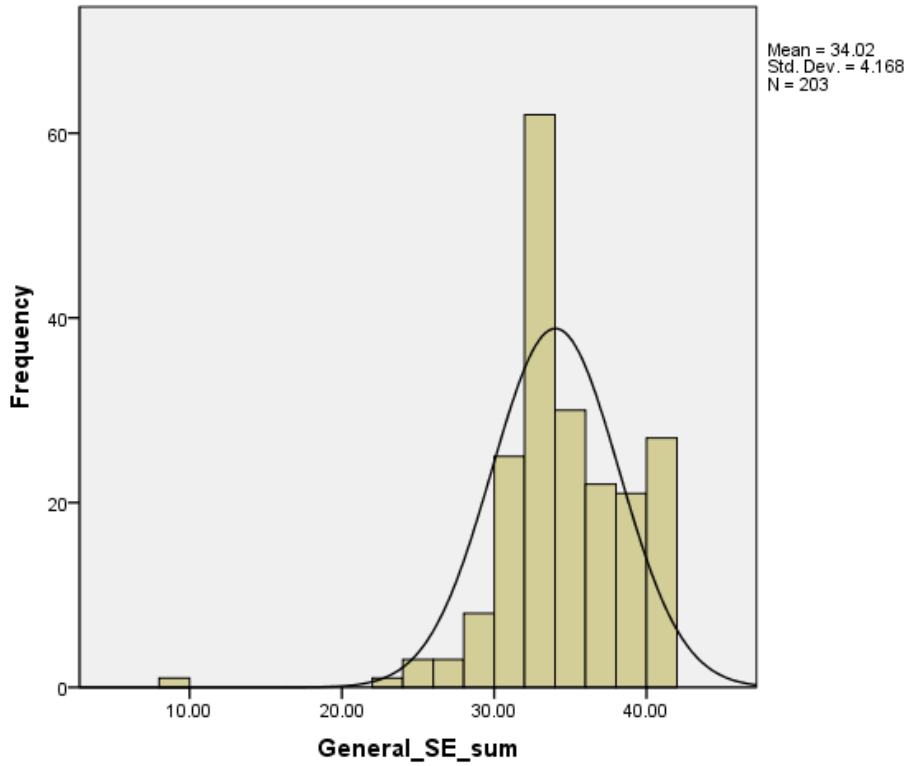

30
25
20
15
10
5
0
Policy_Rubric_Compre


Mean = 18.48
Std. Dev. = 5.739
N = 198
Frequency
Aware_sum


28
124
176
47
205
81
Aware_sum

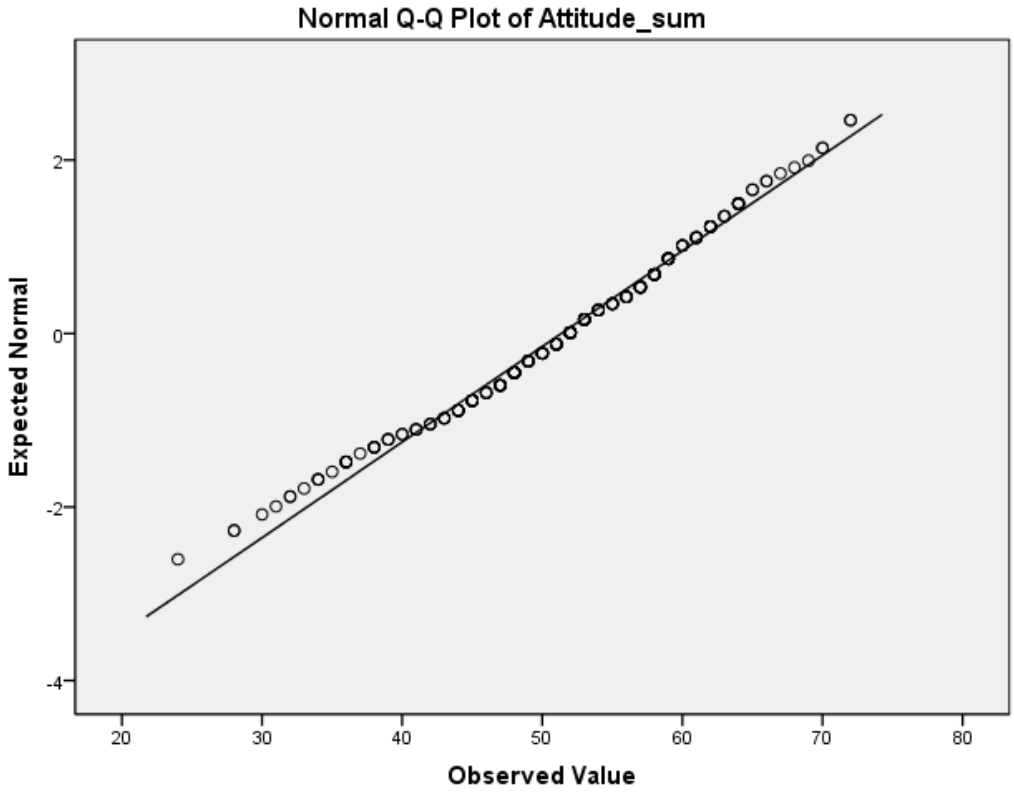

25
20
15
10
5
0
162
177
125
164
174
Compre_sum

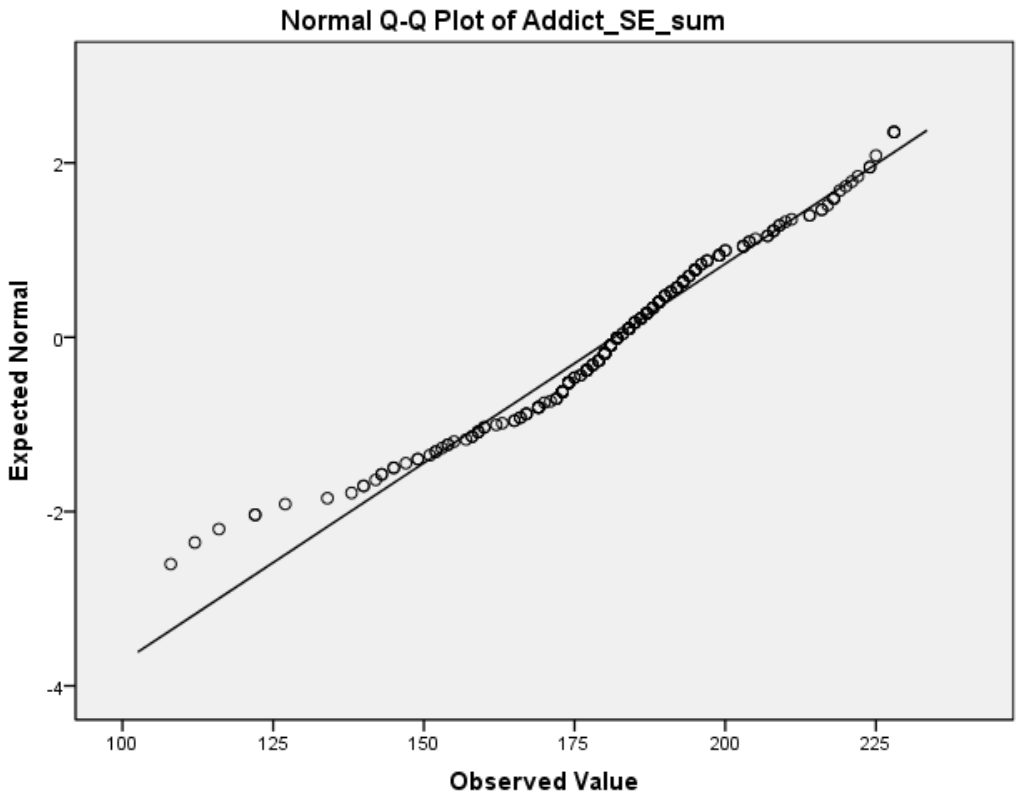

Mean = 16.30
Std. Dev. = 5.872
N = 184
Frequency
20
15
10
5
0
-5.00
.00
5.00
10.00
15.00
20.00
25.00
Compre_sum

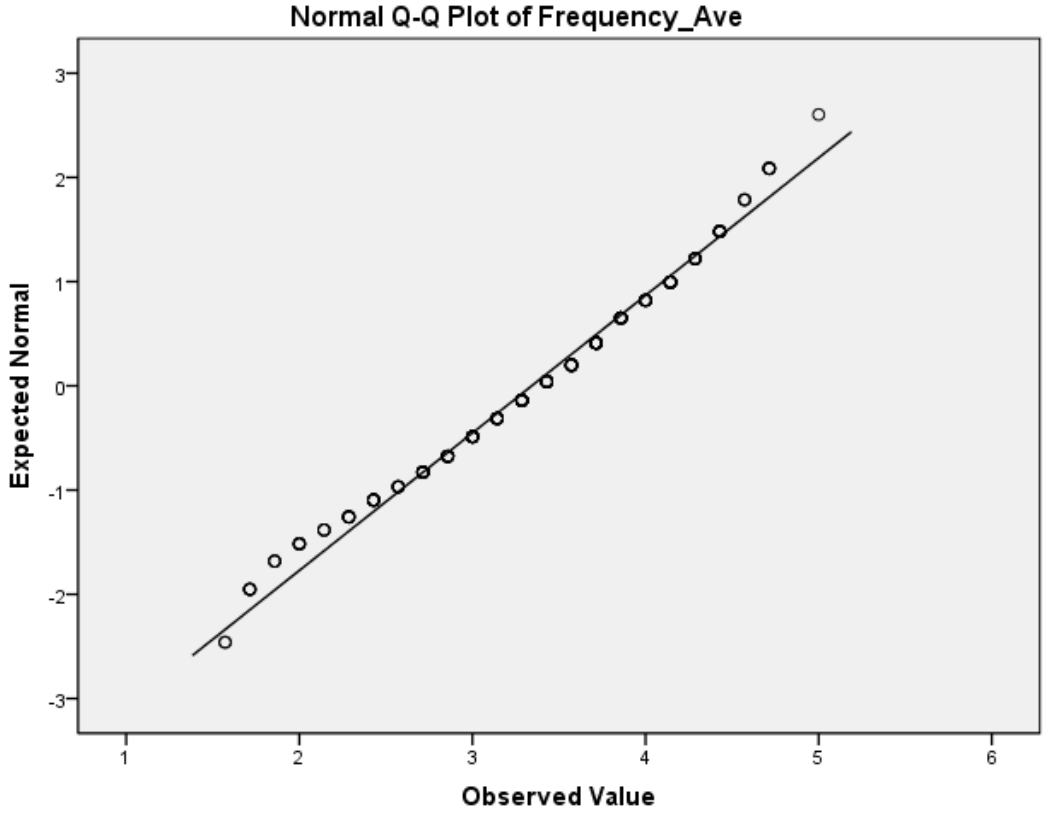

Mean = 34.02
Std. Dev. = 4.168
N = 203
Frequency
60
40
20
0
10.00
20.00
30.00
40.00
General_SE_sum

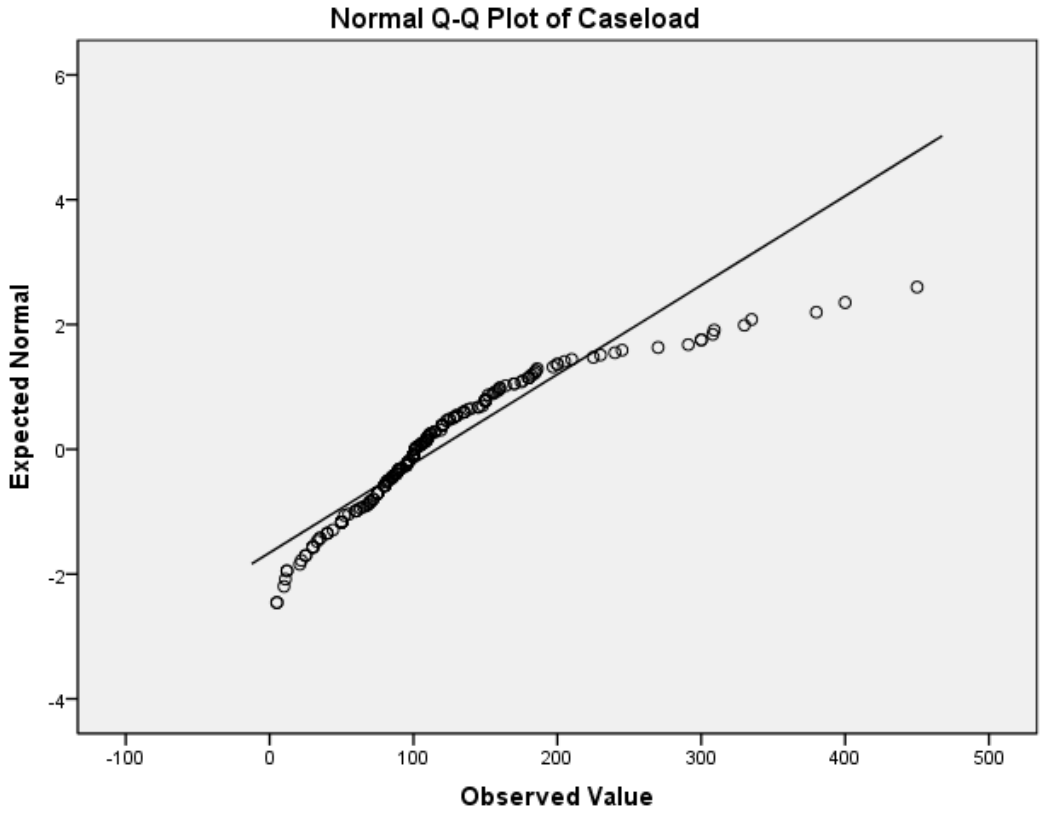

40
30
20
10
0
53
148
104
132
General_SE_sum

APPENDIX I: NORMAL Q-Q PLOTS FOR VARIABLES OF INTEREST

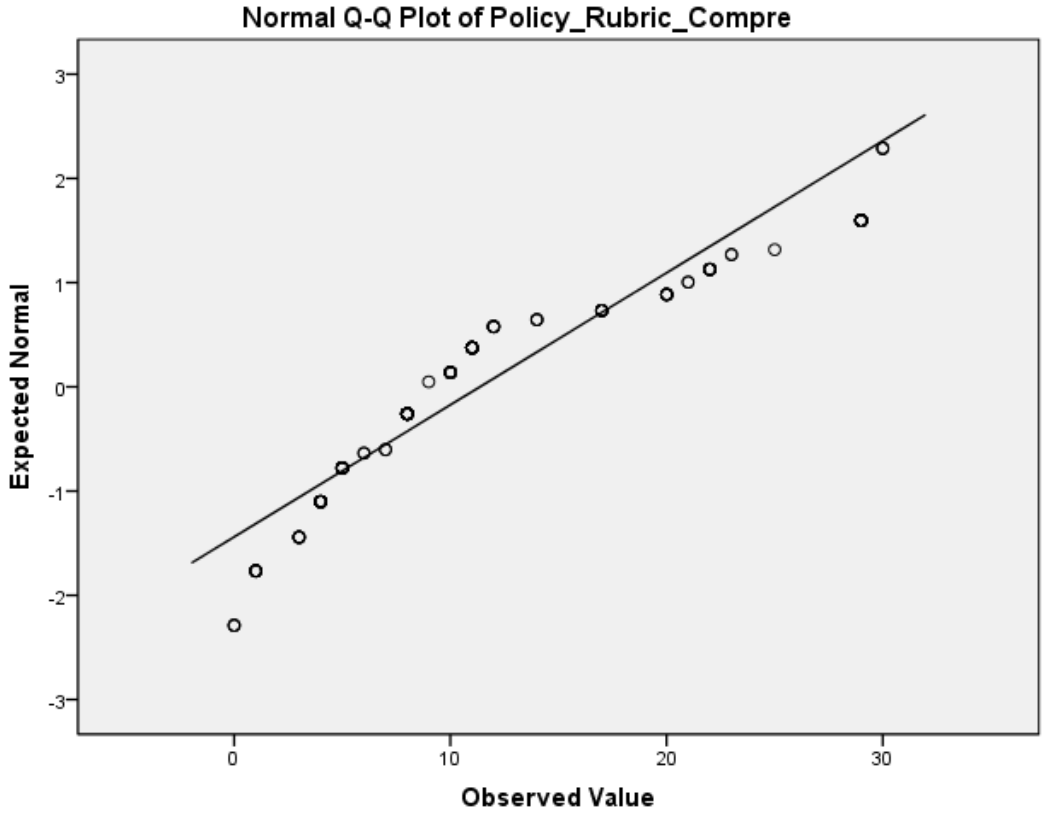


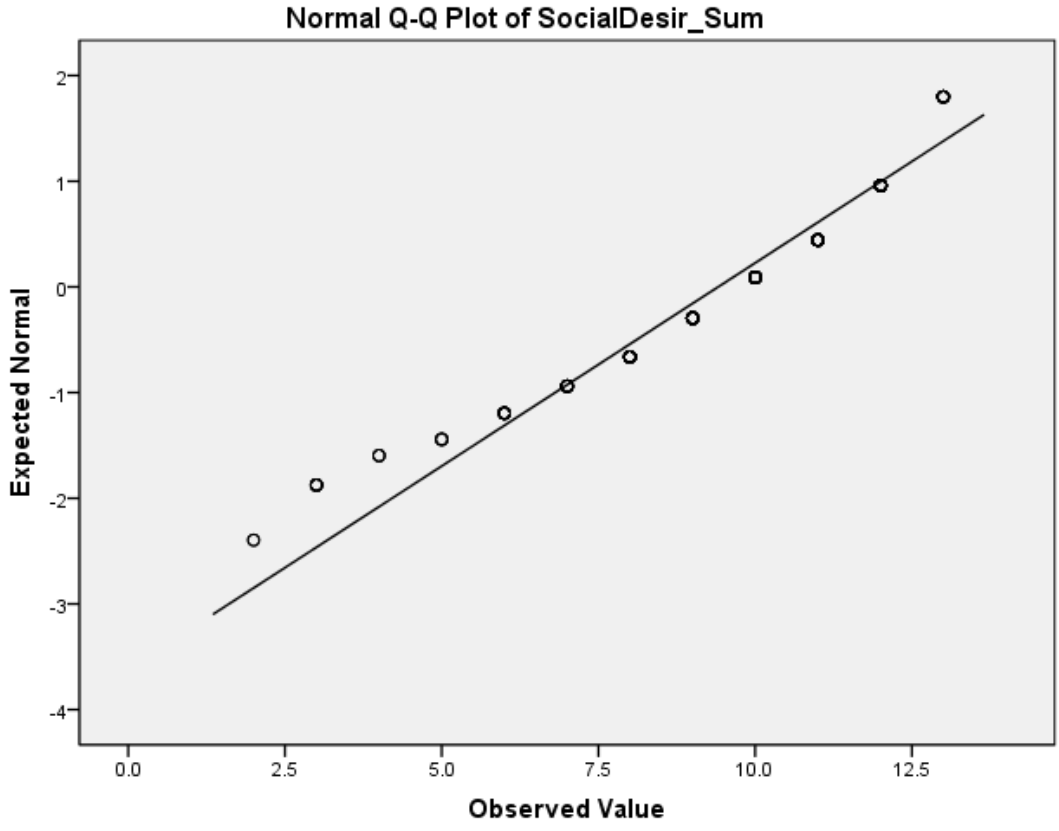


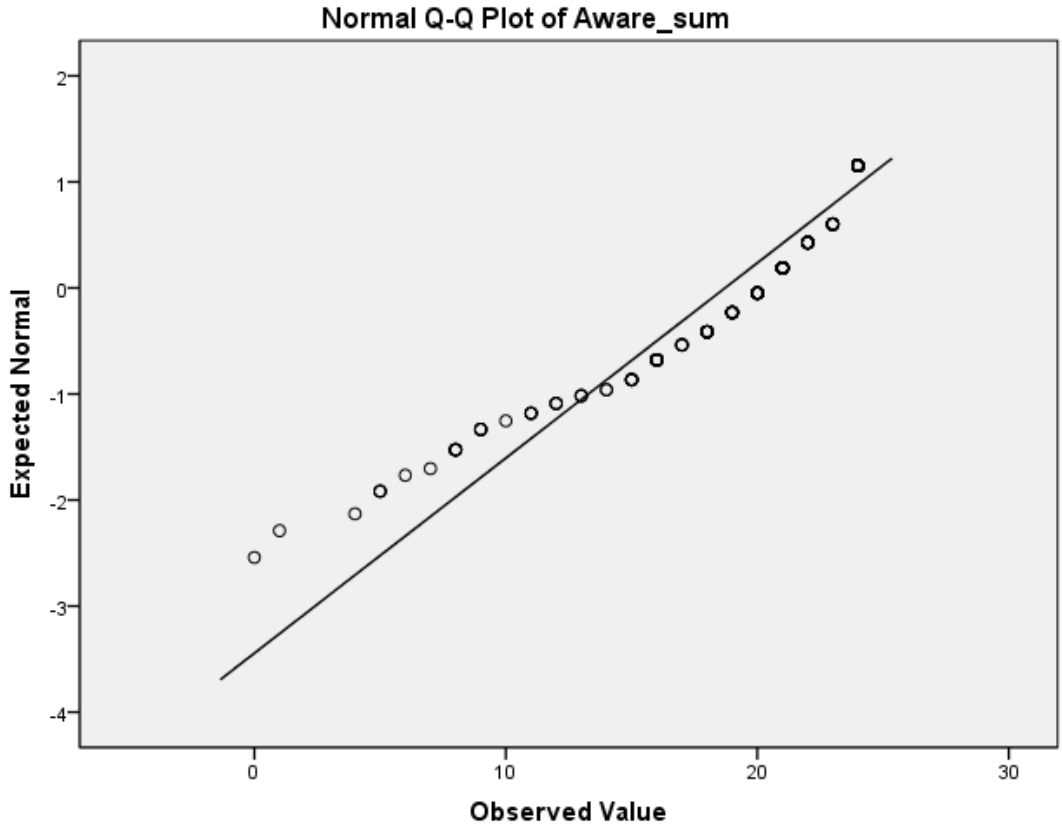

Normal Q-Q Plot of Frequency_Ave
Expected Normal
Observed Value
3
2
1
0
-1
-2
-3
1
2
3
4
5
6

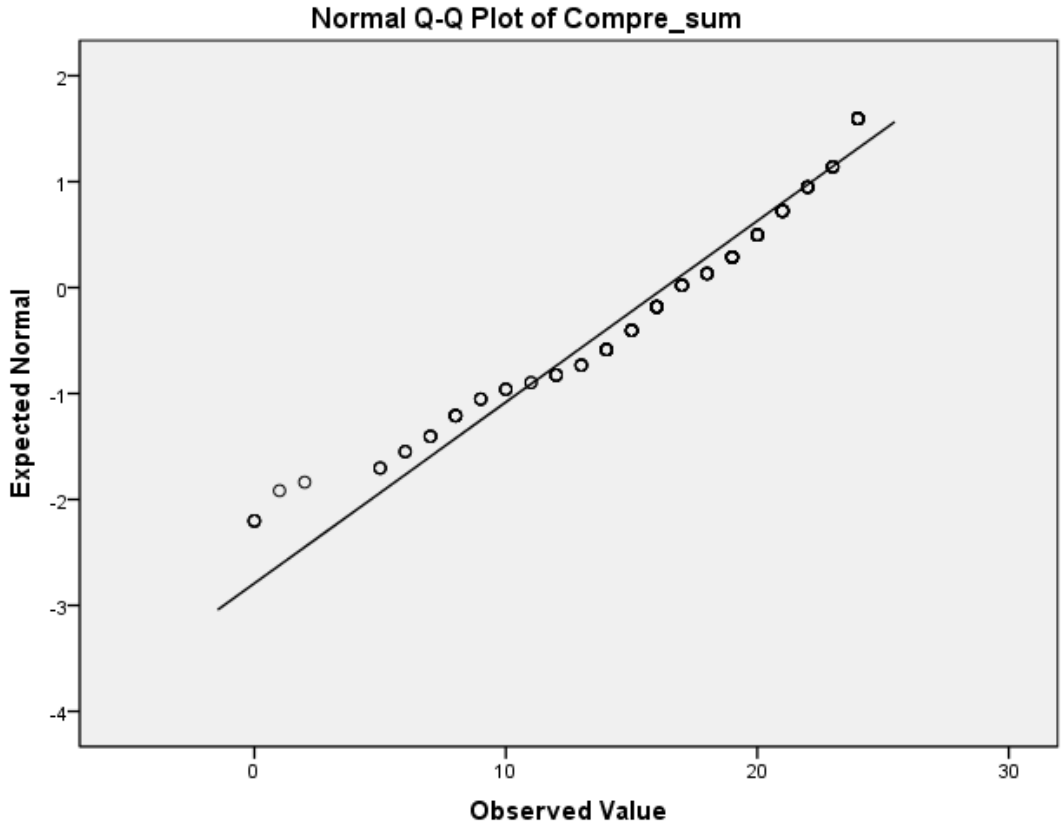

Normal Q-Q Plot of Caseload
Expected Normal
Observed Value
6
4
2
0
-2
-4
-100
0
100
200
300
400
500

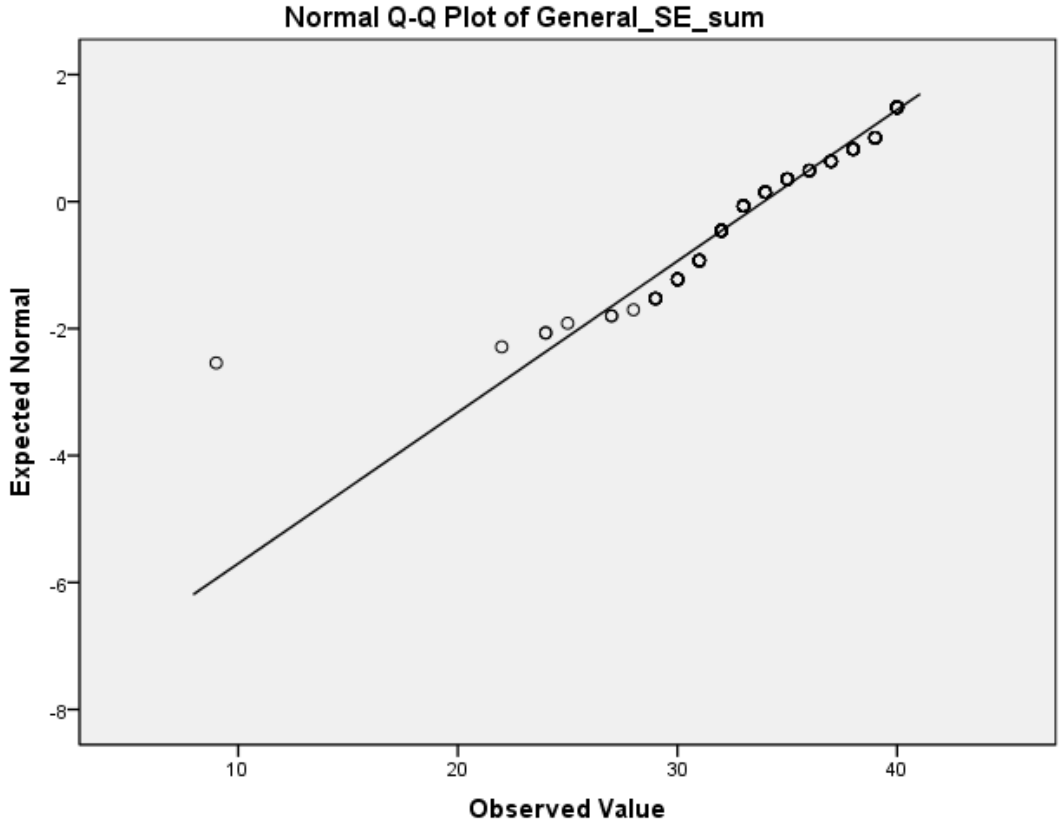

Normal Q-Q Plot of Fulltime_employment
Expected Normal
Observed Value
4
2
0
-2
-10
0
10
20
30
40


Normal Q-Q Plot of Policy_Rubric_Compre
Expected Normal
Observed Value
3
2
1
0
-1
-2
-3
0
10
20
30


Normal Q-Q Plot of SocialDesir_Sum
Expected Normal
Observed Value
2
1
0
-1
-2
-3
-4
0.0
2.5
5.0
7.5
10.0
12.5


Normal Q-Q Plot of Aware_sum
Expected Normal
Observed Value
2
1
0
-1
-2
-3
-4
0
10
20
30


Normal Q-Q Plot of Compre_sum
Expected Normal
Observed Value
2
1
0
-1
-2
-3
-4
0
10
20
30


Normal Q-Q Plot of General_SE_sum
Expected Normal
Observed Value
2
0
-2
-4
-6
-8
10
20
30
40

Appendix J: HOUSE OF THE VR

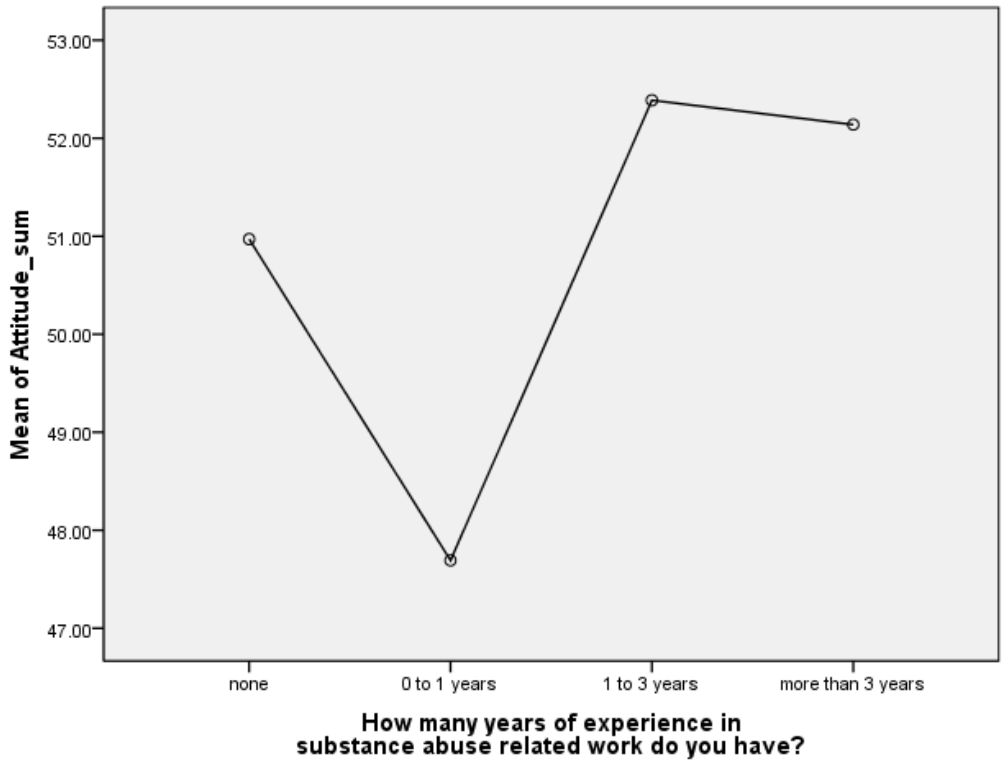
State and DC	House
Alabama	Alabama Department of Rehabilitation Services Vocational Rehabilitation Services
Alaska	State of Alaska Department of Labor and Workforce Development Division of Vocational Rehabilitation
Arizona	Arizona Department of Economic Security Division of Employment and Rehabilitation Services
Arkansas	Arkansas Department of Career Education Arkansas Rehabilitation Services Division
California	California Department of Rehabilitation
Colorado	State of Colorado Department of Human Services Division of Vocational Rehabilitation
Connecticut	Connecticut Department of Rehabilitation Services Bureau of Rehabilitation Services
Delaware	Delaware Department of Labor Division of Vocational Rehabilitation
District of Colombia	District of Columbia Department of Disability Services Rehabilitation Services Administration
Florida	Florida Department of Education Division of Vocational Rehabilitation
Georgia	Georgia Vocational Rehabilitation Agency Division of Vocational Rehabilitation
Hawaii	Department of Human Services Division of Vocational Rehabilitation
Idaho	Idaho State Board of Education Division of Vocational Rehabilitation
Illinois	Illinois Department of Human Services Division of Rehabilitation Services
Indiana	Indiana Family and Social Services Administration Division of Disability and Rehabilitation Services
Iowa	Iowa Department of Education Iowa Vocational Rehabilitation Services

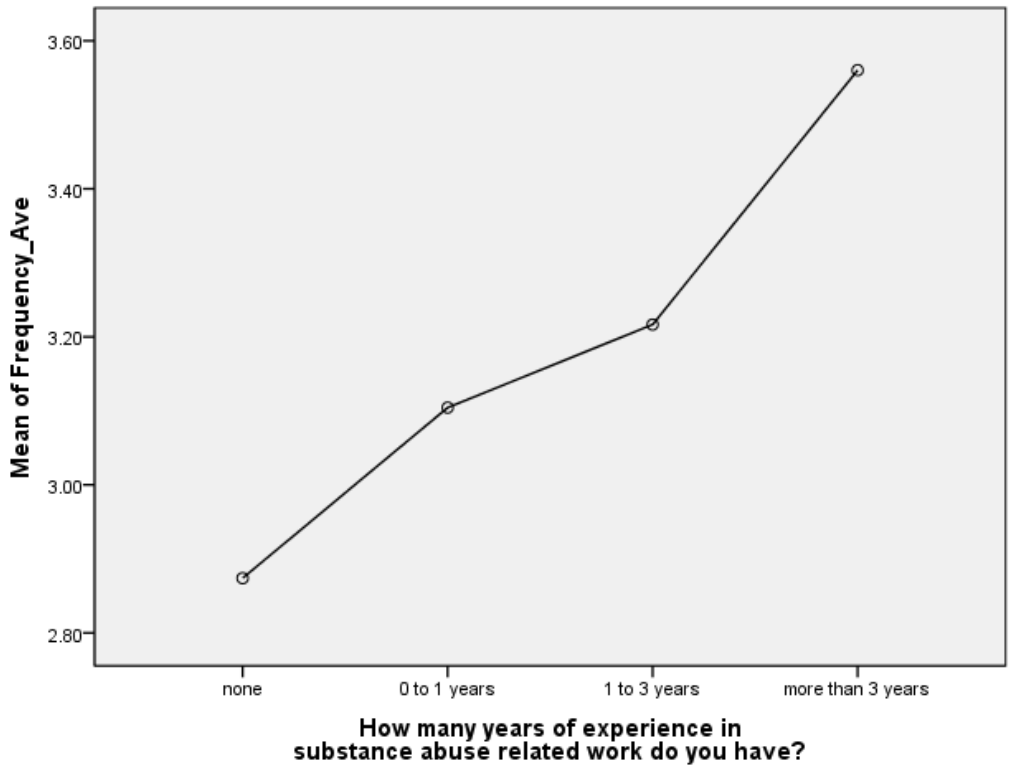
Kansas	Department of Children and Families Kansas Rehabilitation Services
Kentucky	Kentucky Department of Workforce Investment Office of Vocational Rehabilitation
Louisiana	Louisiana Office of Workforce Development Louisiana Rehabilitation Services
Maine	Maine Department of Labor Bureau of Rehabilitation Services Division of Vocational Rehabilitation
Maryland	Maryland Department of Education Division of Rehabilitation Services
Massachusetts	Massachusetts Executive Office of Health and Human Services Rehabilitation Commission Vocational Rehabilitation Services
Michigan	Michigan Department of Health and Human Services Michigan Rehabilitation Services
Minnesota	Minnesota Department of Employment and Economic Development--Vocational Rehabilitation Services
Mississippi	Mississippi Department of Rehabilitation Services Office of Vocational Rehabilitation
Missouri	Department of Elementary and Secondary Education Missouri Vocational Rehabilitation
Montana	Department of Public Health and Human Services Disability Employment and Transition Division Montana Vocational Rehabilitation
Nebraska	Nebraska Department of Education Nebraska Vocational Rehabilitation
Nevada	Nevada Department of Employment, Training, and Rehabilitation Rehabilitation Division Bureau of Vocational Rehabilitation
New Hampshire	New Hampshire Department of Education Bureau of Vocational Rehabilitation
New Jersey	New Jersey Department of Labor and Workforce Development Division of Vocational Rehabilitation
New Mexico	New Mexico Public Education Department Division of Vocational

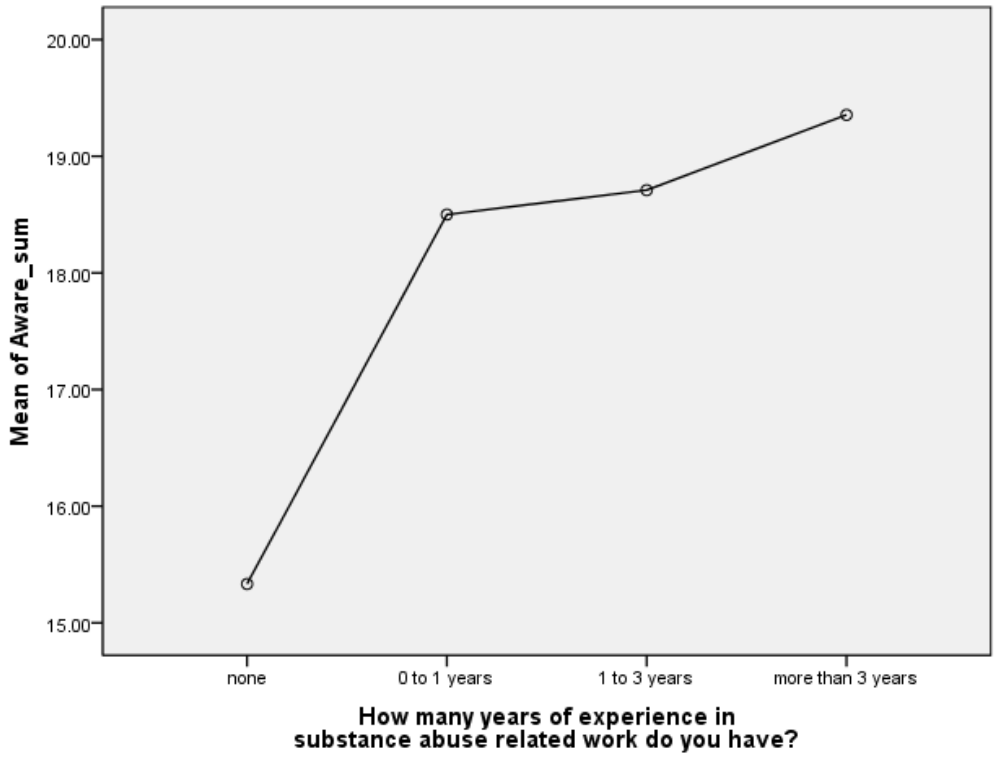
	Rehabilitation
New York	New York State Education Department Adult Career & Continuing Education Services-Vocational Rehabilitation
North Carolina	North Carolina Department of Health and Human Services Division of Vocational Rehabilitation Services
North Dakota	North Dakota Department of Human Services Division of Vocational Rehabilitation
Ohio	Opportunities for Ohioans with Disabilities Bureau of Vocational Rehabilitation
Oklahoma	Oklahoma Department of Rehabilitation Services Division of Vocational Rehabilitation
Oregon	Oregon Department of Human Services Vocational Rehabilitation
Pennsylvania	Pennsylvania Department of Labor and Industry Office of Vocational Rehabilitation
Rhode Island	Rhode Island Department of Human Services Office of Rehabilitation Services Vocational Rehabilitation Program
South Carolina	South Carolina Vocational Rehabilitation Department
South Dakota	South Dakota Department of Human Services Division of Rehabilitation Services Vocational Rehabilitation
Tennessee	Tennessee Department of Human Services Division of Rehabilitation Services Vocational Rehabilitation Services
Texas	Texas Department of Assistive and Rehabilitative Services Vocational Rehabilitation Program
Utah	Utah State Office of Education Utah State Office of Rehabilitation Division of Vocational Rehabilitation
Vermont	Vermont Agency of Human Services Division of Vocational Rehabilitation
Virginia	Virginia Department for Aging and Rehabilitative Services Division of

	Rehabilitation Services
Washington	Washington Department of Social and Health Services Division of Vocational Rehabilitation
West Virginia	West Virginia Department of Education and the Arts Division of Rehabilitation Services
Wisconsin	Wisconsin Department of Workforce Development Division of Vocational Rehabilitation
Wyoming	Wyoming Department of Workforce Services Division of Vocational Rehabilitation

Appendix K: MEANS PLOTS FOR POST-HOC ANALYSES



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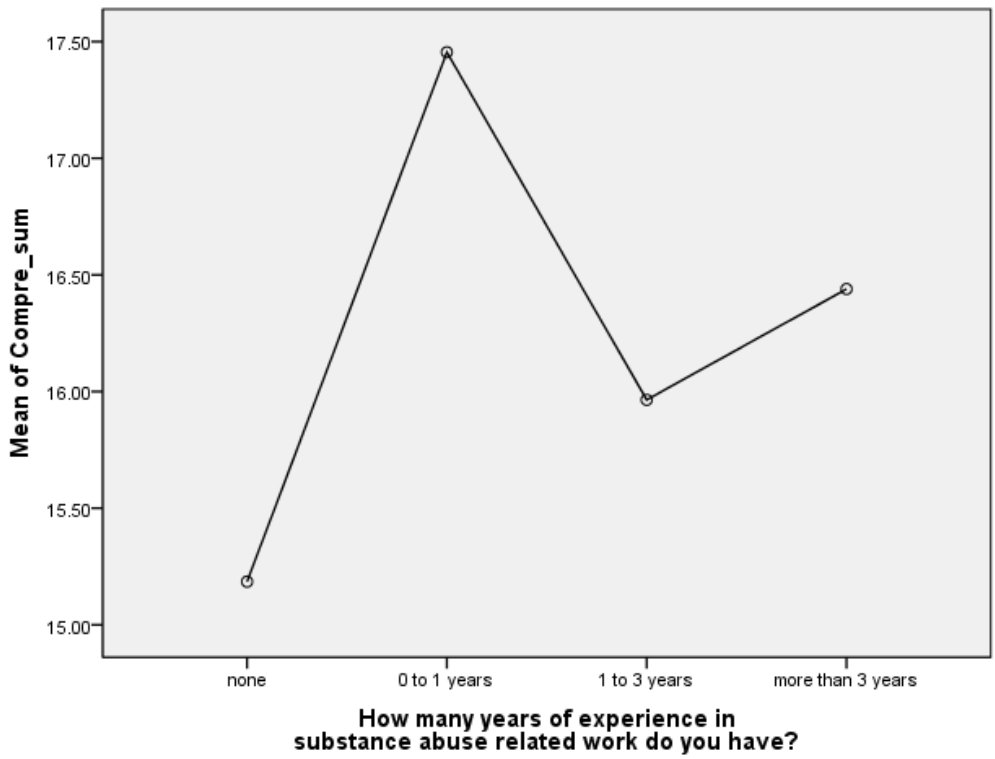
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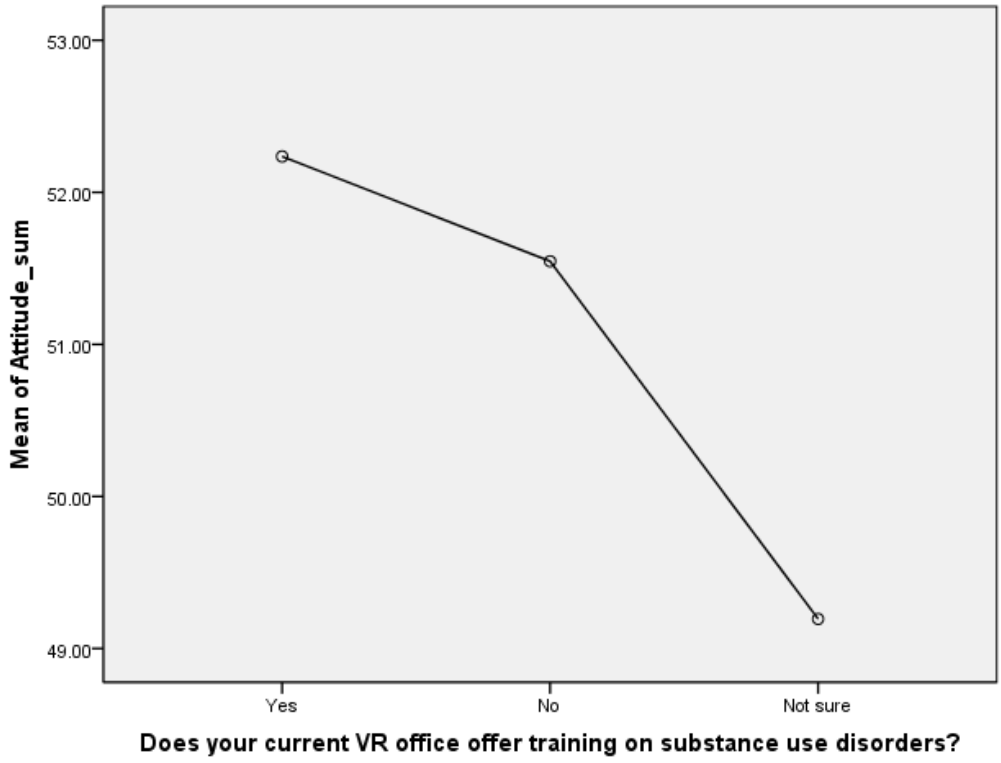
How many years of experience in substance abuse related work do you have?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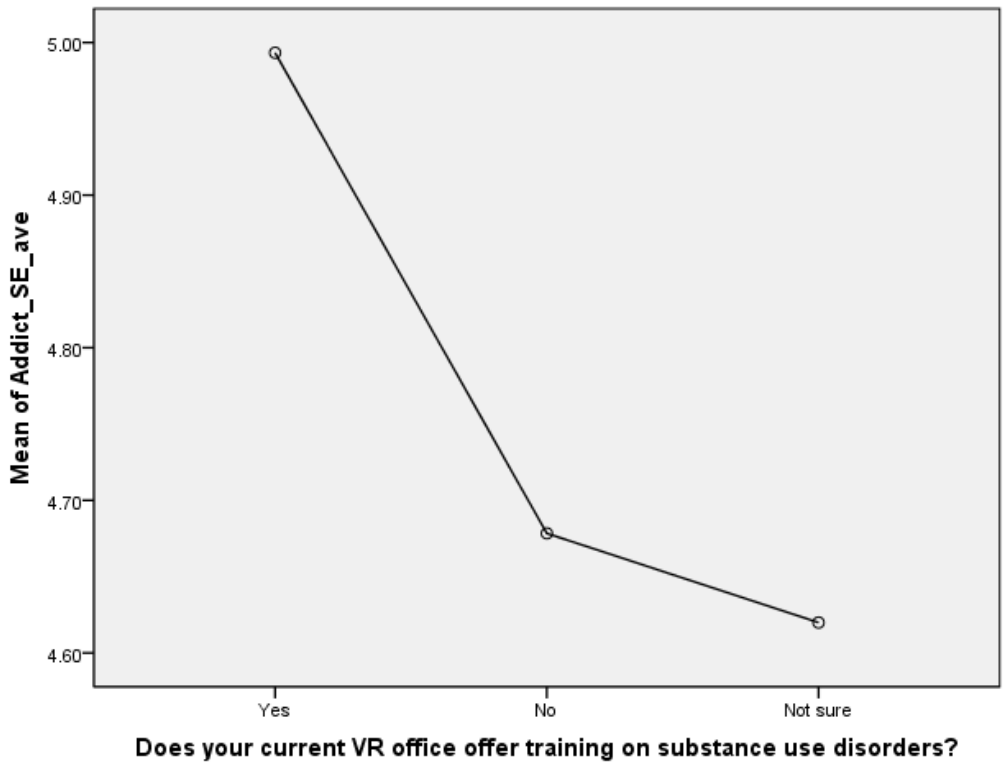
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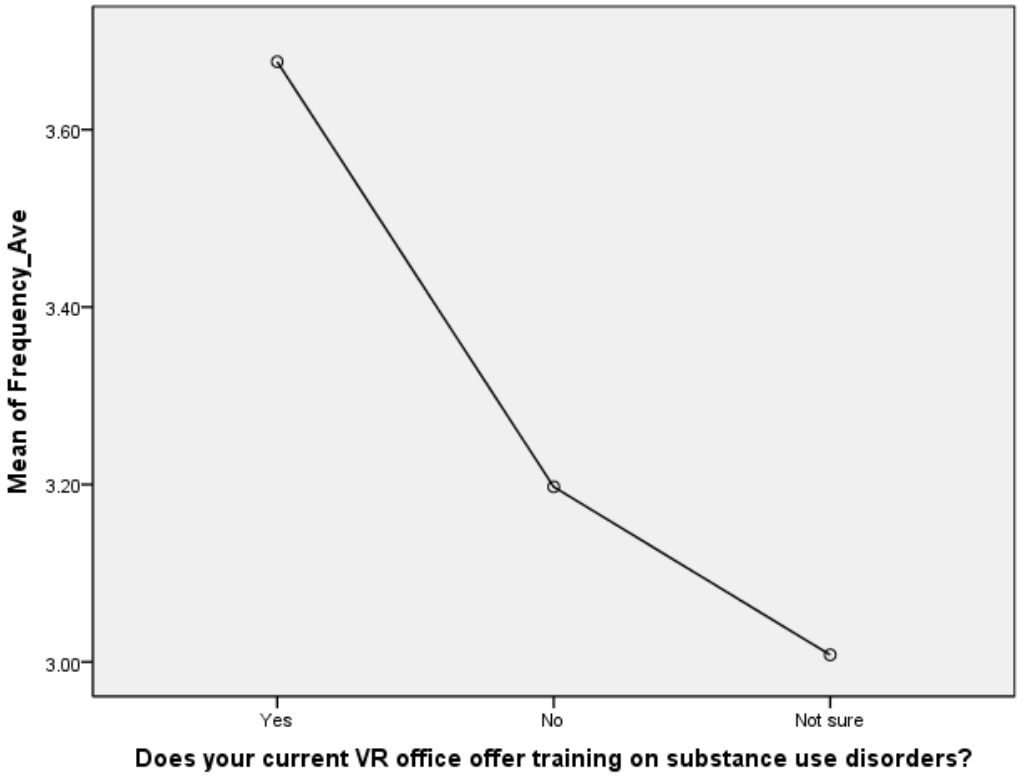
Not sure
Does your current VR office offer training on substance use disorders?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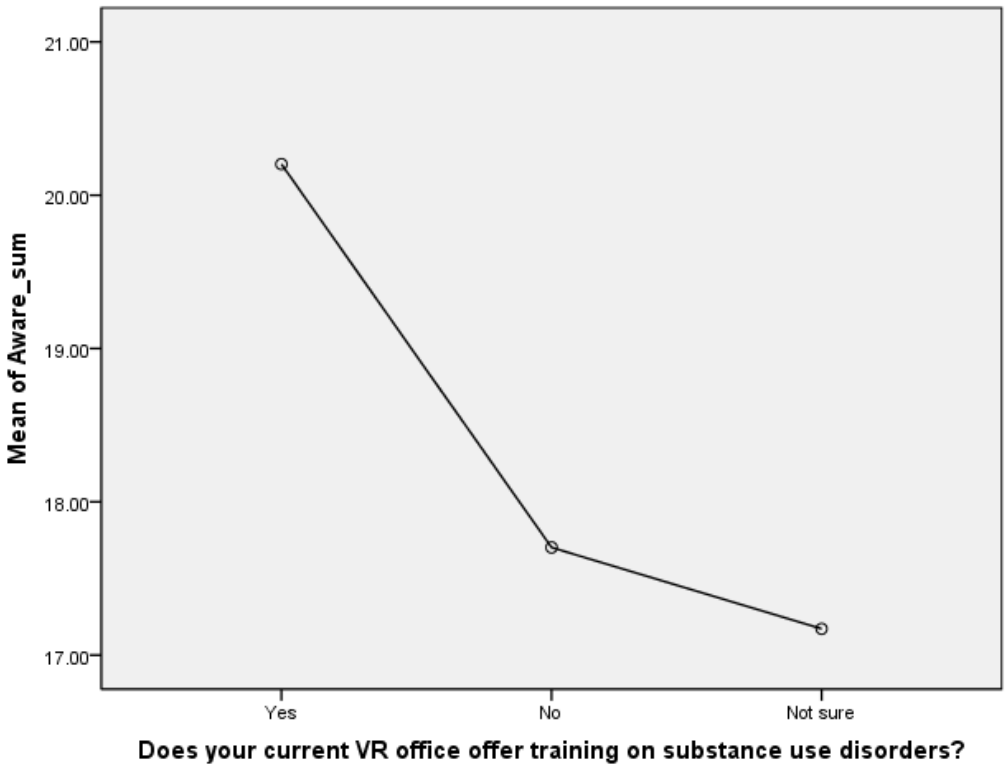
Yes
No
Not sure
Does your current VR office offer training on substance use disorders?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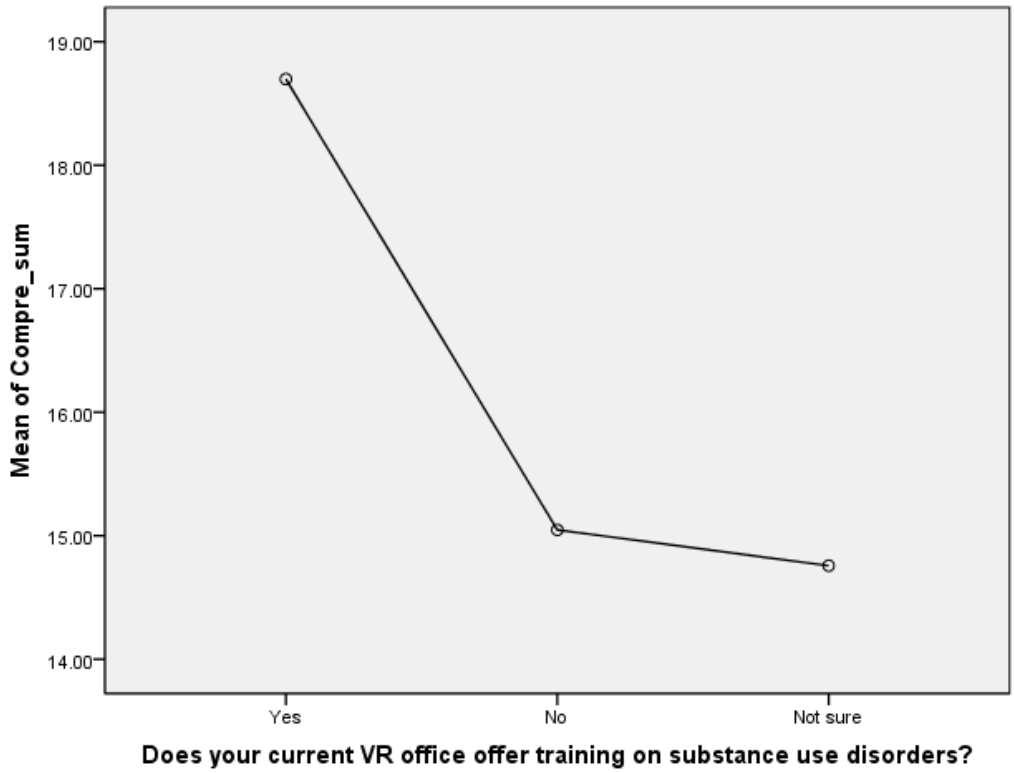
No
Not sure
Does your current VR office offer training on substance use disorders?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Mean of Compre_sum
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No
Not sure
Does your current VR office offer training on substance use disorders?

APPENDIX L: INSTRUMENTS AND DEMOGRAPHICS

Medical Condition Regard Scale

Directions: The following items are about your attitude towards working with **clients with substance use disorders** on a scale from **strongly disagree to strongly agree**.

		Strongly disagree	Disagree	Not sure but probably disagree	Not sure but probably agree	Agree	Strongly agree
1	I prefer not to work with clients like this.	1	2	3	4	5	6
2	Clients like this irritate me.	1	2	3	4	5	6
3	I enjoy giving extra time to clients like this.	1	2	3	4	5	6
4	Clients like this are particularly difficult for me to work with.	1	2	3	4	5	6
5	Working with clients like this is satisfying.	1	2	3	4	5	6
6	I feel especially compassionate toward clients like this.	1	2	3	4	5	6
7	I wouldn't mind traveling to care for clients like this.	1	2	3	4	5	6
8	I can usually find something that helps clients like this feel better.	1	2	3	4	5	6
9	There is little I can do to help clients like this.	1	2	3	4	5	6
10	Insurance plans should cover clients like this to the same degree that they cover clients with other conditions.	1	2	3	4	5	6
11	Treating clients like this is a waste of VR dollars. [Display only to participants who identified as State/Federal VR counselors]	1	2	3	4	5	6
11	Treating clients like this is a waste of medical dollars. [Display only to participants who do not identified as State/Federal VR counselors]	1	2	3	4	5	6
12	In general, I trust clients like this about the same as other clients.	1	2	3	4	5	6

Addiction Counseling Self-Efficacy Scale [Display only to participants who identified as State/Federal VR counselors]

Directions: For each of the following, please rate how confident you are in your ability to perform these skills on a scale from **strongly disagree to strongly agree**. Circle the number for each item that best represents your confidence to be effective in each activity described. Imagine a client who is eligible for VR services based on his or her primary disability. You notice this client exhibits problems related to drugs or alcohol.

1. For clients eligible for VR services and exhibiting substance abusing problems, I am confident in my ability to assess their previous experience with peer support groups such as AA, NA, CA, SMART Recovery, etc.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

2. For clients eligible for VR services and exhibiting substance abusing problems, I am confident in my ability to help them identify an accessible, and appropriate peer support group, including twelve step, SMART Recovery, or other peer support networks.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

3. For clients eligible for VR services and exhibiting substance abusing problems, I am confident in my ability to show empathy towards them.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

4. For clients eligible for VR services and exhibiting substance abusing problems, I am confident in my ability to create a therapeutic environment where they will feel that I understand them.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

5. I am confident in my ability to work effectively with a client who has both an anxiety disorder and substance abusing problems.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

6. For clients eligible for VR services and exhibiting substance abusing problems, I am confident in my ability to screen them for co-occurring mental health disorders.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

7. For clients eligible for VR services and exhibiting substance abusing problems, I am confident in my ability to help them determine who is available to support their recovery.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

8. I am confident in my ability to work effectively with a client who has both a psychotic disorder (for example, schizophrenia) and substance abusing problems.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

9. For clients eligible for VR services and exhibiting substance abusing problems, I am confident in my ability to use assessment data to develop a treatment plan.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

10. I am confident in my ability to work effectively with a client who has both a personality disorder and substance abusing problems.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

11. For clients eligible for VR services and exhibiting substance abusing problems, I am confident in my ability to assess their readiness to change substance use.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

12. For clients eligible for VR services and exhibiting substance abusing problems, I am confident in my ability to help them develop realistic expectations about recovery.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

13. I am confident in my ability to work effectively with a client who has both history of interpersonal trauma (for example, child abuse or other forms of interpersonal violence) and substance abusing problems.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

14. I am confident in my ability to work effectively with a client who has both Post Traumatic Stress Disorder (PTSD) and substance abusing problems.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

15. For clients eligible for VR services and exhibiting substance abusing problems, I am confident in my ability to teach them about self-help support networks and related self-help literature.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

16. For clients eligible for VR services and exhibiting substance abusing problems, I am confident in my ability to help them figure out what behaviors will support recovery.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

17. For clients eligible for VR services and exhibiting substance abusing problems, I am confident in my ability to help them recognize what triggers their substance use.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

18. For clients eligible for VR services and exhibiting substance abusing problems, I am confident in my ability to write accurate and concise assessment reports.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

19. For clients eligible for VR services and exhibiting substance abusing problems, I am confident in my ability to assess their financial concerns.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

20. For clients eligible for VR services and exhibiting substance abusing problems, I am confident in my ability to summarize their treatment and recovery information for other professionals.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

21. For clients eligible for VR services and exhibiting substance abusing problems, I am confident in my ability to establish a warm, respectful relationship with them.

Strongly disagree	Disagree	Not Sure but probably	Not sure but probably	Agree	Strongly agree

disagree agree

22. For clients eligible for VR services and exhibiting substance abusing problems, I am confident in my ability to gather information about their prior experiences with substance abuse treatment.

Strongly disagree | Disagree | Not Sure but probably disagree | Not sure but probably agree | Agree | Strongly agree

23. For clients eligible for VR services and exhibiting substance abusing problems, I am confident in my ability to challenge behaviors that interfere with their recovery.

Strongly disagree | Disagree | Not Sure but probably disagree | Not sure but probably agree | Agree | Strongly agree

24. I am confident in my ability to work effectively with a client who has both a mood disorder (for example, persistent depressive disorder) and substance abusing problems.

Strongly disagree | Disagree | Not Sure but probably disagree | Not sure but probably agree | Agree | Strongly agree

25. For clients eligible for VR services and exhibiting substance abusing problems, I am confident in my ability to use active listening techniques when working with them.

Strongly disagree | Disagree | Not Sure but probably disagree | Not sure but probably agree | Agree | Strongly agree

26. For clients eligible for VR services and exhibiting substance abusing problems, I am confident in my ability to maintain a respectful and nonjudgmental atmosphere with them.

Strongly disagree | Disagree | Not Sure but probably disagree | Not sure but probably agree | Agree | Strongly agree

27. I am confident in my ability to work effectively with a client who has both an injury related disability (for example, spinal cord injury, traumatic brain injury, or amputation) and substance abusing problems.

Strongly disagree | Disagree | Not Sure but probably disagree | Not sure but probably agree | Agree | Strongly agree

28. I am confident in my ability to work effectively with a client who has both a chronic pain related disability (for example, back pain or rheumatoid arthritis) and substance abusing problems.

Strongly disagree | Disagree | Not Sure but probably disagree | Not sure but probably agree | Agree | Strongly agree

29. I am confident in my ability to work effectively with a client who has both HIV or AIDS and substance abusing problems.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

30. I am confident in my ability to work effectively with a client who has both a cardio-pulmonary disorder (for example, hypertension or COPD) and substance abusing problems.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

31. I am confident in my ability to work effectively with a client who has both a neurodevelopmental disorder (for example, intellectual disability or autism spectrum disorder) and substance abusing problems.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

32. For clients eligible for VR services and exhibiting substance abusing problems, I am confident in my ability to address their legal concerns related to substance use.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

33. For clients eligible for VR services and exhibiting substance abusing problems, I am confident in my ability to address barriers to employment related to substance use.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

34. For clients eligible for VR services and exhibiting substance abusing problems, I am confident in my ability to address childcare and parenting concerns related to substance use.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

35. For clients eligible for VR services and exhibiting substance abusing problems, I am confident in my ability to address transportation barriers for someone with substance use.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

36. For clients eligible for VR services and exhibiting substance abusing problems, I am confident in my ability to address on-the-job issues related to substance use.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

37. For clients eligible for VR services and exhibiting substance abusing problems, I am confident in my ability to report suspected child abuse related to substance use.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

38. For clients eligible for VR services and exhibiting substance abusing problems, I am confident in my ability to accurately diagnose substance use disorders based on the Diagnostic and Statistical Manual 5 (DSM-5).

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

Addiction Counseling Self-Efficacy Scale [Display only to participants who do not identified as State/Federal VR counselors]

Directions: For each of the following, please rate how confident you are in your ability to perform these skills on a scale from ***strongly disagree to strongly agree***. Circle the number for each item that best represents your confidence to be effective in each activity described. Imagine a client who is eligible for your agency services based on his or her primary disability. You notice this client exhibits problems related to drugs or alcohol.

1. I am confident in my ability to assess a client's previous experience with peer support groups such as AA, NA, CA, SMART Recovery, etc.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

2. I am confident in my ability to help a client identify an accessible, and appropriate peer support group, including twelve step, SMART Recovery, or other peer support networks.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

3. I am confident in my ability to show empathy towards a client.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

4. I am confident in my ability to create a therapeutic environment where clients will feel that I understand them.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

5. I am confident in my ability to work effectively with a client who has both an anxiety disorder and substance abusing problems.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

6. I am confident in my ability to screen clients for co-occurring mental health disorders.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

7. I am confident in my ability to help a client determine who is available to support his/her recovery.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

8. I am confident in my ability to work effectively with a client who has both a psychotic disorder (for example, schizophrenia) and substance abusing problems.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

9. I am confident in my ability to use assessment data to develop a treatment plan.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

10. I am confident in my ability to work effectively with a client who has both a personality disorder and substance abusing problems.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

11. I am confident in my ability to assess a client's readiness to change substance use.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

12. I am confident in my ability to help a client develop realistic expectations about recovery.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

13. I am confident in my ability to work effectively with a client who has both history of interpersonal trauma (for example, child abuse or other forms of interpersonal violence) and substance abusing problems.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

14. I am confident in my ability to work effectively with a client who has both Post Traumatic Stress Disorder (PTSD) and substance abusing problems.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

15. I am confident in my ability to teach a client about self-help support networks and related self-help literature.

Strongly	Disagree	Not Sure but	Not sure but	Agree	Strongly agree

disagree probably disagree probably agree

16. I am confident in my ability to help a client figure out what behaviors will support recovery.

Strongly disagree Disagree Not Sure but probably disagree Not sure but probably agree Agree Strongly agree

17. I am confident in my ability to help a client recognize what triggers his/her substance use.

Strongly disagree Disagree Not Sure but probably disagree Not sure but probably agree Agree Strongly agree

18. I am confident in my ability to write accurate and concise assessment reports.

Strongly disagree Disagree Not Sure but probably disagree Not sure but probably agree Agree Strongly agree

19. I am confident in my ability to assess a client's financial concerns.

Strongly disagree Disagree Not Sure but probably disagree Not sure but probably agree Agree Strongly agree

20. I am confident in my ability to summarize a client's treatment and recovery information for other professionals.

Strongly disagree Disagree Not Sure but probably disagree Not sure but probably agree Agree Strongly agree

21. I am confident in my ability to establish a warm, respectful relationship with a client.

Strongly disagree Disagree Not Sure but probably disagree Not sure but probably agree Agree Strongly agree

22. I am confident in my ability to gather information about a client's prior experiences with substance abuse treatment.

Strongly disagree Disagree Not Sure but probably disagree Not sure but probably agree Agree Strongly agree

23. I am confident in my ability to challenge behaviors that interfere with a client's recovery.

Strongly disagree Disagree Not Sure but probably disagree Not sure but probably agree Agree Strongly agree

24. I am confident in my ability to work effectively with a client who has both a mood disorder (for example, persistent depressive disorder) and substance abusing problems.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

25. I am confident in my ability to use active listening techniques when working with a client.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

26. I am confident in my ability to maintain a respectful and nonjudgmental atmosphere with a client.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

27. I am confident in my ability to work effectively with a client who has both an injury related disability (for example, spinal cord injury, traumatic brain injury, or amputation) and substance abusing problems.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

28. I am confident in my ability to work effectively with a client who has both a chronic pain related disability (for example, back pain or rheumatoid arthritis) and substance abusing problems.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

29. I am confident in my ability to work effectively with a client who has both HIV or AIDS and substance abusing problems.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

30. I am confident in my ability to work effectively with a client who has both a cardio-pulmonary disorder (for example, hypertension or COPD) and substance abusing problems.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

31. I am confident in my ability to work effectively with a client who has both a neurodevelopmental disorder (for example, intellectual disability or autism spectrum disorder) and substance abusing problems.

Strongly disagree	Disagree	Not Sure but probably	Not sure but probably	Agree	Strongly agree

		disagree	agree		

32. I am confident in my ability to address a client's legal concerns related to substance use.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

33. I am confident in my ability to address barriers to employment related to substance use.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

34. I am confident in my ability to address childcare and parenting concerns related to substance use.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

35. I am confident in my ability to address transportation barriers for someone with substance use.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

36. I am confident in my ability to address on-the-job issues related to substance use.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

37. I am confident in my ability to report suspected child abuse related to substance use.

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

38. I am confident in my ability to accurately diagnose substance use disorders based on the Diagnostic and Statistical Manual 5 (DSM-5).

Strongly disagree	Disagree	Not Sure but probably disagree	Not sure but probably agree	Agree	Strongly agree

Frequency of Procedural Practices

Please indicate your responses on a scale ranging from ***never to almost always***.

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

Never Rarely Sometimes Frequently Almost Always

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

Never Rarely Sometimes Frequently Almost 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 Frequently Almost Always

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

Never Rarely Sometimes Frequently Almost Always

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

Never Rarely Sometimes Frequently Almost Always

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

Never Rarely Sometimes Frequently Almost Always

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

Never Rarely Sometimes Frequently Almost Always

New General Self-Efficacy Scale

Directions: The following items are about your general self-efficacy. Please rate the extent to which you agree with the following statements on a scale from ***strongly disagree to strongly agree***.

		Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
1	I will be able to achieve most of the goals that I have set for myself.	1	2	3	4	5
2	When facing difficult tasks, I am certain that I will accomplish them.	1	2	3	4	5
3	In general, I think that I can obtain outcomes that are important to me.	1	2	3	4	5
4	I believe I can succeed at most any endeavor to which I set my mind.	1	2	3	4	5
5	I will be able to successfully overcome many challenges.	1	2	3	4	5
6	I am confident that I can perform effectively on many different tasks.	1	2	3	4	5
7	Compared to other people, I can do most tasks very well.	1	2	3	4	5
8	Even when things are tough, I can perform quite well.	1	2	3	4	5

Marlowe-Crowne Form C

Please indicate your responses to the following items.

1. It is sometimes hard for me to go on with my work if I am not encouraged.
True False

2. I sometimes feel resentful when I don't get my way.
True False

3. On a few occasions, I have given up doing something because I thought too little of my ability.
True False

4. There have been times when I felt like rebelling against people in authority even though I knew they were right.
True False

5. No matter who I'm talking to, I'm always a good listener.
True False

6. There have been occasions when I took advantage of someone.
True False

7. I'm always willing to admit it when I make a mistake.
True False

8. I sometimes try to get even rather than forgive and forget.
True False

9. I am always courteous, even to people who are disagreeable.
True False

10. I have never been irked when people expressed ideas very different from my own.
True False

11. There have been times when I was quite jealous of the good fortune of others.
True False

12. I am sometimes irritated by people who ask favors of me.
True False

13. I have never deliberately said something that hurt someone's feelings.
True False

Demographics

1. **Please indicate the current size (approximate) of your caseload: ____**

2. **Are you a State/Federal Vocational Rehabilitation counselor? [branch]**

Yes

No

3. **What is your age: _____** (in years)

4. **What is your gender**? ___Female ___Male ___Transgender ___Other (check one)

5. **Please indicate your professional credentials (check all that apply).**

Certified Rehabilitation Counselor (CRC)

National Certified Counselor (NCC)

Master Addiction Counselor (MAC)

Certified Alcohol and Drug Counselor (CADC)

Certified Advanced Alcohol and Drug Counselor (CAADC)

National Certified Addiction Counselor (NCAC)

Licensed Professional Counselor (LPC)

Licensed Professional Clinical Counselor (LPCC)

Licensed Professional Counselor Supervisor (LPC-S)

Licensed Psychologist

Licensed Mental Health Counselor (LMHC)

Licensed Marriage and Family Therapist (LMFT)

Licensed Clinical Social Worker (LCSW)

Other (please specify) _____

6. **What best describes your degree specialization (check all that apply)?**

Rehabilitation counseling

Social work

Mental health counseling

Psychology

Addictions counseling

Rehabilitation and human services

Other counseling (for example, school counseling) Other (please specify) _____

7. **What best describes your current work setting?** [Display only to participants who do not identified as State/Federal VR counselors]

Private Rehabilitation Services

Community-based Employment Agency

Veterans Services

Medical Center or Hospital

Substance Abuse Agency

Mental Health Agency

Insurance Company

School

Other (please specify) _____

8. **What is your employment status as a rehabilitation counselor?**

Full-Time

Part-Time

Other (please specify) _____

9. **How long have you been employed as a rehabilitation counselor at your current VR office?** [Display only to participants who identified as State/Federal VR counselors]

_____ Years ____Months (Full-Time)

_____ Years ____Months (Part-Time)

10. **How many years of experience in substance abuse related work do you have?**

none

0 to 1 year

1 to 3 year

3 years and above

11. **Would you describe your caseload as general (i.e. clients composed of a range of disabilities, such as physical, neuro-developmental, psychiatric, and substance abuse)?**

Yes

No (please specify) _____

12. **Please select type(s) of training related to substance use disorders you have received (check all that apply).**

Workshops provided by VR [Display only to participants who identified as State/Federal VR counselors]

Workshops [Display only to participants who do not identified as State/Federal VR counselors]

Continuing education unit

Graduate course

Undergraduate course

Certificate in Addictions Counseling

Other (please specify) _____

None

13. **To the best of your knowledge, do you or any of your loved ones previously and/or currently lived with substance use disorders?**

Yes

No

Not sure

14. **Does your current VR office offer training on substance use disorders?** [Display only to participants who identified as State/Federal VR counselors]

Yes

No

Not sure

15. **Please estimate the prevalence rate of substance use disorders on your caseload**

Prevalence rate 0% 100%

16. **Please rate the barriers to serving clients with substance use disorders at your current VR office (0 = no significance, 100 = highest significance).** [Display only to participants who identified as State/Federal VR counselors]

1	Clients with substance use disorders requires more time and energy	0%	100%
2	Negative employer bias against people with substance use disorders	0%	100%
3	My community lacks resources	0%	100%
4	I lack raining related to substance use disorders	0%	100%
5	VR policies and procedures regarding substance use disorders are insufficient or inappropriate	0%	100%
6	Clients continue to use or relapse	0%	100%
7	Clients do not tell the truth about their substance use	0%	100%
8	Clients lack access to transportation to treatment or other appointments	0%	100%
9	Clients lack insurance coverage	0%	100%
10	Are there other important barriers? (please specify and rate) _____	0%	100%

17. **Please rate the extent to which you agree with the following statements regarding policies and procedures related to substance use disorders in your current VR office (0%-100%). Please check N/A if there are no such policies and procedures.** [Display only to participants who identified as State/Federal VR counselors]

				N/A
1	These policies make sense to you	0%	100%	
2	Most people in your office follow these policies	0%	100%	

18. **Please think about policies and procedures related to substance use disorders in your VR office. For each indicator listed, please identify the extent to which you know about them (*0* = not aware, *3* = fully aware) and the extent to which they are addressed (*0* = not addressed, *3* = comprehensively addressed).** [Display only to participants who identified as State/Federal VR counselors]

Indicator	Awareness				Comprehensiveness			
	Not aware	Minimally aware	Moderately aware	Fully aware	Not addressed	Minimally addressed	Moderately addressed	Comprehensively addressed
Application and intake	0	1	2	3	0	1	2	3
Assessment and screening	0	1	2	3	0	1	2	3
Eligibility determination	0	1	2	3	0	1	2	3
Individualized Plan for Employment	0	1	2	3	0	1	2	3
Due process/ disciplinary action	0	1	2	3	0	1	2	3
Release of information	0	1	2	3	0	1	2	3
Case closure	0	1	2	3	0	1	2	3
Referral	0	1	2	3	0	1	2	3

19. **Ethnicity (please check all that apply):**

_____White _____ Native Hawaiian or Pacific Islander

_____Black or African American _____ Hispanic/Latino(a)

_____American Indian or Alaska Native _____Other (please specify_____)

_____Asian

20. **Please indicate which state you work for_____**

21. Please use the space below to provide comments about important information we did not cover in this survey.

Submit

Vita

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Master of Education (2013): The Pennsylvania State University (CACREP and CORE Accredited Program)
Major: Rehabilitation Counseling

Bachelor of Arts (2011): Beijing Sport University
Major: English

Teaching Experience

Co-teacher (Fall 2014, Summer 2015, Summer 2017): Department of Educational Psychology, Counseling, and Special Education. The Pennsylvania State University.

Clinical Experience

Counseling Supervisor/Counselor (2013, 2015). CEDAR Clinic: The Pennsylvania State University.

Counselor Intern (2013). Community Residential Rehabilitation, Strawberry Fields, Inc.

Publications

O'Sullivan, D., Watts, J., & **Xiao, Y.**, & Bates, J. (2016). Differences in refusal efficacy among SMART recovery peer support members by affiliation and meeting frequency. *The Journal of Addictions & Offender Counseling.*

Watts, J., **Xiao, Y.**, & O'Sullivan, D. (2014). Pick it up! Group Work Experts Share Their Favorite Activities for the Prevention and Treatment of Substance Use Disorder.