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Counseling Clients with Traumatic Brain Injury: Exploring Counselors' Perceived Knowledge, Comfort, and Self-Awareness

Michelle Bradham-Cousar
University of South Florida

Counseling Clients with Traumatic Brain Injury: Exploring Counselors' Perceived Knowledge, Comfort, and Self-Awareness

By

Michelle Bradham-Cousar

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Co-Major Professor: Tony Tan, Ed.D.
Co-Major Professor: Chloe Lancaster, Ph.D.
Marylou Taylor, Ph.D.
Robert Dedrick, Ph.D.

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DEDICATION

To my Lord and Savior Jesus Christ. To my wonderful, thoughtful, caring, and understanding husband. To my mother and father, thank you for your dedication to my life. Gracias a todos mis familiares y amigos en Panamá. Amor para siempre. Thank you for your support throughout this process.

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ABSTRACT

The number of traumatic brain injury (TBI) diagnoses continues to rise each year. Counseling is a critical factor in TBI treatment, and although numerous studies have investigated TBI outcomes, a paucity of researchers have studied professional counselors' knowledge, comfort, and self-awareness when working with TBI clients. Due to the diversity of counselor caseloads, it is likely that counselors will serve clients with a dual diagnosis that includes TBI. These dual diagnoses include depression, posttraumatic stress disorder, anxiety, psychosis, or another neurocognitive disorder. The purpose of this study was to explore counselors' knowledge, comfort, and self-awareness when working with individuals with a TBI. I used a survey questionnaire to explore counselors' knowledge, comfort, and self-awareness when working with individuals with a TBI. An expert panel (n = 6) followed the Polit and Beck framework for content validity to review the survey in two rounds. I conducted another a pilot study (n = 16) with the items after the expert panel completed all initial revisions. After the expert panel and the pilot study, professional counselors (n = 72) completed the Counselor Brain Injury Questionnaire (CBQ) to assess the three domains (Knowledge, α = .85; Comfort, α = .93; Self-Awareness, α = .66).

Results showed that counselors scored the highest on self-awareness. I conducted three MANOVAs and found that those who received training through their employment scored higher in knowledge than those who received training through an in-service, seminar, or webinar. I did not find any other significant differences.

Keywords: working alliance, depression, assessment, supervision

CHAPTER ONE:

INTRODUCTION

Disability affects people of all ages, ethnicities, backgrounds, and lifestyles. Persons affected by a disability constitute the largest minority (Brault, 2012). Due to the prevalence of disabilities, therapists from various fields will work with a client who identifies as a person with a disability at some-point in their career (Chapin et al., 2019). Chapin et al. (2019) published a set of disability-related competencies to assist therapists in all specializations work with the generalized population of disabilities. Therapists have a diverse caseload; thus, it is expected that therapists will work with clients with varying disabilities, such as dual diagnoses that include traumatic brain injury (TBI).

TBI is a disruption to the normal function of the brain because of a bump, blow, jolt, or penetrating head injury (Centers for Disease Control and Prevention [CDC], 2016; American Psychiatric Association [APA], 2013). Available data suggest that the occurrence and frequency of TBI increased between 2001 and 2010, with a sharp spike in 2008 (CDC, 2016; Coronado et al., 2012a). Individuals of all ages can be affected by a TBI (CDC, 2016; Corrigan et al., 2010). TBI tends to disproportionately affect males (CDC, 2010). TBI is more than just a medical condition; TBI can alter one's state of consciousness or produce mental health challenges such as sensory, cognitive, or behavioral deficits (Florida TBI statute, 2017, Title XXIX). Thus, counseling has an important role in helping TBI persons adjust, recover, and have success after a TBI (Maucieri, 2012; Coetzer, 2007). The psychosocial impairments resulting from a TBI are dependent on (a) whether the TBI is classified as mild, moderate, or severe and (b) the regions of

the brain that sustained the impact. These psychosocial impairments include forgetfulness, irritability, depression, executive function decrease, lack of self-awareness, decreased energy, emotional instability, inability to complete tasks, and drastic personality changes (Silverberg et al., 2013; Hsieh et al., 2012; Macmillan, 2000). Additionally, the psychosocial and behavioral manifestations of TBI often coexist with other disorders such as depression, anxiety, and posttraumatic stress disorder (PTSD), making persons with a TBI particularly complex and challenging for counselors to work with (Libin et al., 2015; Maucieri, 2012; Fann, 2009). It is common for TBI clients to exhibit stubborn thinking, lack of empathy, difficulty with relationships, lack of self-awareness, memory complications, cognitive challenges, and lack of insights (Coetzer, 2007; Judd & Wilson, 2005). As a result, counselors often have some resistance towards treating individuals with TBIs based on their belief that individuals with a TBI may not benefit from counseling and some sense of inadequacy in their own knowledge, comfort, and self-awareness in working with individuals with TBIs (Coetzer, 2007; Judd & Wilson, 2005).

Counselors' knowledge, comfort, and self-awareness of TBI are necessary in providing client treatment following a TBI (Maucieri, 2012). The relevance of TBI to the counseling field is more prevalent today than in the past because counselors may encounter clients from various settings such as school, family, mental health, and employment (Maucieri, 2012). It is likely that counselors will encounter at least one client with a TBI during their work experience; therefore, a better understanding of counselors' knowledge, comfort, and self-awareness when working with individuals with a TBI could help improve counselors' ability to provide successful treatment to clients (Wright & Reese, 2015; Maucieri, 2012; Coetzer, 2007; Bishop, 2005; Judd & Wilson, 2005).

Statement of the Problem

The topic of TBI is well-recognized and particularly timely, given all the concussions in professional sports that have raised public health concerns (Coronado et al., 2012a, 2012b). Ritchman stated that "each counselor has a responsibility to advocate for brain health on behalf of our clients" (J. Ritchman, personal communication, April 1, 2016). Furthermore, additional supports are necessary to maximize the potential for community integration of those with TBIs (Selassie et al., 2008). One support to help facilitate the growth of an individual with a TBI could be counseling. Counselors promote hope, self-awareness, and coping skills that could be helpful to individuals suffering from a TBI. Individuals with TBI can better implement strategies to cope with difficulties when their hope was increased (Ownsworth & Fleming, 2005); however, counselors who offer psychotherapeutic behavioral guidance to clients may lack training directly related to TBI (Stucky, 2012). Insufficient numbers of therapists are trained to work with individuals with TBIs (Block & West, 2013). Counselors need more information to understand the special knowledge and skills necessary to address the needs of this growing group (Chapin et al. 2019; Patterson & Staton, 2009).

Counselors who have knowledge of the various components of TBI may improve outcomes for clients with TBI (Maucieri, 2012; Stucky, 2012; Klonoff, 2010; Bishop, 2005). Knowledge is a critical component in counselors' ability to effectively treat clients. Bordin's working alliance parallels the therapeutic process that helps to undergird counselors in developing meaningful relationships, thus creating a higher level of comfort for counselors who work with individuals with a TBI (Judd & Wilson, 2005). Counselors' levels of self-awareness stems from the supervisory working alliance, which affects counselors' knowledge and comfort

in working with individuals with TBIs and their ability to properly understand and treat clients (DePue et al., 2016; Hays, 2016; Bordin, 1983).

Purpose of the Study

A TBI that disturbs or disrupts cognitive functioning can be life changing, causing one's thoughts and beliefs to become unreasonably altered (Hoge et al., 2009; Huckans et al., 2010; Jones et al., 2010). Counselors may be instrumental in increasing successful outcomes through additional supports identified by Selassie et al. (2008). Counselors who have a strong knowledge base, a high degree of confidence and comfort in working with TBI patients, and keen self-awareness of their own strengths and weakness may be instrumental in augmenting successful outcomes when working with individuals with a TBI. Measuring counselors' attributes can offer insight into how successful counselors work with individuals with a TBI. A better understanding of knowledge, comfort, and self- awareness could lead to the development of more effective professional practices.

Currently, no measures exist for examining counselor knowledge, comfort, and self-awareness when working with individuals with a TBI. Thus, the purpose of this study was to develop a measure that could be used to explore counselors' knowledge, comfort, and self-awareness when working with individuals with a TBI. Counseling professionals are required to possess a multitude of competencies to provide optimal care to their clients. In this study, I focused on three important competencies: knowledge, comfort, and self-awareness related to TBI. These qualities have been explored within the working alliance framework for counselors (Bordin, 1983,1994). At the foundation of working alliance, the therapist has the ability to help facilitate growth and change through collaboration (goals), the acceptance of ways to achieve the

goals (task), and rapport building (bond) with the client (Bordin, 1983,1994). Bordin (1983) described the working alliance approach as a "change process" (p. 35).

Within Bordin's perspective, the therapist could work with diverse populations to help facilitate the development of the therapeutic relationship. Knowledge is the belief system that the individual uses to process information that is based on previous information gathered, experience, and education. The individual processes information over time into a set of beliefs that results in the individual's frame of reference. Knowledge base becomes important when helping individuals develop goals, assessing the task experiences of the client, and promoting continued change. Through the supervisory alliance, counselors' knowledge and skills for working with individuals increases when the counselor- supervisor working alliance bond increases (Bordin, 1983). The main goal of the supervisory working alliance is to help counselors master a specific skill or specialization to overcome counseling barriers (Bordin, 1983).

Comfort (working alliance) is a therapeutic tool a counselor uses to increase engagement and interaction and build comfort between the therapist and the client. The stronger the working alliance or comfort during sessions with the therapist, the stronger the learning dynamics in an individual. Counselors and clients who work together to complete tasks associated with larger goals may see greater growth (Bordin, 1983, 1994). Each task is designed to facilitate the shared experiences between the counselor and the individual attending sessions. The task helps develop comfort between the therapist and the client, which assists the client in achieving their goals. I use the word comfort to describe this concept in the current study.

Finally, self-awareness helps individuals explore meaningful events. I use the term self-awareness in the present study, although Bennett-Levy (2006) referred to this process as self-reflection. Self-reflections are self-explorations that occur through increasing self- awareness and

attitudes (thinking and feeling). Self-exploration (self-awareness) builds on the thoughts and confidence of the individual (Hays, 2016; Bennett-Levy, 2006; Beck et al., 1979). Counselors who increase self-awareness also increase skill, mastery, bonding, and the guided self-process examination (Bordin, 1983). Many of the foundational principles of the therapeutic process are seen within the supervisory relationship (Bordin, 1983). This relationship affects the therapeutic outcomes of the clients regardless of the therapeutic approach. The supervisory relationship is seen as the primary method to enhance professional development of the knowledge, comfort, and self-awareness needed for the therapist to work with diverse populations.

The working alliance emphasizes the ways therapists can effectively work with a diverse client population (Bordin, 1983,1994). The working alliance addresses and confronts counselors' perceived notions of individuals (knowledge), comfort (task), and self-awareness (bond). The American Counseling Association (ACA; 2014) indicates that counselors have an ethical and moral responsibility to gain self-awareness to their own values, attitudes, and beliefs (B.1.a Multicultural/Diversity considerations; C.2.d Monitor effectiveness; F.2.b. Multicultural issues/Diversity in Supervision). In this study, I designed a survey to explore counselors' knowledge (goals), comfort (working alliance), and self-awareness (self-exploration and self-reflection) when working with individuals with a TBI.

Assumptions

One assumption was that all counselor participants would truthfully respond to the survey questions because participation was voluntary and participants' information was kept confidential. This confidentiality helped to minimize social desirability bias, in which participants answer in a manner that they believe reflects on them more positively, resulting in the inflation of positive results (Field, 2013). A second assumption was that current counseling

practices can help counselors accommodate when working with an individual with a TBI. Overall, the general assumption is that TBI would continue to be relevant to the field of counseling.

Research Questions

Counselors' tasks include assisting clients in developing new actions and the modification of coping skills to increase independence, behavioral, and social skills (Granello & Young, 2012). Counselors who have a better understanding of client diversity as it relates to a disability or a specialization of TBI may produce improved outcomes in counseling sessions (Granello & Young, 2012; Stucky, 2012; Klonoff, 2010; Bishop, 2005). Improved outcomes include social competence, behavior regulation, acceptance, realism and self-awareness, social awareness, and employability (Coetzer, 2007; Judd & Wilson, 2005). The establishment of comfort between the therapist and the client has been linked to treatment success (Kondrat & Early, 2010; Kivlighan et al., 2016; Judd & Wilson, 2005; Lustig et al., 2002, Bordin, 1983).

Counselors who engaged in supervision for specific client populations have increased positive clinical outcomes (Bezyak et al., 2010; Ng, 2005; Thielsen & Leahy, 2001; Bordin, 1983). This study addressed the following research questions:

Research Question 1: What are counseling professionals' knowledge, comfort, and self-awareness in working with individuals with a TBI?

Research Question 2: What is the relationship between counseling professionals' knowledge, comfort, and self-awareness in working with individuals with a TBI and the counselors' levels of experience, training, or work setting?

Delimitations

I only surveyed professional counselors in this study. I did not delimit a specific aspect of counseling because I wanted to capture a broad cross-section of counselors in general. I did not study individuals who were not in the counseling profession, who did not have a counseling experience, or who reported that they had no experience with working with a person with a TBI. Additionally, I only used closed-ended Likert-type scale responses in the survey rather than open ended responses to increase the chances of survey completion.

Definition of Terms

The following terms are used throughout this study:

- *Acquired brain injury (ABI).* ABI indicates "damage to the brain that is acquired after birth and can result from TBI (caused by, for example, a car crash or a fall) and non- TBI (caused by, for example, cerebrovascular events and brain tumors)" (Kat et al., 2010, p. 808).
- *TBI*. TBI is generally a result of the head abruptly hitting or being hit by an object with direct force (CDC, 2016). TBI often occurs after a sudden jolt to the head (CDC, 2016; Coronado et al., 2012b; Miller, 2013; National Conference of State Legislatures, 2014). The DSM-V (APA, 2013) defined TBI as "brain trauma with specific characteristics that include at least one of the following: loss of consciousness, posttraumatic amnesia, disorientation and confusion" (p. 625).
- *Concussion*. Also known as mTBI, a concussion is a result of various calamities to the brain and can occur from playing a sport, certain kinds of employment, or motor vehicle or bicycle accidents (CDC, 2016). Kay et al. (1993) defined concussed individuals as someone who has had a traumatically induced

physiological disruption of brain function … but where the severity of the injury does not exceed: loss of consciousness of approximately 30 minutes or less; after 30 minutes, an initial Glasgow Coma Scale of 13–15; and posttraumatic amnesia (PTA) not greater than 24 hours. (p. 86)

- *Counseling services.* Counseling services are career services, individual therapy, psychotherapy, group therapy, rehabilitation services, assessment, guidance, and advisement (Granello & Young, 2012).
- *Executive function*. Executive functioning is referenced as the command center for all cognitive abilities (Miller, 2013). Executive functioning is associated with the frontal lobe. The command center of cognitive ability can be seen as the "facilitators that guide other cognitive processing. These facilitators include attentional control, goal- directed behaviors, behavior regulation"(Miller, 2013, p. 339).
- *Improved outcomes.* Improved outcomes are social competence, behavior regulation, acceptance, realism and self-awareness, social awareness, and employability (Coetzer, 2007; Judd & Wilson, 2005).
- *Knowledge.* One's schema refers to the knowledge obtained through various means such as gathering information, experience, and education. Over time, the individual processes the information into a set of beliefs that have resulted in the individual's understanding and frame of reference. Future responses and experiences are structured based on previous schema (Beck et al., 1979).
- *Comfort.* Comfort is referenced as therapeutic alliance, working alliance, and therapeutic collaboration. Engagement, interaction, and establishing comfort

between the therapist and the client are important elements in understanding the truth of human interaction. The stronger the working alliance, the stronger the learning dynamic (Beck et al., 1979; Bordin, 1983, 1994).

- *Self-awareness.* Self-exploration and self-reflection is referred to as one's self-awareness and attitudes (thinking and feeling). Self-awareness builds on one's thoughts and confidence of how knowledge and understanding are achieved. Self-awareness is achieved by exploring meaningful events throughout the course of therapist and client interactions (Beck et al., 1979; Bennett-Levy, 2006, Bordin, 1983, 1994).

Summary

The primary focus of the study was to explore the knowledge, comfort, and self-awareness of counselors when working with individuals with a TBI. The theoretical framework for this study was the working alliance (Bordin, 1983, 1994). In Chapter 1, I introduced the issue of counselors' knowledge, comfort, and self-awareness in working with clients with a TBI. Additionally, I presented the purpose of the study, research question to be addressed, and relevance to the field of counseling. In Chapter 2, I provide a review of the existing literature. I also discuss counselor awareness and comfort level with working with individuals with TBI. Chapter 3 provides information related to the research method, participant selection, research design, data analysis, and materials that I used to conduct the study. Chapter 4 provides the results of the data analysis. Chapter 5 provides the discussion and recommendations for future research.

CHAPTER TWO:

LITERATURE REVIEW

Counselors are required to possess a multitude of competencies to provide optimal care to clients (Granello & Young, 2012). The Disability-Related competencies developed by Chapin et al. (2019) offers therapist a framework to implement effective approaches for better understanding and supporting individuals with disabilities. The framework the client may bring to a counseling session would be dependent upon the type of disability experienced. Disability is considered the largest minority in the U.S. Therapists who demonstrate ease in establishing a working alliance may meet the premise for many competencies such as multicultural and disability related. Arredando et al. (1996) emphasized that counselors achieve competency when they obtain the knowledge, information, and understanding of specialized groups. Knowledge continues to increase with a therapist when they are fully engaged in the awareness of their own identities in addition to achieving the knowledge of understanding the differences the minority group members may experience (Hays, 2016). As therapist increase their competencies of working with diverse populations then the ease of integrating other specialized groups increases.

Some of the key competencies that counselors must possess in treating clients with varying disabilities include TBI, knowledge, comfort, and self-awareness. The purpose of this chapter is to discuss scholarly research pertaining to counselors' knowledge, comfort, and self-awareness, and demonstrate the gap in existing literature regarding these specialized competencies in the treatment of a TBI. This chapter includes an introduction of TBI, an

exploration of current research of TBI, a discussion of the theoretical framework, counselor competency, clinical supervision, and the need for a survey.

Counselors often assist their clients with independence-skills training, behavioral and social functions, such as the modification of coping skills and strategies (Granello & Young, 2012). The collaborative process between the client and the counselor, is an integral part towards moving forward with the desired goals. Due to the higher frequency of people with disabilities, counselors may have clients with dual diagnoses of TBI and depression, posttraumatic stress disorder, anxiety, psychosis, or another neurocognitive disorder (Albrecht et al., 2015; van Delft-Schreurs et al., 2014; Whelan-Goodinson, 2009).

Counselors play an essential role in treatment and improved outcomes for individuals with TBIs (Coetzer, 2007). These outcomes include social competence, behavior regulation (Ylvisaker et al., 2005), awareness, acceptance, realism (Judd & Wilson, 2005), and employability (Ben-Yishay & Daniels-Zide, 2000; Coetzer, 2007). The Institute of Medicine indicated that a "TBI increases the risk of major depression, general anxiety disorder, obsessive-compulsive disorder, panic disorder, post-traumatic stress disorder, anti-social behavior such as criminality, substance abuse, and suicide" (as cited in Eden & Stevens, 2006, p. 11). Counselors who have an understanding of TBI and its effects may bring about successful outcomes in counseling sessions (Bishop, 2005; Ylvisaker, Turkstra, & Coelho, 2005). Further, research has suggested that counselors of clients with TBI should be educated and well informed of cognitive limitations, emotional preparedness, and social and environmental cues of their clients (Block & West, 2013). Research has shown that the consequences of a TBI have a higher likely hood for depression, impaired executive function, comorbidity issues, challenges in developing a working alliance during sessions, and the difficulty to complete assessments. Client's that have a

diagnosis of TBI with a secondary diagnosis of depression or challenges with executive function are limited as it relates to working alliance to develop the effective therapeutic relationship.

Research has recently been found to explore another area of the cognitive domain, a diagnosis of a stroke, that have a tendency to affect the executive function of the brain (Stagg et al., 2020). In the research conducted by Stagg et al. (2020) the working alliance framework was utilized for stroke victims in order to assist them with recovery. Another study that included working alliance was working with individuals with an intellectual disability by Strauser, Lustig, & Donnell (2004).

Traumatic Brain Injury and Counseling

As counselors gain important competencies in providing care to individuals with a TBI, the basic concept of how to counsel a client with a TBI may be challenging due to the profound impact the brain injury may have on a client's life. Zelenchich (2020) evaluated the TBI from the observer perspective rather than the therapist or client. Ponsford et al. (2020) investigated the factors that correlated with anxiety, depression and TBI from the viewpoint of working alliance. Ponsford (2020) and Zelenchich (2020) agreed that limits exist on the research of TBI and working alliance. Many behavioral manifestations that result from a TBI often co-exist with other disorders such as depression (Fann, 2009).

Psychological changes may be impacted in several areas for an individual with a TBI that present itself with decreased executive function that is displayed as childlike behaviors, forgetfulness, anger, and emotional instability (Macmillan, 2000). This section will discuss the basic concept, diagnostic criteria for a TBI, psychosocial impairments as it relates to depression and executive function.

The counseling profession uses a clinical diagnosis referenced in the DSM-V for classifications of disorders, treatment-plan guide, case conceptualization, and billing purposes (Eriksen & Kress, 2006; Mead, Hohenshil, & Singh, 1997). The use of the DSM-V in counselor-training programs may integrate further exploration of disorders into the program to bring concise awareness of diagnosis criteria and ethical considerations (Eriksen & Kress, 2006; Kress, Hoffman, & Eriksen, 2010).

The DSM-V explains that the severity rating (mild, moderate, or severe) of TBI is specific to TBI and not in direct correspondence with the diagnosis of neurocognitive disorder (APA, 2013). According to the DSM-V (APA, 2013), the diagnostic category name is neurocognitive disorder (NCD) with a classification of major or mild, due to TBI. The DSM-V (APA, 2013) defines TBI as follows:

> Brain trauma with specific characteristics to include at least one of the following: loss of consciousness, posttraumatic amnesia, disorientation and confusion. To be attributable of TBI, the NCD must present either immediately after the brain injury occurs or immediately after the individual recovers consciousness after the injury and persist past the acute post-injury period. The cognitive presentation is variable. Difficulties in the domains of complex attention, executive ability, learning and memory are common as well as slowing in speed of information processing and disturbances in social cognition. (pp. 624–625)

The DSM-V (APA, 2013) emphasized the use of the guide in diagnosis, as it is a vital element for counselors to guide "treatment recommendations, identifying prevalence rates for mental health service planning, identifying patient groups for clinical and basic research, and documenting important public health information" (p. 5). Block and West (2013) stressed it is

important to "accurately identify and adequately treat psychiatric symptoms, [and] it is important that the provider familiarize themselves with the neuropsychiatric and adjustment-related difficulties that can occur following TBI" (p. 779). Steel et al. (2010) provided a summary of clinical considerations to improve diagnostic criteria with individuals identified as having a TBI. Steel et al. indicated that accuracy begins with obtaining pertinent information from the individual with a TBI. The authors provided some practical tips to obtain the necessary information using questions, having knowledge of the diagnostic criteria, and education on symptoms associated with a TBI.

DSM-V (APA, 2013) discusses the implications of NCD due to a TBI with considerations of psychological impediments that occur following injury. The Institute of Medicine (Eden & Stevens, 2006) and the DSM-V (APA, 2013) described depression disorder. Block and West (2013) referred to depression as the most common psychiatric disorder after a TBI has occurred. Ylvisaker, Turkstra, and Coelho (2005) supported behavioral interventions for clients with TBIs to help resolve the psychological challenges they face. Clients face significant changes in their social, education, family, economic, and life roles while addressing multiple stressors. Over time, counseling has been used as a modality for hope, advocacy, and strength for many clients (Granello & Young, 2012).

Block and West (2013) referenced how starting with a small success may increase self-efficacy. Group therapy relates to adaptive skills development (Anson & Ponsford, 2006), problem-solving techniques (Rath, Simon, Langenbahn, Sherr, & Diller, 2003), and awareness and self-expression (Ownsworth & Fleming, 2005). Patterson and Staton (2009) discussed counseling considerations of relationship building through a collaborative empowerment approach for clients to begin their personal journey. Weiss, Coll, Gerbauer, Smiley, and Carillo

(2010) indicated success when information processing was used in the family setting of a military genogram. Guided imagery and memory strategies could advance the client toward a better system of therapy.

During the research conducted by Judd and Wilson (2005), the researchers found an overarching theme of responses to reflect on cognitive therapy as the selected therapeutic approach for individuals with a brain injury. Hsieh et al. (2012) and Silverberg et al. (2013) determined that early detection followed by immediate and intensive therapy can address the decrease of psychosocial skills, lack of self-awareness, or decreased energy to cope with life stressors (Hoge et al., 2009; Hsieh et al., 2012; Jones et al., 2010; Silverberg et al., 2013). The studies provided a framework for the therapist to have treatment options to enhance practice for clients with a diagnosis of depression and TBI. Some treatment options may have to be altered when dealing with an individual that may have some executive dysfunction that has occurred because of the TBI. The executive function of the brain may impact many areas that aid in the counseling areas such as memory, interpersonal skills, and organization (Miller,2013).

The executive function of an individual with a TBI would have an impact treatment success (Cicerone et al., 2011). The next two sections will discuss depression and executive function effects on the client as a framework for why it is important to understand the paradigms of the disability in order to develop the therapeutic alliance.

Depression

Sohlberg et al. (2001) supported collaborative working alliance with the client and natural supports to increase successful outcomes. Depressive disorder in individuals with TBI had an increased frequency of lower social function, a higher prevalence of anxiety disorder, and challenges with executive function (Jorge et al., 2004). Bombardier et al. (2010) found that

counseling was a preferred avenue with a need for standardized mental health services. In this section, I consider a general perspective on depression and TBI.

As noted earlier that a TBI may be the main presentation of a diagnosis and depression may be a secondary effect of the disability. Given that individuals with a TBI may encounter depression studies on TBI and depression will be discussed in this section. Fann, Hart, and Schomer (2009) evaluated 27 articles that referenced individuals with a diagnosis of depression and TBI. Their findings revealed that only eight studies incorporated therapeutic methods, 13 studies included pharmacotherapy, and six studies included other biological interventions (electroconvulsive, neurotherapy, biofeedback, and Chinese medicine). Fann et al. indicated that studies lacked standards in exploring depression and TBI. Albrecht et al. (2015) and Fann et al. (2009) reported that more research is needed in depression following a TBI. Albrecht et al. indicated that counselors lack guidance on treatment of individuals with a diagnosis of depression after a TBI; too little information is available to ensure adequate outcomes. Albrecht et al. found no difference between predepression and post-depression diagnosis with a TBI. Cicerone et al. (2008) created a study to compare treatment programs, designed to determine the most effective mode of treatment for individuals with a diagnosis of TBI. Minimum progress was seen in the study due to other mediating factors.

The severity of diagnosis is a criterion of the selection of the psychotherapeutic intervention. Hsieh et al. (2012) compared two types of counseling techniques— motivational interviewing and cognitive behavioral—for individuals with a dual diagnosis of anxiety and TBI. The purpose of the Hsieh et al. study was to compare the effect of two interventions for anxiety following TBI. The aim of the study was to determine the most successful treatment modality between treatments as usual, nondirective counseling, cognitive-behavioral therapy, and

motivational interviewing. The purpose of the Hsieh et al. (2012) study was to sample motivational interviewing in individuals with TBI and anxiety. A limitation was that a limited number of empirical studies investigated the *best* method of treatment for individuals who suffer from TBI. Hsieh et al. aimed to identify a reduction in depression and stress while demonstrating an increase in coping and self- awareness skills as the dependent variable. Hsieh et al. made a compelling argument for the success of the treatment modality in helping individuals suffering from TBI.

Executive Function

Counselors' knowledge, comfort and self-awareness can result in more positive outcomes for individuals that may be impacted by the lack of executive function and a TBI. Bordin (1983, 1994) would regard the development of knowledge of the executive function and assessments that are attributed to this area as gaining mastery in a specific skill area for a therapist. This mastery of a specific skill may be imperative to the success of working with an individual that may have this type of impairment. Miller (2013) defined executive functioning as the cognitive ability that guides the processing of managing life task to achieve goals. The impact to the executive function area creates an impairment in the ability to manage time, plan, organize, recall details, inhibit skills, to think flexibly, regulate emotions, initiate new activities and to self-monitor (Macmillian, 2000; Miller, 2013; Novokovic-Agopian et al., 2011).

Judd and Wilson (2005) evaluated therapists who worked with individuals with a TBI. The research found that the therapist challenges to successful counseling when working with an individual with a TBI, was the client's lack of insight, impaired memory, and inflexible thinking. Out of the therapist evaluated for the study, only five indicated that they did not experience negative reactions when working with the client population. The study noted that therapists that

were exposed to the academics, knowledge, and skills in therapy as it relates to individuals with a TBI, had no negative emotions to the therapeutic process. Judd and Wilson (2005) indicated that the therapeutic strategies acknowledged by the therapist to address the challenges when working with an individual with a TBI, was behavioral exploration, education and information about a TBI. Judd and Wilson (2005) notated that counselors' knowledge via academics, comfort via working alliance and self- awareness when working with individuals with a TBI can contribute to the success of treatment.

Psychosocial areas that are impacted within executive function may manifest as lack of planning, lack of organization, lack of attention and awareness (Macmillian, 2000; Novokovic-Agopian et al., 2011). Executive functioning deficit has a frontal lobe cognitive impact, affecting planning, attention, and problem solving. Macmillan (2000) noted several areas of psychological changes such as mental impassivity, childlike behaviors, memory impairment, and emotional instability. Fuster (1980) found that lesions caused effects on emotional behavior. When a lesion was sustained on the prefrontal cortex, immediate defects emerged in temperament and emotion. Fuster (1980) noted that affect and emotion were potentially secondary to cognitive disorder and thought the prefrontal cortex was the driving force for the organization of behavior. Fuster (1997) indicated that attention-deficit disorder and schizophrenia have characteristics similar to frontal lobe damage. In 1999, Fuster redirected verbiage, calling the prefrontal cortex the frontal lobe that affects executive function. Fuster (1999) acknowledged that some clinical appearances of frontal-lobe pathology are similar to psychiatric disorders.

During clinical observations presented by Stuss and Benson (1986), damage to the frontal lobes accompanied altered levels of anxiety, decreased affect, attention, awareness, restlessness, planning, memory, control, and an altered mental state. Stuss and Benson indicated that

"although memory, IQ, perceptual speed, and visual-motor coordination were within normal limits on standard testing" a continued deficiency was evident through lack of "goal establishment and planning" (p. 206). As Fuster (1997) indicated that the executive function area impacts social and community behavior. Emotional behaviors are a negative result of the injury (Williams & Wilson, 1999). Counselor's awareness of treatment options that rely solely on emotional enhancement may be challenging if this region of the brain was affected during the incident causing the TBI.

Unlike Fuster (1997, 1999), Miller (2013) referenced executive function as the command center for all cognitive abilities. This command center of cognitive ability is the "facilitators that guide other cognitive processing. These facilitators include attentional control, goal-directed behaviors, behavior regulation" (Miller, 2013, p. 339). Cicerone et al. (2000) defined executive functioning as the cognitive process that establishes goals, anticipates consequences of actions, plans and organizes behavior, and adjusts conduct as necessary. Executive function is similar to metacognitive, emotional, and psychosocial functioning (Ownsworth & Fleming, 2005).

Deficiencies in the area of executive functioning may appear as impairment to self-regulation, an inability to organize (Novakovic-Agopian et al., 2011; Tate et al., 2014), the absence of insight (Cicerone et al., 2000, 2011), decreased attention (Cicerone et al., 2000, 2011; Novakovic- Agopian et al., 2011; Tate et al., 2014), and lack of awareness (Cicerone et al., 2000, 2011). Cicerone et al. (2011) conducted a series of literature reviews from 1970 to 2008 and found a lack of material on executive functioning. Cicerone et al. (2000) located only 14 articles that provided adequate empirical research or evaluation. Executive function impacts one's sense of organization, and one's ability to direct and manage cognitive and emotional behaviors. Overall, the lack of executive function could impede progress toward successful community

integration, thereby decreasing successful outcomes that impact the quality of life for the client, providing direction for counseling progress.

Counselors' awareness of potential deficits in executive functioning can help them work toward progress in clients' psychological and psychosocial adjustments after a TBI. A client's level of executive functioning may affect the success of treatment (Cicerone et al., 2011). Novakovic-Agopian et al. (2011) found that attention and executive function increased because of treatment interventions. A tool that has proven useful for counselors according to Barisa & Barisa (2001) are the use of assessments to adequately evaluate clients for effective community and social integration after a TBI. The assessment can provide a clearer picture of the cognitive process of the individual and the dysfunctional areas that are resulting in the delay of success.

Value of Assessment

Interventions can be extrapolated from a psychological assessment; thus, understanding assessments used for executive functioning is useful as many specific skills are necessary for improved quality of life and progress in counseling. Assessments play an integral part in obtaining further knowledge of the client. Bordin (1983, 1994) would encourage the supervisee that the therapeutic tools used to gain further understanding of a client could only aid in bond needed to be developed. Assessments are helpful to identify functional status for community reintegration, employability, money management, memory, and social functioning (Boone, 1999). Also, counselors will wish to inquire about a neuropsychological report provided by a neuropsychologist that could address specific questions by the counselor, practical remediation strategies, compensatory skills, and recommendations (Barisa & Barisa, 2001). The neuropsychological evaluation can assist in obtaining the functional impact of a TBI. The evaluation can assist with understanding motivation, attention, concentration, memory,

reasoning, social skills, flexible thought processes and learn new information (Barisa & Barisa, 2001). Judd and Wilson (2005) found factors that influenced the successful therapeutic process was defined as the lack of insight, memory impairment, and inflexible thinking of an individual with a TBI. Barisa and Barisa (2001) explained that neuropsychological reports contain various assessments that are useful to the therapeutic process of counseling to explain the brain behavior. It was acknowledged by Barisa and Barisa (2001) that the lack of access through communication barriers (as defined as knowledge of the report, lack of counselor understanding and the neuropsychologist ability to convey the information for functional use by a counselor) can decrease a counselor's knowledge and comfort in working with patients who have executive functioning problems because of a TBI.

The neuropsychological report has various components that address executive function, cognition, intellectual ability, processing, and behavioral and emotional components. Novakovic-Agopian et al. (2011) used the neuropsychological report as a tool of assessment of executive function and cognitive status. Neuropsychologists have several tests that evaluate dual features. However, forms are not consistent or comparable across impairment measures (Oddy, Alcott, Francis, Jenkins, & Fowlie, 1999).

Assessments such as the neuropsychological report are helpful when planning goals, conducting event discovery for clients to gain greater self- awareness, helping to better understand the client, and identifying strengths and weaknesses (Granello & Young, 2012). Mansour and Lajiness-O'Neill (2015) identified assessment tests.

Measurement tests of executive function can be considered adequate to answer questions in the counseling session that relate to goal-directed behavior, planning, logical processing, and potentially, self-monitoring.

As counselors continue to work with individuals with TBI and other persistent mental illnesses, knowledge of the impact to executive function could help aid in improved outcomes (Judd & Wilson, 2005). Assessments are tools useful for counselors to adequately evaluate clients for effective community and social integration after a TBI (Barisa & Barisa, 2001). The DSM-V (APA, 2013) referred to TBI as a neurocognitive disorder with a defined cognitive domain; in this section, I discussed the impact of executive function as the selected cognitive domain.

TBI often co-exists with multiple diagnoses such as depression (Fann, Hart, Schomer, 2009; Jorge et al., 2004) posttraumatic stress disorder, anxiety, psychosis, lack of executive function (Jorge et al., 2004), or another neurocognitive disorder (Albrecht et al., 2015; van Delft-Schreurs et al., 2014; Whelan-Goodinson, 2009) where counselors' knowledge, comfort and self-awareness in these areas would contribute to treatment outcomes. Barisa and Barisa (2001) indicated that multiple and complex assessments can assist counselors in developing functional treatment plans for clients to increase successful outcomes. Coetzer (2007) noted that counselors are crucial to the improved outcomes.

Thus, the gap in the literature persists for counselors who work with individuals with a TBI. It is important for counselors to have the necessary competency for working with specialized populations to increase successful outcomes (Coetzer, 2007), to increase awareness (ACA, 2014), and to develop the necessary skills (Judd & Wilson, 2005). Bordin (1983,1994) has provided a theory of working alliance that can be utilized in all types of counseling situations, a review of his theory follows. Bordin (1983, 1994) additionally discuss the supervisory working alliance as it supports supervisees increased learning capacities through his three central areas of goal, task, and bond.

Foundation Theory

To address the marginalized underrepresented population of individuals with disabilities, specifically as it relates to individuals who have sustained a TBI, a brief discussion into the working alliance framework will be further explained. Bordin's (1983, 1994) working alliance was selected due to the flexibility of working with other foundational theories or by itself. The main premise for working alliance is the collaboration that is developed between the client and the therapist. The relationship becomes important in movement forward in the therapeutic sessions. Bordin's (1983, 1994) theory has been used in the research areas of mental health case management (Kondrat & Early, 2010; Kivlighan et al. 2016, Lustig, Strauser &Rice, 2002), stroke (Stagg et al., 2020), and intellectual disabilities (Strauser et al., 2004). Working alliance focuses on pulling from an individual's natural resourcefulness to work in the counseling settings and helping clients move from smaller to larger change, as well as increasing clients' positive outcomes (Hays, 2016; Bordin 1983, 1994). Working alliance theory builds on learning through collaboration, shared experiences, and relationship development. The key facets that are instrumental in the transformational process of an individual are goals, tasks, and bond. Learning includes development of new behaviors or reestablishing current ones (Schunk, 2000). Thus, learning occurs when information is categorized and generalized to relate to new experiences (Hays, 2016). Bordin (1994) indicated that individuals process of change and learning begins at the first session. Bordin regards the learning process as the collaboration that occurs between the client- therapist or the supervisor-supervisee.

Working alliance provides a set of steps of how therapist should work with clients in an efficacious way (Bordin, 1983, 1994). Working alliance enables therapist to develop a collaborative relationship towards an agreeable change between the therapist and the client.

Bordin has a threefold process of therapeutic relationship alliance in order to assist with developing the therapist skills of knowledge, comfort and skills in working with individuals from diverse populations. Bordin's three-part process is explained as the following; 1. Shared common goals that are developed during the session; 2. Determining the necessary task for the collaborators (i.e. therapist and client); 3. Bonding between the collaborators is essential to nurture the alliance strength. Bordin believed that the power is within the alliance structure, to determine the factors that are influential in the client who is seeking to change and the therapist who is the change agent. Working alliance is centered around the collaborative process where the therapist and client is an active participant in the session. Each collaborator brings their special attributes to the session in order to have change to occur. Bordin explained that knowledge and understanding occurs through the clearly mutual agreed upon goals between the therapist and client. How well the client understands and connect the goals to the associated task will determine how much change occurs according to Bordin. The associated task is fitly designed for the client in or for them to be stretched but have success. Working alliance also increases counselors' comfort and self-awareness in working with clients with disabilities including TBI.

Bordin (1983) not only created a framework for therapist to work through during session but also for Supervisors that provide the supervision for trainees. The framework for working alliance to help to the strength the bonds between the Supervisor and the Supervisee. The eight steps developed by Bordin are (1) mastery of specialized skills (2) increased understanding and awareness of the client through communication (3) knowledge and awareness of the issues and reflection on continuity (4) self-awareness and impact on the change process (5) overcoming individual and knowledgeable difficulties to increase learning and mastery of a skill (6) developing comfort and knowledge of theory and concepts (7) stimulus to research opportunities

to understand theoretical underpinnings through cause and effect (8) sustaining, maintaining and standardizing practice. Each of the keys are further discussed in the Supervisory section. A goal of this theory is to help a therapist to bring their individuality to the counseling session along with the client's distinctiveness to actively participate towards a common goal that unifies and stronger bond thus creating change. Working alliance is a precursor to successful therapeutic outcomes, regardless of the theoretical approach. It is the foundational principle found in all therapeutic relationship's that assist in the development of grounding the session in order to obtain successful outcomes. As therapist gain greater awareness, skill, knowledge and comfort of the developing structural working alliances then greater successful outcomes would be prevalent.

Knowledge

Knowledge includes individuals' beliefs and experiences, which are categorized through their thought processes (Wright, Basco, & Thase, 2006). Knowledge can lead to behavioral changes in individuals (Beck et al., 1979). Thus, knowledge is an important factor in counseling. However, researchers have indicated that because of a "lack of training, many counselors lack the knowledge and experience to provide counseling service" (Wright & Reese, 2015, p. 276).

Continued professional development, workshops, and training have led to positive outcomes for individuals with various ailments. However, counselors may lack training directly related to TBI among counselors who offer psychotherapeutic behavioral guidance to clients (Stucky, 2010). A shortage exists of trained therapists to work with individuals with a TBI (Block & West, 2013).

In a recent study, counselor knowledge and positive outcome was examined by the Department of Corrections (DOC). Larrauri de Leon reported that the University of Washington is partnering with the state's DOC to increase and improve staff knowledge and skills in working

with individuals with a TBI (E. Laurrauri, personal communication, November 15, 2018). This will be done through an integration of an online TBI curriculum within the DOC Academy, that would consist of intensive TBI training. This is a collaborative pilot program within DOC, to training materials to increase the knowledge of therapist and workers in DOC (E. Laurrauri, personal communication, November 15, 2018). The TBI knowledge curriculum will be tailored for practical application within the prison training curriculum in order to determine the effectiveness of the knowledge obtained and utilized to increase successful outcomes. During the communication it was acknowledged that counselors who had better training were more prepared for working with individuals with a TBI. As Laurrauri indicated, that the prevalence for individuals with a TBI is high among institutionalized individual's creating a need for therapeutic services. See the study conducted by Phillips (2013), they estimated that 35.6% of Washington State offenders have a history of TBI, and of those, 7.6% have moderate to severe TBI, totaling 60% of offenders had a TBI. Two recent meta-analyses estimated higher rates—their findings suggest 51%-60.25% of the incarcerated population had experienced a TBI (Farrer & Hedges, 2011; Shiroma, Ferguson, & Pickelsimer, 2012). Many people are impacted by TBI, to include staff and offenders within the institutionalized settings.

Comfort

A component of effective treatment for disabilities, including TBI, is counselors' comfort in working with clients with disabilities (Hays, 2016). One factor in counselors' comfort is having an agreeable working alliance with clients, which also increases successful therapeutic outcomes (Hays, 2016; Judd & Wilson, 2005). Often, counselors may resist treating or working with individuals with TBIs because of assumed obstacles and lack of treatment benefit, as clients with TBI often present with stubborn thinking, lack of empathy, difficulty with relationships,

lack of self-awareness, memory complications, cognitive challenges, and lack of insight (Coetzer, 2007; Judd & Wilson, 2005). These challenges can make treating individuals with TBI more difficult than treating clients with other disabilities or symptoms. Stagg, Douglas, and Iacono (2017) reviewed literature related to counselor-client working alliance and working with individuals with a brain injury. The researchers noted that both working alliance and counselors' overall skill level in treating clients with TBI positively influenced clients' outcomes.

Comfort rests on the quality of the therapeutic alliance, meaning that rapport and trust are integral to success. The collaborative approach to treatment develops as the therapeutic relationship develops between counselor and client. Training techniques such as role-playing and scenario learning should be implemented to identify and test counselors' misconceptions and fear in treating clients because Hays (2016) indicated that fear can lead to anger and uneasiness in counselors, as well as diminished rapport with clients. Other basic principles of therapists' continued development are goal orientation, educative function, time limitation, structure, and employment of a variety of techniques (Beck et al., 1979; Beck & Beck, 2011; Beck & Weishaar, 2011). Techniques such as skills training, self-assessment, educational development, social-skills training, and cultural engagement are also used to increase knowledge and understanding of individuals with TBI among counselors.

Self-Awareness

Self-awareness is explored through assessment of how counselors perceive various counseling situations (Hays, 2016). Bennett-Levy (2006) examined the cognitive learning process of professional counselors, proposing additional learning strategies for self-awareness such as homework assignments, when-then rules, plans, procedures and skills. Bennett-Levy believed that reflection is pivotal in describing how a counselor achieves the knowledge and

security needed to be successful. This recommendation aligns with Beck et al.'s (1979) suggestion that self-awareness and reflection are beneficial in counseling settings. Self-awareness involves "a combination of professional development, self-reflection, critical analysis, readings, and immersion in one's own community" (Ratt et al., 2016, p. 11). Increasing self-awareness, according to Hays (2016), is a necessary component to decrease gaps of knowledge among counselors and increase therapeutic outcomes for clients.

Self-awareness is a critical factor in counselors' achieving a greater understanding of clients and TBI and increasing performance when working with individuals of various cultural dynamics, such as disabilities (Hays, 2016). Stagg, Douglas, and Iacono (2017) reported that counselors' self-awareness of clients' psychosocial conditions affects client treatment outcomes. Additionally, Pompeo and Levitt (2014) stated that self-awareness is important for counselors' development and efficacy. They postulated that self-awareness is the basis for decision-making and action, and thus can affect counselors' job performance. Further, counselor self-awareness positively impacts clients and client outcomes (Pompeo & Levitt, 2014).

Counselor Competency

There are many factors involved in effective therapeutic counseling and the assessment/evaluation. As discussed earlier, a lack of knowledge, comfort, and self- awareness may affect the counselors' ability to treat individuals with a disability or the specialized area of TBI. Other factors may impact the process for successful case closure such as experience, training, and work setting. Experience, training, and work setting all relate to therapist ability to provide care and treatment for clients. It was notated that therapist obtain their skill development from supervisors, literature, and trainings. The research may not support the topic of disabilities for therapists to develop a solid background of knowledge through the literature. Woo, Goo, and

Lee (2016) addressed the lack of articles related to disability within the 10 American Counseling Association (ACA) journals.

Rust (2013) indicated that counselors have to look past the therapeutic component and consider socio-cultural factors as it affects the clients. Sohlberg et al. (2001) supported collaborative working alliance with the client and natural supports to increase successful outcomes. Bordin (1983) that has a therapist prepares a session they consider the goal, the task, and the bond.

Experience

Greenwood, Theadom, Kersten, and McPherson (2015) acknowledged that when intake interviews or psychosocial interviews are conducted when working with an individual with a brain injury it is necessary to recognize behavior changes. Changes may include a fluctuation of fatigue, distress, uneasiness, or frustration that could be caused by not recalling information (Greenwood et al., 2015). Sessions of exploration could take on various dynamics when working with an individual with TBI and the comfort of the therapist is paramount (Greenwood et al., 2015). It was noted that prior experience was a factor in counselors' knowledge of brain changes and comfort in recognizing and treating clients with a TBI. Increased self-awareness and knowledge would also occur through experiences working with individuals with disabilities or TBI (Cooper, Rose & Mason, 2003). Cooper et al. (2003) believed that counselors' attitudes toward people with disabilities would impact the quality of services. As counselors' experiences with individuals with a TBI increases, so do their confidence and self-awareness in treating those individuals.

Bordin (1983) believed that the therapist encountered a two-part experience. The first part of the experience was for the therapist to work in collaboration with the client to develop

goals. The second experience involved the therapist and client developing task that are associated to reach the goals. Bordin would encourage the supervisees to write down their difficulty or challenges with the client. The therapist is encouraged to take a more effective position with special populations. Bordin would encourage the therapist to have clear goals established, and tasks associated with the goals so that they could be appropriately measured. The task is to be completed by the client while the measurement of goals would occur with the therapist. The relationship begins a collaborative process in order to develop a stronger bond. The therapist would continue to engage in the supervisory working alliance process in order to troubleshoot out of the ordinary cases.

Training

Sohlberg et al. (2001) indicated that counselors need knowledge and specific skills to make the collaborative process between them and their clients effective. Much of clinical training for developing a collaborative counseling is obtained through graduate training (Sohlberg et al., 2001). Leigh, Powers, Vash, and Nettles (2004) noted that barriers exist among counselors who have a lack of knowledge and training in working with individuals with a disability such as TBI. Greenwood et al. (2015) reported that additional training was needed to develop counselors' confidence and effectiveness in complex cases.

Evans, Sherer, Nakase-Richardson, Mani, and Irby (2008) conducted in-service training to increase counselors' knowledge, comfort, and self-awareness in providing therapeutic services. The in-service training contributed to counselors' ability to confidently handle non-planned situations during a session (Evans et al., 2008). The attrition of the team members was not discussed during this study; however, Evans et al. (2008) found that counselors' rating was associated with productive status of clients at discharge.

Bordin (1983) believed that training is an integral part of the process to the development of a therapist. He had concerns around the rapidity of therapist moving towards independent work without sufficient supervision time. He indicated that there is a learning curve that is necessary for person to have success within the counseling field. Bordin reported that there is a gap between the progression of experiences to the next step of becoming an independent therapist. He reported that recognizing the successes within session along with the areas that needed to improvement or further development was necessary in training successful therapists.

Work Setting

Lambert (2013) indicated that there may be considerable differences in counselors' work settings as they relate to their reflections on perceived outcomes. Sohlberg et al. (2001) stated to have a successful outcome, it is important for counselors to have knowledge of their work settings to create collaborative techniques when working with individuals with a TBI. Sohlberg et al. (2001) advocated for collaborative work environments that consisted of working with natural supports (families, community, etc.) to create client success. The clinical setting was important as the therapist worked through the sessions by utilizing active listening skills, goals with the family, and check in times for the family. Sohlberg et al. (2001) found that the clinical sessions that incorporated the collaborative process with the client did in fact improve treatment outcomes. It was noted that the partnership with the families resolved various issues that were unplanned (Sohlberg et al., 2001).

Bordin (1983) indicated that within the work setting i.e. internship, practicum, on the job mastery of skills were developed. This allowed for the experiential process to occur within the work setting. Discussions would occur as it relates to case progression, goal attainment, task completion, and bond development. During the supervisory session, the perceptions of the

supervisee and the supervisor would be discussed for greater growth and development. Another area warranting discussion is supervision of counseling options that are specific to meeting the needs through working alliance.

Clinical Supervision

Clinical supervision is vital for the development, efficacy of counselors, increased supervisory relationship, in which counselors can begin to develop technical and relational skills (Bernard & Goodyear, 2014; Rust, Raskin, & Hill, 2013, Bordin, 1983). Supervision is pivotal in counselors obtaining an understanding, learning, and developing counseling skills that are aimed at successful outcome. Disability related competencies were created to aid the development of counselors when working with people with disabilities (Chapin et al. 2019). Woo, Goo, & Lee, (2016) notated that little practical information exists to guide clinical supervisors on methods of teaching counselors how to treat clients with disabilities. In counseling supervision, the aim is for counselors to increase their knowledge and awareness of working with various clients.

Instruction and supervision are necessary to increase a counselor's knowledge, comfort, and self- awareness in working with individuals with TBI. According to Shiffrin and Schneider (1977), automatic processing is innate: after being learned, information comes automatically, as it sits in long-term memory. Schunk (2000) introduced the concept that people store and process information as necessary, when information is encoded, retrieved, rehearsed, thought of, or used to solve a problem. Counselor skills are enhanced through a supportive learning environment that is fostered in a clinical supervision relationship (Bezyak, Ososkie, Trice & Yeager, 2010; Thielsen & Leahy, 2001).

Working alliance foundation is built on three key components that help with the development of the therapeutic session: mutually formed goals, agreed-upon task of how to

complete the goals, and the continual bond that occurs as a result of the experience of obtaining the goals. Bordin (1983) specifically indicated that the supervisory working alliance involve the jointly decided goals that would be completed during the supervision process. The supervisor and supervises would devise a plan of how to complete the goals within the task associated with the goal. The strength of the relationship or bonding between the supervisee and the supervisor is a continual process as goals are obtained and task are completed. The bonding occurs throughout the lived experiences of completing the goals. Bordin (1983) indicated that there are total of 8 areas of development within the supervisee and supervisor relationship. These areas of development are evaluated on a weekly basis. In the next few paragraphs, steps will be explained through example research.

Ku (2016) regarded that the time necessary to develop the goal, task, and bond helps to build a strong supervisory working alliance and has beneficial benefits towards the supervisee. These benefits also trickle into the counseling relationships that are composed of the client-counselor. The main change component consists of the working alliance between the client and counselor and the supervisory relationship. This helps the counselor to develop confidence and strength as they move forward in the processing of various cases. Understanding the goals and task necessary to achieve success and how they will be evaluated helps to aid the therapists in increased development. When the components are set in place this strengthens the bond between the supervisor and the supervisee. This bond becomes instrumental the therapist development and the client's development that is assisted by that therapists. The relationship begins to have an effect not only on the supervisee that is working with the direct supervisor but additionally with the client that is working with the supervisee. Increased competency increases knowledge, increases comfort, and increases self-awareness.

Maucieri (2012) evaluated the components of knowledge necessary for counselors to work effectively with clients. Maucieri's research demonstrated the importance of counselors having a knowledge base to assist with coping and functioning on a long-term basis. Maucieri (2012) noted that as counselors gather knowledge of TBI, their professional skills will broaden. Maucieri (2012) indicated that in order to gain a skill of mastery conceptualization and understanding of a TBI must occur because counselors can be instrumental in developing the natural supports that may be used to aid the individual towards success. Maucieri regarded that counselor awareness, comfort and knowledge is vital in order to provide effective care to military personnel and veterans who have experienced a TBI. Bordin (1983) regarded this as the first area for supervisees to master specific skills. This skill development will concentrate on specific techniques and procedures.

Winer et al. (2018) learned that supervision primarily focused on social and cultural subject as it relates to culturally competent treatment was necessary to support counselors in providing effective and efficient treatment. Winer et al. found that the creation of a dialogue during the internship phase of the clinical training program was essential. Increasing the dialogue during the initial training phases helped to create a stronger bond between the supervisor and supervisee. Bordin (1983) emphasizes that this is the second area of development to increase communication. The communication dialogue represents a continual development of the skills necessary to work with individuals. That is instrumental in developing the mastery skill within the supervisee.

Bordin (1983) indicated that he would have the supervisee prepare prior to a scheduled session a written dialogue that both would match perception during the next session. Winer et al. (2018) built and implemented group psychotherapy interventions in multiple treatment programs

at McLean Hospital and Harvard Medical School. The goal of integrating these groups into existing treatment settings was to help patients (and staff) more effectively broach issues of social and cultural identity and their relevance to mental health treatment. Group implementation also included parallel staff training initiatives and continuous feedback from patients. Bordin (1983) regarded this feedback from patients and the continual staff trainings as the third area of development as it relates to increasing the process of awareness as a relates to issues and how the process continues and that concerns were addressed as they move forward.

Bezyak et al. (2010) explained that it is necessary for the counselor to have a specific counseling focus during supervision to gain the necessary knowledge to improve client services. Within the study conducted by Bezyak et al., it was notated that limitations were observed as it relates to supervisors not having the training to provide effective supervision. The argument in this study was related to if a supervisor does not have the necessary training, how can they effectively train supervisees to overcome various obstacles, challenges, or discrepancies within a session. Supervisors are instrumental in moving supervisees forward to address the gaps in client development. Supervisors who are deficient in the training area could be identified as a disruption to the entirety of the process. Supervisors that lack the needed training in specific skill development could impede the process of supporting counselors to move clients toward independence. Bordin (1983) regarded this as the fourth area of development the technical factor, supervisor's ability to effectively work through the change process. Bezyak et al. indicated that supervisors can obtain continual development through additional trainings.

Clinical supervisors help fill in the gaps with tools to increase the clinical outcome through the enhancement of supervisee competence (Ng, 2005; Thielsen & Leahy, 2001). Ng (2005) regarded that comfort (i.e. collaborative relationship) have the applicable uses during the

supervisory relationship. Ng indicated that a role of active fostering of the comfort necessary during supervision could be displayed through providing the supervisee with reading assignments, direct coaching, and the enhancement of self-awareness. Within Bordin's (1983) fifth area of development this is where the supervisee begins to conquer those areas that are barriers, challenges, difficulties and or stumbling blocks. Bordin cautions the supervisor to not adjust the role within the relationship.

In the same way working alliance can provide counseling strategies for working with individuals with a disability (i.e. TBI), working alliance can also provide a foundation for working with a therapist in an evaluative format to ensure competence (Bordin, 1983; Hays, 2016; Woo, Goo & Lee, 2016). Ng (2005) found that therapist competence levels increased with continued support from their supervisors. Ng (2005) revealed substantial improvement in the clinical outcome of clients occurred with increased supervisor support. Bezyak, Ososkie, Trice and Yeager, 2010) revealed that professional competence of counselors leads to improved outcomes.

Wright (2015) research indicated that professional training as it relates to individuals with disabilities is lacking across many the literature. Wright notated that due to the lack of training, literature inclusion, many of counselors may lack the necessary knowledge and experience to provide effective service to the clients. Wright revealed that this could be impactful to the counseling service that is delivered from a supervisee that lacks the skills necessary to develop a client. The sixth and seventh area of development according to Bordin (1983) is an area where the supervisor assist the supervisee in obtaining the knowledge and understanding as a relates to concepts and theory this is where the supervisor will make recommendations to assist in skillful opportunities for guided growth, self-observation, self-awareness and/or self-reflection.

Supervisors may consider various literature, books, videos, role plays, and experiential activities that could help aid the supervisee in their growth. During this stage the supervisee may began to assist in research, junior instructor roles, or through various networking and advocacy.

The eighth area of development is the maintenance of service delivery model. According to Bordin (1983) the supervisee will continue to maintain what they have learned and gained during the supervision sessions. This is the time where the supervisee will develop their own critical outlook as it pertains to their counseling session and are fully self-aware of the progression of counseling sessions, they may be sought after as a subject matter expert in regards to developing other counselors. The supervisee begins to approach this level as an area of continual learning through continuing education, webinars, in-service, and/or employer lead trainings. DePue (2016) related this area as the supervisees perceptions towards the clients have an increase potential towards success additionally their direct relationship in the supervisory process moves to a new standard. The supervisee moves to a level of a collaborator, encourager, developer, and trainer.

Several studies have indicated that clinical supervision is an essential component to the development of skills, knowledge, comfort, and self-awareness (Bernard & Goodyear, 2014; Ng, 2005; Rust, Raskin & Hill, 2013; Thielsen & Leahy, 2001). Woo, Goo & Lee (2016) stressed the importance of counselors to engage in training as it relates to working with individuals with a disability (i.e. TBI). Bordin (1983) regarded that there are 8 areas of development through the supervisor-supervisee process. Each process is designed to develop a stronger supervisory working alliance that will help to increase the successful outcomes of the supervisee. In the next section, I will discuss the counselor competency as it relates to experience, training, and work setting.

Need for a Survey

The research indicates that there is limited information on counselors' knowledge, comfort, and self-awareness in treating individuals with TBI. Existing research lacked a survey that measured counselors' knowledge, comfort, and self-awareness when working with individuals with a TBI. Furthermore, the need to assess this population is an essential concern for the field of counseling.

A survey that engages the therapist measures of working alliance with individuals with disabilities as it relates to TBI. Sabella (2020) indicated that further assessment is necessary in order to assist the supervisee's, on-site supervisors, and faculty supervisor screening the entire process. Working alliance allows the integration of the use of techniques that have been traditionally found within another theoretical framework. Thus, allowing working alliance to have a model that works with varying skills, abilities, interests, and theoretical foundations. Hays (2016) agreed that disability from a diverse perspective needs to be explored through an integration of questions whereas Hays reference Socratic dialogue to develop further awareness. The Socratic dialogue (questioning) occurs to uncover clients' views and examine thought patterns (Beck et al., 1979; Beck & Beck, 2011; Beck & Weishaar, 2011). Bezyak (2010) the continuation of research that helps to narrow down the defining aspects of how to create successful outcomes is necessary in order for the supervisee's development, supervisors training, and educational program incorporation.

To assess counselors who work with individuals with TBI, a survey must be created that assesses counselors' knowledge, comfort, and self-awareness levels when working with individuals with TBI. This study adds to the existing knowledge. Findings from this study can apply to the field of counseling through identification of counselor knowledge, counselor

awareness, or the lack thereof, which could lead to opportunities for additional education and training. Such a survey could potentially guide curriculum development for counselor programs and serve as the impetus for future educational developments.

Summary

This chapter summarizes literature related to counselors and clients with TBI. The literature review provided counseling perspectives to allow further insight into working with individuals with TBI in the counseling field. The goal of the current study was to articulate the need to explore counselors' knowledge, comfort, and self- awareness when working with individuals with TBI. The next chapter describes the creation of the survey, validity and reliability, explanation of the design, participant identification, and data collection.

CHAPTER THREE:

METHOD

The purpose of this quantitative non-experimental study was to explore counselors' knowledge, comfort, and self-awareness when working with individuals with a TBI. This chapter contains a description of the research methods that were used in the study. In this chapter, the steps used to develop the survey questionnaire are described, along with the participants in the study. Procedures used to collect and analyze the survey data are discussed. The research questions are as follows:

Research question 1: What are counseling professionals' knowledge, comfort, and self-awareness in working with individuals with a TBI?

Research question 2: What is the relationship between counseling professionals' knowledge, comfort, and self-awareness in working with individual with a TBI and the counselors' levels of experience, training, or work setting?

Research Design

For this study, I used a quantitative, non-experimental research design. As part of the research process, I created a structured survey questionnaire to measure counselors' knowledge, comfort, and self-awareness of individuals with a TBI. I structured the creation of the survey questionnaire around Farooq's (2016) five-step survey creation approach, which is designed to frontload the validity of the instrument prior to the study. Farooq (2016) delineated the following sequence for creating the survey: a) define the constructs; b) synthesize the information from the literature review; c) develop items; d) conduct expert reviews; and e) pilot the items. A

quantitative, non-experimental study was appropriate as I could not experimentally manipulate any variables, and because I sought to explore counselors' knowledge, comfort, and self-awareness when working with individuals with a TBI. This information can be used to assess counselors' training needs to work with clients with a TBI.

Development of the Survey Questionnaire

Defining the Constructs

I designed this study to explore three constructs: counselors' knowledge (goals), comfort (working alliance/collaborative), and self-awareness (self-exploration/self- reflection) when working with individuals with a TBI. According to Beck et al. (1979), *knowledge* can be obtained through various means such as gathering information, experience, and education. Beck et al. (1979) note that over time, the individual processes the information into a set of beliefs that result in the individual knowing how to understand a concept and gain a frame of reference.

Future responses and experiences are structured based on this previous knowledge (Beck et al., 1979). Comfort is seen through the lens of working alliance within the therapeutic collaboration (Bordin, 1983, 1994; Hays, 2016). Engagement, interaction, and establishing comfort between the therapist and the client are important elements in understanding human interaction (Bordin, 1983, 1994; Hays, 2016). The stronger the comfort, the stronger the learning skills (Bordin, 1983, 1994; Hays, 2016). Self- awareness (being aware of how you are thinking and feeling) is achieved by exploring meaningful events throughout the course of the therapist and client interactions (Bordin, 1983, 1994; Bennett-Levy, 2006).

Synthesis of the Information from the Literature Review

Based on a review of the literature, I included questions about counselors' familiarity and awareness of working with individuals with a TBI diagnosis. I focused on the literature that

related to working with individuals with a TBI. The instrument contained questions on counselors' preparedness for working with individuals with a TBI.

Item Development

To create the questionnaire, I developed items using a review of the literature (as suggested by Burns et al., 2008) in order to explore counselors' knowledge, comfort, and self-awareness. I used a coding sheet to indicate how each developed question closely mirrored the literature review of each of the construct areas (knowledge, comfort, and self-awareness; see Appendix F). I titled the questionnaire the Counselor Brain Injury Questionnaire (CBQ). The questionnaire contained questions theoretically related to counselors' familiarity and awareness of working with individuals with a TBI diagnosis, to which participants could respond to using a 5-point Likert scale ranging from 1 (*strongly agree*) to 5 (*strongly disagree*). An example item is "I am comfortable with integrating a neuropsychological report into counseling services with my clients." Overall, the final CBQ comprised 24 items—eight items for each of the three constructs being measured (knowledge: survey items 1-8; comfort: survey items 9-17; self-awareness: survey items 18-24). Subscale scores were created by averaging the eight items within each subscale. I also collected demographic information as part of the questionnaire. Appendix G contains the final version of this instrument.

Counselor Variables

I used additional questions on the survey to collect information on experience, training, and work setting in order to answer Research Question 2. Table 1 contains the response options for each variable. Previous researchers indicated that counselors may lack the necessary training (Block & West, 2013; Stucky, 2012). Beck et al. (1979) indicate counselors with previous experience have the knowledge base to draw the needed resources from. Silverberg et al. (2013)

evaluated the types of work setting that could promote positive outcomes. Additional questions were used to gather demographic data such as counselor gender and race.

Table 1

Response Options for Experience, Training, and Work Setting

Variable	Survey item	Response options
Work experience	How long have you worked as a Counselor?	
		0
		1–4 years
		5–9 years
		10–14 years
		15–19 years
		20–24 years
		> 24 years
Training	What type of training have you had in Brain Injury?	
		Workshop
		Employment Training
		In-Service
		Conference
		Seminar
		Webinar
		Journal Publication
		Graduate Class/Coursework
Work Setting	What is your primary work setting?	
		Agency
		Government
		Self-Employment
		Group Practice
		School
		University
		Hospital
		Volunteer

Note. Participants could select more than one training experience.

Expert Panel Review

A panel of expert reviewers were established to evaluate the content validity of the CBQ. To recruit the expert panel, I sent an invitation email to 60 experts who were listed in a local web directory for counselors who provide services to people with disabilities. After recruitment, the final panel of expert reviewers consisted of six professionals who reviewed the study protocol, survey items, and procedures involved in the content validation process.

The expert panel represented different content perspectives found in counseling (forensic counselor, career counselor, government counselor, rehabilitation counselor, social worker, and neuropsychologist) and had average experience of no less than 10 years. Each were licensed according to their field. A diverse panel of expert reviewers was necessary in order to strengthen the validity of the instrument. Table 2 presents the demographics of the expert panel used in the content validation review.

Table 2

Demographics of Experts Panel Reviewers (n = 6)

Expert ID	Gender	Specialty	Experience (Years)	Worked w/person with/TBI	Degree	License
1	Male	Forensics Counseling	24+	Yes	Master	Yes
2	Female	Career	20–24	Yes	Master	Yes
3	Female	Government	20–24	Yes	Master	Yes
4	Female	Rehabilitation	10–14	Yes	Master	Yes
5	Female	Social Worker	21–30	Yes	Master	Yes
6	Female	Neuropsychologist	10–14	Yes	PhD	Yes

Expert-panel reviewers provided consent and the Counselor Brain Injury Questionnaire was electronically sent to them, with the opportunity for feedback. The six panel experts rated the applicability of the 24 items to the relevant construct domains of knowledge, comfort, and

self-awareness. See Appendix H for the responses from the expert panel. I used the content validity index (CVI; Polit & Beck, 2006) to determine each item's relevance to the constructs of knowledge, comfort, and self-awareness. The CVI for an item is the proportion of the six experts who rated the item as relating to the construct item (Polit & Beck, 2006). The results appear in Appendix G for the two rounds of CVI review.

Polit and Beck (2006) indicated that for six raters, the CVI should reach .83 or higher. Davis (1996) indicated that .80 is the standard. The overall content validity index, which was the average CVI for the 24 items, was .67 for the first round of the content validation (CVI-1). Upon further review, 18 survey items fell below the .83 threshold. I then edited these 18 survey items. Survey items 1, 2, 3, 13, 20, 22, and 23 met the .83 threshold and did not require editing. I then submitted the 18 revised survey items that originally did not meet the required threshold for a second round of the CVI (CVI-2).

I conducted the CVI-2 with a 2-week delay from the first round of review, which took a total of 1.5 months to complete. I sent three electronic communications to follow up, encouraging expert-panel members to return their surveys. I instructed the expert reviewers to only rate the 18 revised questions. The expert reviewers did not re-score the items that originally met the threshold of .83. CVI-2 revealed that all 24 content items were valid with total agreement that the items were relevant to the constructs among all six raters for all 24 items (see Appendix G). The next step was to determine the reliability of the scores from the instrument.

Pilot Study

Upon completion of the expert panel review, I sent out another recruitment call to a different set of 54 potential participants in the counseling disciplines for a pilot study. The included counselors for this section were found in an approved directory held by a local

disability agency. The counselors in the pilot study were used to provide preliminary reliability estimates of the measure. Of the potential 54 pilot-study recruitment offers, 18 participants returned surveys. However, only 16 of the surveys were usable for further analysis during the pilot study. Table 3 presents the demographics of the pilot study participants. See Appendix D for the pilot study questions.

Table 3

Demographics of Pilot Study Participants (n =18)

Variable	*n*	*%*
Gender		
Female	10	44.44
Male	8	55.56
Specialty		
Career	2	11.11
Clinical	0	0.00
Mental Health	1	5.56
Marriage and Family	0	0.00
Rehabilitation Counseling	11	61.11
Counselor Educator	0	0.00
Substance Abuse	3	16.67
College	0	0.00
Psychologist	1	5.56
Trauma and Grief	0	0.00
Worked with Client with TBI		0.00
No	0	0
Yes	18	100

Table 3 (Continued)

Variable	*n*	*%*
Experience		
1-4 Years	2	11.11
5-9 Years	6	33.33
10-14 Years	2	11.11
15-19 Years	3	16.67
20-24 Years	1	5.56
> 24 Years	3	16.67
Missing	1	5.56
Degree		
Master's degree	10	55.56
Ph.D.	2	11.11
Psy.D.	2	11.11
Ed.S.	2	11.11
Bachelor	2	11.11

I used the pilot study data to assess the reliability of the scores from the instrument using Cronbach's alpha, which is statistical measure of internal consistency. I interpreted Cronbach's alpha coefficients using Lance, Butts, and Michels's (2006) guidelines. Cronbach's alphas for knowledge (α =.85), comfort (α = .93), and self-awareness (α = .66) were acceptable.

Population and Sample

The population of interest was professional counselors in the United States. There are approximately 552,000 professional counselors in the United States (Bureau of Labor, 2016). The counselors selected for this study were counselors who work with adult populations within the counseling profession. I utilized different counseling networks through the American Counseling Association (ACA), American Rehabilitation Counseling Association (ARCA), and

the Counselor Education network located in the United States to access the emails of potential participants. ACA connect requires membership dues and emails are only available to counselors within the profession.

Membership to the Counselor Education network is based on a membership request. I sent an email to these counseling listservs with a hyperlink to the survey, hosted by Qualtrics. A criterion for participation was that participants were practicing counselors who had provided counseling services for an individual with a TBI. These inclusion criteria were intentionally broad, so that I could survey a potentially wide variety of counseling professions to increase the diversity of responses. I excluded individuals who were not in the counseling profession, who did not have a counseling experience, or who reported that they had no experience working with a person with a TBI.

Data Collection Procedures

At this point, the survey had gone through a rigorous expert review and had been adjusted based on that review. Thus, the survey was now ready for full execution within the counseling population. During recruitment, I sent an email to potential participants containing a link to participate in the study on Qualtrics. Once participants clicked on the link to participate in the survey, they were taken to the Qualtrics webpage hosting the survey. Here, participants first read an informed consent form (see Appendix E), which detailed the nature of the study, what their participation would entail, and that their participation was voluntary and would be kept confidential. After indicating their informed consent, participants were then presented with demographic questions. Counselors who indicated “no” type of counseling service with an individual with a TBI were not permitted to move forward and the survey ended for them. After all participants took the CBQ, they were presented with a page thanking them for their time.

After downloading the data from Qualtrics, I stored it in a password secured computer behind a firewall. I will maintain all data for five years, after which I will securely delete it. Participants experienced no known risks and all data were deidentified.

Data Analysis

First, I imported the collected data to SPSS version 24 for management and analysis. I received 110 responses. I removed cases missing more than 50% of data, for a total of 36 cases removed. The final sample consisted of 72 participants. I report specific amounts of remaining missing data within Table 4 in Chapter Four. I then used descriptive statistics to describe the demographics of the sample.

Research Question 1

What are counseling professional's knowledge, comfort, and self-awareness in working with individuals with a TBI?

In order to answer this research question, I used descriptive data analyses to examine participants' scores in knowledge, comfort, and self-awareness. I calculated means and standard deviations for knowledge, comfort, and self-awareness scores.

Research Question 2

What is the relationship between counseling professionals' knowledge, comfort, and self-awareness in working with individual with a TBI and the counselors' levels of experience, training, or work setting?

To answer this researcher question, I conducted three multivariate analyses of variance (MANOVAs). This is the appropriate analysis to perform when seeking to assess group differences in multiple continuous dependent variables that may be theoretically related (Tabachnick & Fidell, 2014). The categorical independent variables for these analyses were

experience, training, and work setting, respectively. The continuous dependent variables for each MANOVA were the three subscales of the CBQ: knowledge, comfort, and self-awareness. I used a MANOVA, rather than three separate univariate analyses of variance (ANOVAs), in order to reduce the risk of Type I error (i.e., concluding a "false positive" result), which may result from the repeated testing involved in conducting multiple ANOVAs (Field, 2013).

In the first step of each analysis, I evaluated the MANOVA's overall *F* test, which tests for overall differences in knowledge, comfort, and self-awareness for each of the independent variables. Significance at this stage is indicative of overall differences in knowledge, comfort, and self-awareness, and warrants further testing to examine the nature of these differences through a series of one-way ANOVAs (Field, 2013). I evaluated significance at the $\alpha = .05$ level.

Prior to assessing the significance of the MANOVA, I conducted assumption testing. Assumptions for the MANOVA include normality, equality of variance, and equality of covariance matrices. I tested normality through a series of Shapiro-Wilk tests for each dependent variable; if the test was not significant, the assumption was met (Field, 2013). However, statistical tests of normality can be overly sensitive to slight deviations of normality; for any significant Shapiro-Wilks tests, I examined skew and kurtosis values to confirm normality (Field, 2013). I tested the assumption of homogeneity of variances using Levene's test, and the multivariate equivalent of this assumption, homogeneity of covariances, using Box's M test; non-significance indicates that the assumption was met (Field, 2013). However, deviations from perfect homogeneity can be corrected for by using an adjusted degrees of freedom measure during interpretation of the MANOVA (Leech, Barrett, & Morgan, 2008).

Summary

I conducted this quantitative, non-experimental study to explore counselors' knowledge, comfort, and self-awareness when working with individuals with a TBI. I created an instrument (the CBQ) to measure counselors' knowledge, comfort, and self- awareness when working with individuals with a TBI. I recruited three samples of professional counselors, one each for an expert review, pilot study, and main sample, respectively. I recruited these professional counselors from professional counseling networks. Participants took the CBQ online through Qualtrics. I answered the research questions using descriptive statistics and a series of three MANOVAs. The following chapter, Chapter 4, will contain a report of the results of the analyses described in this chapter.

CHAPTER FOUR:

RESULTS

The purpose of this quantitative non-experimental study was to explore counselors' knowledge, comfort, and self-awareness when working with individuals with a TBI. This chapter includes the results of the analyses described in Chapter Three. First, I discuss the data cleaning procedures. Next, I report descriptive statistics to describe the demographics of the sample. Finally, I report the results of the analyses used to answer the research questions.

Data Cleaning

A total of 110 participants accessed the Counselor Brain Injury Questionnaire (CBQ). I assessed this dataset for missing cases and outliers. There was a total of 22 cases that did not have any associated responses, three cases that did not provide informed consent, and 11 cases that provided demographic data but did not answer the CBQ survey items. I removed each of these cases. I removed a further two participants who only held a bachelor's degree, for a total of 72 usable cases in the dataset. I handled any other instances of minor missing data using SPSS's default listwise deletion method. I then assessed each dependent variable (knowledge, comfort, self-awareness) for outliers using standardized scores. There was no case with a standardized score beyond ± 3.29, indicating that there were no outliers in the dataset (Tabachnick & Fidell, 2014).

Descriptive Statistics

I report full frequencies and percentages of categorical variables in Table 4. Of the 72 counselors who participated in the survey, 62.5% were female. More than half of the participants

were White (61.1%). Counseling specialties were diverse, with the largest proportion of counselors serving as a counselor educator (41.7%). Other specialists represented were trauma (11.1%), clinical (1.4%), mental health (8.3%), marriage and family (19.4%), rehabilitation counseling (5.6%), substance abuse (11.1%), and social work (1.4%).

The majority of counselors indicated that they did have an interest in working with clients with a diagnosis of TBI (75.0%). The experience of the counselors was diverse, but the largest percentage of counselors had 24+ years of experience (29.2%). Over half of the participants (54.2%) had a master's degree, while others held a PhD (38.9%), a PsyD (2.8%) or an Ed.S. (4.2%). The theories that the largest proportions of counselors preferred were Cognitive (30.6%) and Solution Focused (23.6%). Others used interpersonal, social cognitive, existential, Gestalt, Reality/Choice, Adlerian, and psychoanalytic. The largest percentage of counselors indicated that the type of training they received to work with individuals with a TBI took place at workshops (26.8%), followed by through employment (25.4%). Licensures varied, with the largest number of counselors indicating that they had a LMHC or LPC (29.2%). Half of the participants worked with 1-10 clients with a TBI (50.0%). Most participants worked in universities (36.6%). Table 4 presents these full frequencies and percentages.

Table 4

Frequencies and Percentages of Demographic Data

Variable	*n*	*%*
Gender		
Female	45	62.5
Male	27	37.5
Missing	0	0.0

Table 4 (Continued)

Variable	*n*	%
Race or Ethnicity		
American Indian or Alaska Native	1	1.4
Asian	2	2.8
Black or African American	12	16.7
Hispanic or Latino	3	4.2
Native Hawaiian or Pacific Islander	1	1.4
Not Reported	1	1.4
Other	8	11.1
White	44	61.1
Missing	0	0.0
Specialty		
Career	0	0.0
Clinical	1	1.4
Counselor Educator	30	41.7
Marriage and Family	14	19.4
Mental Health	6	8.3
Rehabilitation Counseling	4	5.6
Social Work	1	1.4
Substance Abuse	8	11.1
Trauma	8	11.1
Missing	0	0.0
Interest working with TBI clients		
No	18	25.0
Yes	54	75.0
Missing	0	0.0
Theory Preference		
Adlerian	2	2.8
Cognitive	22	30.6
Existential	4	5.6

Table 4 (Continued)

Variable	*n*	%
Gestalt	2	2.8
Interpersonal	3	4.2
Person-centered	15	20.8
Psychoanalytic	1	1.4
Reality or Choice Theory	2	2.8
Social Cognitive	4	5.6
Solution Focused	17	23.6
Missing	0	0.0
Experience in Counseling		
1-4 Years	2	2.8
5-9 Years	15	20.8
10-14 Years	17	23.6
15-19 Years	9	12.5
20-24 Years	7	9.7
> 24 Years	21	29.2
Missing	1	1.4
Training in Brain Injury (multiple choice selection)		
Conference	10	13.9
Coursework	8	11.1
Employment	18	25.0
In-Service	6	8.3
Publication	2	2.8
Seminar	3	4.2
Webinar	5	6.9
Workshop	19	26.8
Missing	1	1.4
Degree (single choice selection)		
Bachelor	0	0.00
EdS	3	4.2
Master	39	54.2
PhD	28	38.9
PsyD	2	2.8
Missing	0	0.0

Table 4 (Continued)

Variable	*n*	%
License (multiple choice selection)		
Addictions Specialist	5	6.9
CBIST	3	4.2
CCMHC	3	4.2
CRC	9	12.5
LCSW	3	4.2
LMFT	8	11.1
LMHC or LPC	21	29.2
NCC	8	11.1
Not reported	1	1.4
Missing	11	15.3
Amount of TBI Cases (single choice selection)		
1-10 clients	36	50.0
11-20 clients	10	13.9
21-30 clients	4	5.6
31-40 clients	5	6.9
41 and above clients	16	22.2
Missing	1	1.4
Work Setting (single choice selection)		
Agency	11	15.3
Government	9	12.5
Group Practice	6	8.3
Hospital	3	4.2
School	5	6.9
Self-Employment	11	15.3
University	26	36.1
Volunteer	0	0.0
Missing	1	1.4

Note. Due to rounding errors, percentages may not equal 100%.

Results for Research Question 1

Research Question 1: What are counseling professional's knowledge, comfort, and self-awareness in working with individuals with a TBI?

Participants scored the highest on the self-awareness subscale (M = 4.46, SD = 0.42). This corresponds to an approximate average response of between "agree" and "strongly agree" for each of the responses related to the self-awareness subscale. The participants had an average knowledge level of 3.41 (SD = 0.81). This corresponds to an approximate average response of between "neutral" and "agree" for each of the responses to the knowledge-related survey items. The participants had an average comfort level of 3.75 (SD = 0.42). This corresponds to an approximate average response of between "neutral" and "agree" for each of the responses to the comfort-related survey items.

I also calculated the skew and kurtosis for each variable. When the absolute value of the skew is greater than 2.00, and the absolute value of the kurtosis is greater than 7.00, the data are not normally distributed (Kline, 2015). Table 5 presents the range, mean, standard deviation, skew, and kurtosis for each subscale. Tables 6-8 present the mean, standard deviation, skew, and kurtosis for each subscale by each level of experience, training, and work setting.

Table 5

Descriptive Statistics for Knowledge, Comfort, and Self-Awareness (n = 72)

Variable	*n*	Min	Max	*M*	*SD*	Skew	Kurtosis
Knowledge	*72*	1.50	5.00	3.41	0.81	-0.34	-0.21
Comfort	*72*	1.33	5.00	3.75	0.92	-0.70	-0.10
Self-Awareness	*72*	3.57	5.00	4.46	0.42	-0.60	-0.68

Note. Original survey items were coded from 1 (strongly agree) to 5 (strongly disagree). During the data management stage, the items were reverse scored [1 (strongly disagree) to 5 (strongly agree)] so higher scale scores corresponded to higher perceptions of knowledge, comfort, and self-awareness.

Table 6

Descriptive Statistics for Knowledge by Experience, Training, and Work Setting

Variable	Knowledge				
	n	*M*	*SD*	Skew	Kurtosis
Experience					
1-9 Years	17	3.67	0.75	0.08	-0.44
10-14 Years	17	3.40	0.84	-0.53	-0.43
15-19 Years	9	3.24	0.72	0.70	0.67
20+ Years	28	3.38	0.81	-0.49	-0.52
Training					
Conference	10	3.14	0.91	-0.04	-1.42
Employment	8	3.82	0.83	-0.36	-0.22
In-Service, Seminar, or Webinar	18	2.99	0.62	-0.50	-0.45
Publication or Coursework	6	3.42	0.92	-0.84	-0.53
Workshop	2	3.57	0.53	0.05	-0.68
Work Setting					
Agency	11	3.28	0.91	0.27	-0.70
Government	9	3.50	0.71	0.78	-0.78
Group Practice, School, Hospital, or Volunteer	14	3.92	0.60	0.15	-0.73
Self-Employed	11	3.44	0.77	-0.39	-1.06
University	26	3.20	0.82	-0.65	-0.34

Table 7

Descriptive Statistics for Comfort by Experience, Training, and Work Setting

Variable	Comfort				
	n	*M*	*SD*	Skew	Kurtosis
Experience					
1-9 Years	17	3.74	0.95	-0.77	0.46
10-14 Years	17	3.84	0.96	-0.76	-0.51
15-19 Years	9	3.59	0.77	-0.06	-0.50
20+ Years	28	3.81	0.91	-0.84	0.14
Training					

Table 7 (Continued)

Variable	Comfort				
	n	*M*	*SD*	Skew	Kurtosis
Conference	10	3.48	1.02	-0.85	-0.02
Employment	8	4.19	0.80	-1.53	2.55
In-Service, Seminar, or Webinar	18	3.09	0.83	-0.48	-0.50
Publication or Coursework	6	3.94	0.92	-0.37	-1.34
Workshop	2	3.93	0.70	-0.43	-0.89
Work Setting					
Agency	11	3.30	1.01	-0.38	-0.46
Government	9	3.85	0.68	-0.31	-1.02
Group Practice, School, Hospital, or Volunteer	14	4.16	0.89	-0.79	-0.65
Self-Employed	11	3.79	0.99	-1.42	1.51
University	26	3.70	0.89	-0.60	-0.58

Table 8

Descriptive Statistics for Self-Awareness by Experience, Training, and Work Setting

Variable	Self-Awareness				
	n	*M*	*SD*	Skew	Kurtosis
Experience					
1-9 Years	17	4.59	0.42	-0.95	0.02
10-14 Years	17	4.40	0.44	-0.28	-1.15
15-19 Years	9	4.63	0.32	-0.66	-1.07
20+ Years	28	4.38	0.42	-0.63	-0.69
Training					
Conference	10	4.46	0.40	-0.18	-0.94
Employment	8	4.63	0.32	-1.04	0.24
In-Service, Seminar, or Webinar	18	4.35	0.48	-0.59	-0.90
Publication or Coursework	6	4.40	0.50	-0.10	-1.31
Workshop	2	4.44	0.41	-0.55	-0.88
Work Setting					
Agency	11	4.55	0.46	-0.88	-0.26
Government	9	4.38	0.36	0.01	-1.34

Table 8 (Continued)

Variable	Self-Awareness				
	n	*M*	*SD*	Skew	Kurtosis
Group Practice, School, Hospital, or Volunteer	14	4.60	0.42	-1.26	0.54
Self-Employed	11	4.36	0.47	-0.33	-1.22
University	26	4.44	0.40	-0.62	-0.36

Results for Research Question 2

Research question 2: What is the relationship between counseling professionals' knowledge, comfort, and self-awareness in working with individual with a TBI and the counselors' levels of experience, training, or work setting?

To answer this research question, I conducted three MANOVAs, each with the dependent variables of knowledge, comfort, and self-awareness. The MANOVAs had an independent variable of experience, training, and work setting, respectively. Due to small cell frequencies, I recoded experience into four categories. I combined *1-4 years* and *5-9 years* into one category. I also combined *20-24 years* and *24+ years* into one category.

The final categories of experience were (a) *1-9 years,* (b) *10-14 years*, (c) *15-19 years*, and (d) *20+* years. I recoded training into five categories. I combined the categories *of in-service, seminar*, *and webinar* into one category. I combined the categories of *publication* and *coursework* into one category. The final categories of training were (a) *conference* (b) *employment,* (c) *in-service, seminar, or webinar,* (d) *publication or coursework*, and (e) *workshop*. I recoded work setting into five categories. I combined *group practice, school, hospital* and *volunteer* into one category. The final categories of work setting were (a) *agency,* (b) *government,* (c) *group practice, school, hospital, or volunteer* (d) *self- employed,* and *(e) university.*

I interpreted the Wilks' lambda coefficients for each MANOVA. Prior to interpreting the results of the MANOVAs, I assessed the assumptions of normality and homogeneity of covariances. I also computed correlations between the dependent variables of the MANOVA. The dependent variables were all significantly correlated with one another (see Table 9), indicating that it was appropriate to examine them in a MANOVA. These correlations indicated that each dependent variable had positive interrelationships, indicating that they tended to increase or decrease together.

Table 9

Correlations between Dependent Variables

Variable	*n*	1	2	3
1. Knowledge	72	-		
2. Comfort	72	.80*	-	
3. Self-Awareness	72	.34*	.43*	-

*indicates significance at the .05 level. $n = 72$.

Experience

I assessed the assumption of normality using a series of Shapiro-Wilk tests for each level of experience for each dependent variable. If the Shapiro-Wilk test was not significant, normality can be assumed (Field, 2013). Each level of experience had a non- significant Shapiro-Wilk test for knowledge, but not for comfort or self-awareness (see Table 10). I further assessed the shape of the distribution for those levels of self-awareness using skew and kurtosis values. If the absolute value of skew is less than or equal to 2.00, and the absolute value of kurtosis is less than 7.00, then the variable's distribution can be considered approximately normally distributed (Kline, 2015). The skew and kurtosis values were within acceptable bounds (comfort: 10-14 years skew = -1.08, kurtosis = 0.57; self-awareness 1-9 years skew: -1.04, kurtosis: -0.80),

indicating that normality may be assumed for these levels of these variables as well. I assessed homogeneity of covariances using Box's M test. Box's M test was not significant (p = .959), indicating that the assumption was met (Field, 2013).

Table 10

Shapiro-Wilk Test for Normality Results for Knowledge, Comfort, and Self-Awareness by Experience (n = 72)

Experience		*p-value*		
	n	Knowledge	Comfort	Self-Awareness
1-9 Years	17	.894	.213	.027
10-14 Years	17	.539	.031	.165
15-19 Years	9	.476	.421	.072
20+ Years	28	.373	.054	.021

The results of the overall MANOVA for experience were not significant, $F(9, 158.34)$ = 01.61, p = .116. This indicates that there is not a significant difference in the linear combination of knowledge, comfort, and self-awareness between years of experience. To confirm these results, I conducted follow-up univariate ANOVAs, each with an independent variable of experience and dependent variables of knowledge, comfort, and self-awareness, respectively.

The univariate ANOVA results were not significant for knowledge, $F(3, 67) = 0.76$, p .523, comfort, $F(3, 67) = 0.17$, p = .917, or self-awareness, $F(4, 67) = 1.50$, p = .22. As such, there is no statistical relationship between experience and knowledge, comfort, or self-awareness. Table 11 presents the full results of the univariate ANOVAs.

Table 11

Univariate ANOVA Results by Experience

Dependent Variable	*n*	Source of Variation	*SS*	*df*	*MS*	*F*	*P*
Knowledge	72	Between Group	1.42	4	0.47	0.76	.523
		Within Group	42.02	67	0.63		
Comfort	72	Between Group	0.42	4	0.14	0.17	.917
		Within Group	56.34	67	0.84		
Self-Awareness	72	Between Group	0.77	4	0.26	1.50	.222
		Within Group	11.48	67	0.17		

Note. Overall MANOVA: $F(9, 158.34) = 01.61$, $p = .116$.

Training

I assessed the assumption of normality using a series of Shapiro-Wilk tests for each level of training for each dependent variable. Each level of training had a non- significant Shapiro-Wilk test for knowledge, but not for comfort or self-awareness (see Table 12). I further assessed the shape of the distribution for those levels of comfort and self-awareness using skew and kurtosis values. The skew and kurtosis were within acceptable bounds for comfort (employment: skew = -1.67, kurtosis = 3.86) and self- awareness (employment: skew = -1.14, kurtosis = 0.75; workshop: skew = -0.60, kurtosis = -0.77), indicating that normality may be assumed for these variables as well. I assessed homogeneity of covariances using Box's M test. Box's M test was not significant ($p = .164$), indicating that the assumption was met (Field, 2013).

Table 12

Shapiro-Wilk Test Results for Knowledge, Comfort, and Self-Awareness by Training (n = 72)

Training		p-value		
	n	Knowledge	Comfort	Self-Awareness
Conference	10	.426	.167	.666
Employment	18	.190	.007	.017
In-Service, Seminar, or Webinar	14	.586	.624	.066
Publication or Coursework	10	.187	.265	.217
Workshop	19	.460	.130	.024

The results of the overall MANOVA for training were not significant, $F(12, 169.62) = 1.59$, $p = .099$. This indicates that there is not a significant difference in the linear combination of knowledge, comfort, and self-awareness between types of training. I conducted follow-up univariate ANOVAs, each with an independent variable of training and dependent variables of knowledge, comfort, and self-awareness. The univariate ANOVA results were significant for knowledge, $F(4, 66) = 2.96$, $p = .026$, $\eta^2_{partial} = .15$.

This indicates that there are significant differences in knowledge between types of training. To determine the nature of these differences, I conducted *post hoc* tests using the Bonferroni correction. There was only a significant difference between those who received training through their employer and those who received training through an in-service, seminar, or webinar ($p = .028$). Those who received training through their employment scored 0.83 units higher than those who received training through an in-service, seminar, or webinar. There were no other significant differences.

There was also a significant univariate ANOVA for comfort, $F(4, 66) = 4.09$, $p = .005$, $\eta^2_{partial} = .20$. This indicates that there are significant differences in comfort between types of training. However, when assessed using the Bonferroni correction, there were no significant *post*

hoc comparisons. The results involving self-awareness were not significant, $F(4, 66) = 1.10$, $p = .364$. There is a statistical relationship between training and knowledge and comfort, but not self- awareness. Table 13 presents the full results of the univariate ANOVAs.

Table 13

Univariate ANOVA Results by Training

Dependent Variable	*n*	Source of Variation	*SS*	*df*	*MS*	*F*	*P*
Knowledge	72	Between Group	6.62	4	1.66	2.97	.026
		Within Group					
Comfort	72	Between Group	11.28	4	2.82	4.09	.005
		Within Group					
Self-Awareness	72	Between Group	0.77	4	0.19	1.10	.364
		Within Group					

Note. Overall MANOVA: $F(12, 174.91) = 1.66$, $p = .088$

Work Setting

I assessed the assumption of normality using a series of Shapiro-Wilk tests for each level of work setting for each dependent variable. If the Shapiro-Wilk test was not significant, normality can be assumed (Field, 2013). Each level of work setting had a non- significant Shapiro-Wilk test for knowledge, but not for comfort or self-awareness (see Table 14). I further assessed the shape of the distribution for those levels of comfort and self-awareness using skew and kurtosis values. The skew and kurtosis were within acceptable bounds for comfort (group practice, school, hospital, or volunteer: skew = - 0.89, kurtosis = -0.37; self-employed: skew = -1.65, kurtosis = 3.35) and for self- awareness (group practice, school, hospital, or volunteer: skew = -1.42, kurtosis = 1.39) indicating that normality may be assumed for these variables as

well. I assessed homogeneity of covariances using Box's M test. Box's M test was not significant (p =.963), indicating that the assumption was met (Field, 2013).

Table 14

Shapiro-Wilk Test Results for Knowledge, Comfort, and Self-Awareness by Work Setting

Work Setting		*p*		
	n	Knowledge	Comfort	Self-Awareness
Agency	11	.610	.870	.091
Government	9	.176	.519	.461
Group Practice, School, Hospital, or Volunteer	14	.536	.039	.009
Self-Employed	11	.403	.031	.425
University	26	.167	.177	.069

The results of the overall MANOVA for work setting were not significant, $F(12, 169.62) = 1.52$, $p = .123$. This indicates that there was not a significant difference in the linear combination of knowledge, comfort, and self-awareness between work settings. To confirm these results, I conducted follow-up univariate ANOVAs, each with an independent variable of work setting and dependent variables of knowledge, comfort, and self-awareness. The univariate ANOVA results were not significant for knowledge, $F(4, 66) = 2.08$, $p = .094$, comfort, $F(4, 66) = 1.46$, $p = .223$, or self-awareness, $F(4, 66) = 0.74$, $p = .568$. As such, there is no statistical relationship between work setting and knowledge, comfort, or self-awareness. Table 15 presents the full results of the univariate ANOVAs.

Table 15

Univariate ANOVA Results by Work Setting

Dependent Variable	*n*	Source of Variation	*SS*	*df*	*MS*	*F*	*p*
Knowledge	72	Between Group	5.00	4	1.25	2.08	.094
		Within Group					
Comfort	72	Between Group	4.76	4	1.19	1.46	.223
		Within Group					
Self-Awareness	72	Between Group	0.53	4	0.13	0.74	.568
		Within Group					

Note. Overall MANOVA: $F(12, 169.62) = 1.52$, $p = .123$.

Summary

I conducted descriptive statistics to answer Research Question 1. Participants scored the highest on the self-awareness subscale, and the lowest on the knowledge subscale. I conducted three MANOVAs to answer Research Question 2. There was no significant relationship between counseling professionals' knowledge, comfort, and self- awareness and experience. There was a significant relationship between counseling professionals' knowledge, comfort, and training, but not between counseling professionals' self-awareness and training when assessed through a univariate ANOVA. *Post hoc* comparisons of knowledge based on training indicated that there was only a significant difference between those who received training through their employment and those who received training through an in-service, seminar, or webinar. Those who received training through their employment scored higher in knowledge than those who received training through an in-service, seminar, or webinar. *Post hoc* comparisons of comfort between types of training indicated that there were no significant differences between types of training. There was

no significant relationship between counseling professional's knowledge, comfort, and training, and work setting.

In Chapter 5, I explore these results in terms of the relevant literature. I discuss the strengths and weaknesses of the study. Finally, I provide directions for future research.

CHAPTER FIVE:

DISCUSSION

The primary purpose of this study was to explore counselors' knowledge, comfort, and self-awareness when working with individuals with a TBI. This study's development and conceptualization were influenced by (Bordin, 1983, 1994) working alliance theory. This study was a quantitative, survey research design in which an electronic questionnaire was created in Qualtrics. The questionnaire was designed to address the three independent variables of experience, training, and work setting and their relationships to the constructs of knowledge, comfort, and self-awareness.

This study used three samples of study participants. The first sample was used in the creation of the sample and consisted of six expert panel reviewers who rated the content of each item to its relevance to the construct of knowledge, comfort, and self- awareness. The second sample consisted of 16 counselors who were part of the pilot study. Results from the pilot provided initial estimates of the reliability of knowledge, comfort, and self-awareness scores. The third sample of participants were the main study recipients, which consisted of 72 counselors. Results from the study were used to address the two research questions.

The analysis showed that 27% of the total participants had some type of a workshop training and only 24% received training through the employer. One important finding is that participants who received training from employers had higher levels of knowledge in working with individuals with TBIs.

Interpretation of Results

The purpose of this study was to explore counselors' knowledge, comfort, and self-awareness when working with individuals with a TBI.

Research question 1: What are counseling professionals' knowledge, comfort, and self-awareness in working with individuals with a TBI? Descriptive Statistics were used to find that participants scored the highest on self-awareness.

Research question 2: What is the relationship between counseling professionals' knowledge, comfort, and self-awareness in working with individual with a TBI and the counselors' levels of experience, training, or work setting? MANOVA showed that there was no significant relationship between counseling professionals. A significant relationship was found between counseling professionals' knowledge, comfort, and training but not between counseling self-awareness and training.

Knowledge

The counseling professionals' self-reported knowledge in working with individuals with a TBI was found to be average, as most participants reported "neutral" feelings of knowledge in working with clients who had suffered TBI. Knowledge was found to be highest among participants who had 1-9 years of experience; were trained in their place of employment; and worked in group practice, school, hospital, or volunteer work settings. This finding may lead to development of more effective training in other practitioner settings, as well as the development of professional development or training for counselors to increase their knowledge after 10 or more years of experience. The concern identified in reviewing existing literature was that of counselors having a lack of training (Judd & Wilson, 2005). A significant difference was seen in the types of training counselors received from conferences; employers; in-services, seminars, or

webinars; publications or coursework; and workshops. The type of training received was related to participants' knowledge of TBIs, which affects the treatment and care provided to clients (Wright & Reese, 2015). Knowledge was also found to be at lower levels than both comfort and self-awareness, but all three dependent variables were significantly correlated with one another. These correlations indicated that changes in one of the variables may correspond with changes in the others, though future testing with an experimental design would be necessary to understand the causal relationships between these variables.

The results of this study differed from existing research on counselors' knowledge in practice. Wright and Reese (2015) indicated that many counselors lack sufficient knowledge to properly provide care for clients. Leigh et al. (2004) noted that a counselor with a lack of knowledge would have additional barriers in working with individuals who have a disability. It was noted in two studies that counselors' knowledge was important in having successful sessions (Evans et al., 2008; Sohlberg et al., 2001). Though participants from different work settings with different amounts of experience had statistically similar levels of knowledge, those who took part in employment training exhibited significantly higher levels of knowledge. This indicates that, to improve knowledge, efforts should be directed to employer training, as participants from different work settings and those with different levels of experience all reported similar levels of knowledge.

Comfort

The counseling professionals' levels of comfort in working with individuals with a TBI was found to be average. Research on comfort is limited regarding counselors working with people with disabilities (Judd & Wilson, 2005). The highest levels of comfort were reported by participants who had 20 or more years of experience, and worked in group practice, school,

hospital, or volunteer settings. The highest level of comfort in type of training was in training received from place of employment, signifying that participants were more comfortable when training occurred at their workplace. This difference in comfort based on training type is important because attitudes and perceptions of working with an individual with a disability could facilitate positive client outcomes (Leigh et al., 2004).

The therapeutic alliance between counselors and clients is critical to counselors' levels of comfort in providing care to individuals (Hays, 2016; Bordin, 1983, 1994). Sohlberg et al. (2001) supported collaborative working alliance with the client and natural supports to increase successful outcomes. Greenwood et al. (2015) explored the comfort of counselors working with an individual with TBI. This study adds to these findings, indicating that the level of comfort in providing care to individuals is not based on work setting, and providing no evidence to show that those with different amounts of experience have intrinsically higher levels of comfort.

Self-Awareness

The counseling professionals' self-awareness scored the highest compared to knowledge and comfort in working with individuals with a TBI. Self-awareness was found to be highest among participants with 1-9 years of experience who received training from their place of employment and worked in group practice, school, hospital, or volunteer settings. This may be because counselors develop complacency the longer, they work in the field or are unwilling to learn new information (P. Hays, personal communication, October 25, 2018). Additionally, counselors' age may be a factor in years of experience affecting self-awareness, as counselors with more experience are most often of older ages than newer counselors, and their increased age may cause decreases in self-awareness. The research reviewed demonstrated increased self-awareness can enhance the comfort and knowledge of the counselor (Hays, 2016, Bordin, 1983,

1994). Bordin (1983) referred to self-awareness as an important part of working alliance that can be guided, structured, and facilitated by the development of the supervisor-supervisee relationship to decrease the gaps. A high indication is noticed that counselors have a continued need for supervision throughout their careers, even though they may feel less need for it as they advance in professional experience. Thus, self-awareness is highly correlated with knowledge and comfort.

Self-awareness is a critical factor in quality of care provided to clients (Coetzer, 2007; Hays, 2016; Bordin, 1983, 1994). Bordin, (1983, 1994) further indicated that increased self-awareness can lead to increased levels of knowledge among counselors. Cooper et al. (2003) note that the quality of service may be impacted when a therapist is unaware of perceived attitude. Greenwood et al. (2015) indicated that self-awareness could increase given additional training is provided. However, the results did not show that the same method of training (i.e., training from place of employment) that corresponded with higher knowledge and comfort had a similar effect on self-awareness. The implications of this are that knowledge and comfort may benefit from training, while self-awareness may need to be improved by other methods so that its influence on knowledge and comfort can be useful. Continued professional development, workshops, and training have led to positive outcomes for individuals with various ailments Stucky, 2010; Block & West, 2013). This also provides evidence for future researchers to explore the moderating effect of self-awareness on the relationship between training and knowledge.

Conclusion

Counselors are instrumental in augmenting successful outcomes in individuals with a TBI, but additional supports for counselors pertaining to TBIs are necessary. Traditionally,

counselors' resistance may be caused by perceived obstacles and the potential lack of benefits for individuals with a TBI. Counselors having knowledge of TBI and the various components of it may improve patients' outcomes in counseling sessions (Bishop, 2005; Klonoff, 2010; Maucieri, 2012; Stucky, 2012). Further, given the high estimated incidence of individuals with TBI, it is likely that counselors will encounter at least one such client during their work experience.

This study explored counseling professionals' experiences, training, and work setting as they related to knowledge, comfort, and self-awareness. The intent was to explore counselors' knowledge, comfort, and self-awareness when working with individuals with a TBI. The data obtained from this study have important implications for counselor education and best-practice measures when working with individuals with a TBI.

Limitations

The limitation to this study was size of the sample available after accounting for the missing data from participant surveys. The sample size resulted in a limitation to statistical power, as the study did not have a sufficient sample to detect a medium effect size with .80 power and an alpha of .05; these parameters would be detectable with a minimum of 88 participants. The sample-size attrition resulted in 72 viable surveys that were usable.

Consideration must be given to increasing the sample size, as doing so would help to make more confident inferences and would allow smaller effects to potentially show significance. As such, no inferences regarding differences in knowledge, comfort, or self-awareness between demographic groups could be made. A limitation found in the study was due to the single selection option on theoretical influence of the participants. This could have affected the results in relations to counselors not having the option to select more than one choice of theory that may influence decisions in the counseling process.

Finally, one limitation of this study was that many of the participants were counselor educators as opposed to counselor practitioners. This may have affected the results in terms of participants' responses that referred to treating clients and may have also impacted the findings pertaining to the significance of work setting. This limitation may have resulted from the fact that many counselors spend their workdays treating clients rather than checking emails, while educators would have had more time to see and respond to the survey for this study.

Recommendations for Future Research, Training and Clinical Practice

A replication is suggested with a larger sample size of counselors. An experimental study should also be considered, in which on the job training is randomly assigned to groups. By following a randomized sampling and group assignment design, this methodology could determine which training method has the strongest influence on knowledge, comfort, or self-awareness based on interpretation of a true cause and effect relationship. Confirmatory factor analysis (CFA) also could be used in future studies to evaluate the internal structure of the three-factor model (knowledge, comfort, or self- awareness) underlying the Counselor Brain Injury Questionnaire. Additional validity evidence is needed for this questionnaire.

I recommend an exploration of additional structural equation modeling that includes path analysis to analyze the regression coefficients among the variables of knowledge and self-awareness while controlling for the effects of all variables in the model. A more extensive prediction could be achieved through a path statistical procedure to include the exogenous variable experience and the endogenous variable training. Mediating variables of a goal achieved response from an individual with a TBI, could be explored further with a path-analysis diagram. As the parameters could lead to insight into the intervening variables' effects on knowledge, comfort, and self-awareness, as well as the way these potential intervening variables act on

existing relationships. The component of the training may be considered a proximal goal. The distal goals of obtaining higher successful outcomes with individuals with a TBI could be explored. Parameters could be discussed in further depth.

Future studies related to TBI and counseling should further collect data from counselor programs that have incorporated components of disability in training to assess the generalizability of current findings. The Council for Accreditation of Counseling and Related Educational Programs (CACREP, 2015) and the Council on Rehabilitation Education (CORE) have established a preemptive movement to incorporate trainings into counseling programs for clients with disabilities. The plan states that CACREP and CORE have agreed to a "reformatting of CORE standards to fit in to the CACREP review structure, as well as to recommend how disability concepts can be more fully and clearly infused into the CACREP standards to strengthen the future preparation of all counselors" (CACREP, 2015, p. 1). The goal is for all counseling programs to acknowledge the commonality of disability in U.S. society (CACREP, 2015).

It would be helpful to inform best-practice measures associated with counseling a person with a TBI. Counseling training programs should address areas of disability as a critical aspect of the counseling community. As counselors gain additional disability education, they must understand cognitive deficiency, emotional health, and social situations related to TBI (Block & West, 2013). Counselor education programs should provide opportunities to work with clients in various situations, thereby providing a sound foundation to build professional identity (Bernard & Goodyear, 2014). TBI could easily be woven into courses related to ethical practice, social and cultural diversity, human growth and development, career counseling, group, and assessment.

Because TBI affects every content area, it is important to discuss it throughout the counseling process. Counseling programs that have students entering an entry-level degree in addiction counseling, for example, could study the correlation between substance use and TBI effects (Taylor, Kreutzer, Demm, & Meade, 2003). In a career- counseling program, a student could further evaluate the study of employment outcomes as they relate to TBI (Bounds et al., 2003; Cattelani et al., 2002; Creager, 2011). In the clinical-mental-health counseling program, counselors could further explore the psychosocial aspects of TBI (Livneh & Antonak, 2005). As for a clinical-rehabilitation counseling, counselors could continue to evolve with the medical aspects of disabilities (Roozenbeek, Maas, & Menon, 2013). As students engage in learning the aspects of college counseling and student affairs, they could continue the exploration of the after effects of mTBI (concussion) on college-level athletes and the collegiate environment (Gessel et al., 2007).

Families are impacted by all areas of disabilities. Thus, students entering marriage, couple, and family counseling must have coursework in a foundation class that addresses trauma, viewed from the prospective of an individual with a TBI (Dillahunt-Aspillaga et al., 2014, 2013). Students enrolled in school-counseling programs could benefit from additional training about how to educate high school athletes in the prevention and risks of TBI, as its effect's students' academic achievement (Gagnon et al., 2009). Research has found that athletes have a higher incident of sports related brain injury (Gessel et al., 2007; Gagon et. Al, 2009). Brain injury has been noted to be preventable and further options for school counselors to have the comfort level to discuss prevention may decrease the prevalence of contact sport injuries.

Summary

The results of the survey suggest that professional counselors demonstrated an average foundation of TBI knowledge, comfort, and self-awareness. However, high levels of each variable have been shown to improve the quality of care provided to clients, and thus, further research should be conducted to help counselors achieve higher levels of knowledge, comfort, and self-awareness in working with individuals with TBI. Survey content validity and reliability was high. In conclusion, the CBQ survey is the first counselor brain-injury instrument designed to assess counselor knowledge, comfort, and self-awareness for use by professional counselors who counsel individuals with a TBI.

REFERENCES

Abela, J. R. Z., & D'Allesandro, D. U. (2002). Beck's cognitive theory of depression: The diathesis-stress and casual mediation components. *British Journal of Clinical Psychology, 41,* 111–128. doi:10.1348/014466502163912

Albrecht, J. S., Kiptanui, Z., Tsang, Y., Khokhar, B., Smith, G. S., Zuckerman, I. H. & Simoni-Westila, L. (2015). Patterns of depression treatment in Medicare beneficiaries with depression after traumatic brain injury. *Journal of Neurotrauma, 32,* 1223–1229. doi:10 .1089/neu.2014.3651

American Counseling Association. (2014). *2014 ACA code of ethics.* https://www.counseling.org/docs/default-source/default-document-library/2014-code-of-ethics-finaladdress.pdf

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., Text rev.). Washington, DC: Author.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: Author.

Anson, K., & Ponsford, J. (2006). Evaluation of a coping skills group following traumatic brain injury. *Brain Injury, 20,* 167–178. doi:10.1080/02699050500442956\

Arredondo, P., Toporek, M. S., Brown, S., Jones, J., Locke, D. C., Sanchez, J. & Stadler, H. (1996). *Operationalization of the multicultural counseling competencies*. AMCD: Alexandria, VA.

Bandura, A. J. (1977a). Self-efficacy: Toward unifying theory of behavioral change. *Psychological Review, 84,* 191–215. doi:10.37/0033-295X.84.2.191 Bandura, A. J. (1977b). *Social learning theory*. Englewood Cliffs, NJ: Prentice Hall.

Bandura, A. J. (1986). *Social foundations of thought and action: A social cognitive theory.* Englewood Cliffs, NJ: Prentice-Hall.

Bandura, A. J. (1989). Human agency in social cognitive theory. *American Psychologists, 44,* 1175–1184. doi:10.1037/0003-66x.44.9.1175

Bandura, A. J. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology, 52,* 1–26. doi:10.1146/annurev.psych.52.1.1

Barisa, M. T., & Barisa, M. W. (2001). Neuropsychological evaluation applied to vocational rehabilitation. *NeuroRehabilitation, 16,* 289–293.

Barkley, R. A. (2011). Barkley Deficits in Executive Functioning Scale (BDEFS). New York, NY: Guilford Press.

Beck, A. T. (1976). *Cognitive therapy and the emotional disorders*. New York, NY: International Universities Press.

Beck, A. T., Emery, G., & Greenberg, R. L. (1985). *Anxiety disorders and phobias: A cognitive perspective.* New York, NY: Guilford Press.

Beck, A. T., Rush, A. J., Shaw, B. F., & Emery, G. (1979). *Cognitive therapy of depression*. New York, NY: Guilford Press.

Beck, A. T., & Weishaar, M. E. (2011). Cognitive therapy. In R. J. Corsini & D. Wedding (Eds.), *Current psychotherapies* (9th ed., pp. 276–309). Belmont, CA: Brooks/Cole.

Beck, J. S., & Beck, A. T. (2011). *Cognitive behavior therapy: Basics and beyond* (2nd ed.) New York, NY: Guilford Press.

Ben-Yishay, Y., & Daniels-Zide, E. (2000). Examined lives: Outcomes after holistic rehabilitation. *Rehabilitation Psychology, 45,* 112–129. doi: 10.1037//0090-5550.45.2.112

Bennett-Levy, J. (2006). Therapist skills: A cognitive model of their acquisition and refinement. *Behavioural and Cognitive Psychotherapy, 34,* 57–78. doi:10.1017/S1352465805002420

Bernard, J. M., & Goodyear, R. K. (2014).*Fundamentals of clinical supervision* (5th ed.). Upper Saddle Creek River, NJ: Person Education.

Bezyak, J.L., Ososkie, J.N., Trice, A.L. & Yeager, P. (2010). The importance of counseling supervision in the professional development of public rehabilitation counselors. *Journal of Applied Rehabilitation Counseling*, 41, 30-35.

Bishop, M. (2005). Quality of life and psychosocial adaptation to chronic illness and acquired disability: Preliminary analysis of a conceptual and theoretical synthesis. *Rehabilitation Counseling Bulletin, 71,* 5–13. doi:10.1177/00343552050480040301

Block, C. K., & West, S. E. (2013). Psychotherapeutic treatment of survivors of traumatic brain injury: Review of the literature and special considerations. *Brain Injury, 27,* 775–788. doi:10.3109/02699052.2013.775487

Bloom, B. S. (1956). Taxonomy of educational objectives: The classification of educational goals. Handbook I: Cognitive domain. New York, NY: David McKay.

Bombardier, C. H., Fann, J. R., Temkin, N. R., Esselman, P. C., Barber, J., & Dikmen, S. S. (2010). Rates of major depressive disorder and clinical outcomes following traumatic brain injury. *Journal of The American Medical Association, 303,* 1938– 1945. doi:10.1001/jama.2010.599

Boone, K. B. (1999). Neuropsychological assessment of executive functions: Impact of age, education, gender, intellectual level, and vascular status on executive test scores. In B. L. Miller & J. L. Cummings (Ed.), *The human frontal lobes: Functions and disorders* (pp. 247–260). New York, NY: Guilford Press.

Bordin, E.S. (1994). Theory and research on the therapeutic working alliance: new directions. In A.O. Horvath, & L.S. Greenberg (Eds.), *The working alliance: theory, research, and practice* (pp. 13-37). New York, NY: John Wiley & Son, Inc.

Bordin, E.S. (1983). A working alliance based model of supervision. The Counseling Psychologist, 11 (1), 35-41. DOI: 10.1177/0011000083111007

Bounds, T. A., Schopp, L., Johnstone, B., Unger, C., & Goldman, H. (2003). Gender differences in a sample of vocational rehabilitation clients with TBI. *NeuroRehabilitation, 18,* 189–196.

Brain Association of Florida. (2015). *Traumatic brain injury.* Retrieved from http://www.biaf.org/index.html

Brain Injury Association of America. (2016). *Brain Maps.* Retrieved from http://www.biausa.org

Brasure, M., Lamberty, G. J., Sayer, N. A., Nelson, N. W., MacDonald, R., Ouellette, J., … Wilt, T. J. (2012). *Multidisciplinary post acute rehabilitation for moderate to severe traumatic brain injury in adults* (AHRQ Publication No. 12-EHC101-EF). Rockville, MD: Agency for Healthcare Research and Quality. Retrieved from https://ahrq-ehc-application.s3.amazonaws.com/media/pdf/traumatic-brain-injury-rehabilitation_research.pdf

Brault, M. (2012). *Americans with disabilities: 2010*. Retrieved from http://www.census.gov/prod/2012pubs/p70-131.pdf

Bruning, R. H., Schraw, G. J., Norby, M. M., & Ronning, R. R. (2004). *Cognitive psychology and instruction* (4th ed.). Upper Saddle River, NJ: Merrill/Person.

Burns, K. E. A., Duffett, M., Kho, M. E., Meade, M. O, Adhikari, N. K. J., Sinuff, T., & Cook, D. J. (2008). A guide for the design and conduct of self-administered surveys of clinicians. *Canadian Medical Association Journal, 179,* 245–252. doi:10.1503/cmaj.080372

Butler, A. C., Chapman, J. E., Forman, E. M., & Beck, A. T. (2006). The empirical status of cognitive-behavioral therapy: A review of meta-analyses. *Clinical Psychology Review, 26,* 17–31. doi:10.1016/j.cpr.2005.07.003

Carrozzino-Lyon, A. L., McMullin, S. L., & Parkhurst, J. A. (2013). Mail and web-based survey administration: A case study with recreational users of Virginia's wildlife management areas. *Human Dimensions of Wildlife, 18*, 219–233. doi:10.1080/10871209.2013.761298

Cattelani, R., Tanzi, F., Lombardi, F., & Mazzucchi A. (2002). Competitive re- employment after severe traumatic brain injury: Clinical, cognitive and behavioral predictive variables. *Brain Injury, 16,* 51–64. doi:10.1080/02699050110088821

Centers for Disease Control and Prevention. (2010). *National Hospital Discharge Survey.* Retrieved August 5, 2014 from https://www.cdc.gov/nchs/nhds/index.htm

Centers for Disease Control and Prevention. (2016). *Traumatic brain injury & concussion.* Retrieved from http://www.cdc.gov/traumaticbraininjury/data/rates.html

Chan, F., Rubin, S. E., Kubota, C., Chronister, J., & Lee, G. (2003). Counselors' and consumers' derived criteria for assessing the effectiveness of rehabilitation services. *International Journal of Rehabilitation Research, 26,* 335–337. doi:10.1097/01.mrr.0000102060.48781.25

Chapin, M., McCarthy, H., Shaw, L., Bradham-Cousar, M., Chapman, R., Nosek, M., Peterson, S., Yilmaz, Z., & Ysasi, N. (2019). Disability-related counseling competencies. Alexandria, VA: American Rehabilitation Counseling Association, a division of American Counseling Association.

Cicerone, K. D., Dahlberg, C., Kalmar, K., Langenbahn, D. M., Malec, J. F., Bergquist, T. F., … Morse, P. A. (2000). Evidence-based cognitive rehabilitation: Recommendations for clinical practice. *Archives of Physical Medicine and Rehabilitation, 81,* 1596–1615. doi:10.1053/apmr.2000.19240

Cicerone, K. D., Dahlberg, C., Malec, J. F., Langenbahn, D. M., Felicetti, T., Kneipp, S., & Laatsch, L. (2005). Evidence-based cognitive rehabilitation: Updated review of the literature from 1998 through 2002. *Archives of Physical Medicine and Rehabilitation, 86,* 1681–1692. doi:10.1016/j.apmr.2005.03.024

Cicerone, K. D., Langenbahn, D. M., Braden, C. Malec, J. F., Lalma, K., Frasas, M., … Ashman, T. (2011). Evidence-based cognitive rehabilitation: Updated review of the literature from 2003 through 2008. *Archives of Physical Medicine and Rehabilitation, 92,* 519–530. doi: 10.1016/j.apmr.2010.11.015

Cicerone, K., Levin, H., Malec, J., Stuss, D., & Whyte, J. (2006). Cognitive rehabilitation interventions for executive function: Moving from bench to bedside in patients with traumatic brain injury. *Journal of Cognitive Neuroscience, 18,* 1212–1222. doi:10.1162/jocn.2006.18.7.1212

Cicerone, K. D., Mott, T., Azulay, J., Sharlow-Galella, M. A., Ellmo, W. J., Paradise, S., & Friel,J. C. (2008). A randomized controlled trial of holistic neuropsychologic rehabilitation after traumatic brain injury. *Archives of Physical Medicine and Rehabilitation, 89,* 2239– 2249. doi:10;1016/j.apmr.2008.06.017

Coetzer, R. (2007). Psychotherapy following traumatic brain injury: Integrating theory and practice. *Journal of Head Trauma Rehabilitation, 22,* 39–47. doi:10.1097/00001199-200701000-00005

Cole, J. H., Leech, R., & Sharp, D. J. (2015). Prediction of brain age suggests accelerated atrophy after traumatic brain injury. *Annals of Neurology, 77,* 571–581. doi:10.1002/ana.24367

Coronado, V. G., McGuire, L. C., Faul, M., Sugerman, D. E., & Pearson, W. S. (2012a). Traumatic brain injury epidemiology and public health issues. In D. I. Katz, R. D. Zafonte, & N. D. Zasler (Eds.), *Brain injury medicine: Principles and practice* (pp. 84–126. New York, NY: Demos Medical.

Coronado, V. G., McGuire, L. C., Sarmiento, K., Bell, J., Lionbarger, M. R., Jones, C. D., … Xu, L. (2012b). Trends in traumatic brain injury in the US and the public health response: 1995–2009. *Journal of Safety Research, 43,* 299–307. doi:10.1016/j.jsr.2012.08.011

Corrigan, J. D., Cuthbert, J. P., Harrison-Felix, C., Whiteneck, G. G., Bell, J. M., Miller, A. C., Pretz, C. R. (2014). US population estimates of health and social outcomes 5 years after rehabilitation for traumatic brain injury. *Journal of Head Trauma Rehabilitation, 29,* E1–9. doi:10.1097/HTR.0000000000000020

Corrigan, J. D., Selassie, A. W., & Orman, J. A . (2010). The epidemiology of traumatic brain injury. *Journal of Head Trauma Rehabilitation, 25,* 72–80. doi:10.1097/HTR.0b013e3181ccc8b4

Council for Accreditation of Counseling and Related Educational Programs. (2015). *CACREP/CORE merger.* Retrieved September 15, 2016, from http://www.cacrep.org

Creager, M. F. S. (2011). Practice and research in career counseling and development—2010. *Career Development Quarterly, 59,* 482–527. doi:10.1002/j.2161-0045.2011.tb00973.x

Davis, A. E. (1996). Instrument development: Getting started. *Journal of Neuroscience Nursing, 28,* 204-207. doi:10.1097/01376517-199606000-00009

DePue, M.K., Lambie, G.W., Liu, R., & Gonzalez, J. (2016). Investigating supervisory relationships and therapeutic alliances using structural equation modeling. *Counselor Education and Supervision, 55, 263-277. DOI:10.1002/ceas.12053*

Dillahunt-Aspillaga, C., Agonis-Frain, J., Hanson, A., Frain, M., Sosinski, M., & Ehlke, S. (2014). Applying a resiliency model to community reintegration and needs in families with traumatic brain injury: Implications for rehabilitation counselors. *Journal of Applied Rehabilitation Counseling, 45*(2), 25–36. Retrieved from http://www.experts.com/content/articles/Julianne-Frain-Resiliency-Model-TBI.pdf

Dillahunt-Aspillaga, C., Jorgensen-Smith, T., Ehlke, S., Sosinski, M., Monroe, D., & Thor, J. (2013). Traumatic brain injury: Unmet support needs of caregivers and families in Florida. *PLoS ONE, 8,* e82896. doi:10.1371/journal.pone.0082896

Dillahunt-Aspillaga, C., Jorgensen Smith, T., Hanson, A., Ehlke, S., Stergiou-Kita, M., Dixon, C. G., & Quichocho, D. (2015). Exploring vocational evaluation practices following traumatic brain injury. *Behavioural Neurology,* 2015*,* Aft. 924027, 1-11. doi:10.1155/2015/924027

Eden, J., & Stevens, R. (Eds.). (2006). *Evaluating the HRSA Traumatic Brain Injury Program*. Washington, DC: National Academies Press.

Eriksen, K., & Kress, V. E. (2006). The DSM and the professional counseling identity: Bridging the gap. *Journal of Mental Health Counseling, 28,* 202–217. 10.17744/mehc.28.3.4f39a6wr1n3fceh2

Fann, J. R., Hart, T., & Schomer, K. G. (2009). Treatment for depression after traumatic brain injury: A systematic review. *Journal of Neurotrauma, 26,* 2383–2402. doi:10.1089/neu.2009.1091

Field, A. (2013). Discovering statistics using SPSS (4th ed.). Thousand Oaks, CA: Sage.

Fleischman, J. (2002). Phineas Gage: A gruesome but true story about brain science. New York,NY: Houghton Mifflin.

Fuster, J. M. (1980). The prefrontal cortex: Anatomy, physiology, and neuropsychology of the frontal lobe. New York, NY: Raven Press.

Fuster, J. M. (1997). The prefrontal cortex: Anatomy, physiology, and neuropsychology of the frontal lobe (3rd ed.). Philadelphia, PA: Lippincott-Raven.

Fuster, J. M. (1999). *Cognitive functions of the frontal lobes.* In B. L. Miller & J. L. Cummings (Eds.). *The human frontal lobes: Functions and disorders* (pp. 187– 195). New York, NY: Guilford Press.

Gagnon, I., Galli, C., Friedman, D., Grilli, L., & Iverson, G. L. (2009). Active rehabilitation for children who are slow to recover following sport-related concussion. *Brain Injury, 23,* 956–964. doi:10.3109/02699050903373477

Gessel, L. M, Fields, S. K., Collins, C. L, Dick, R. W., & Comstock, R. D. (2007). Concussions among United States high school and collegiate athletes. *Journal of Athletic Training, 42,* 495–503.

Ganske, K.H., Gnilka, P.B., Ashby, J.S., & Rice, K.G. (2015). The relationship between counseling trainee perfectionism and the working alliance with supervisor and client. *Journal of Counseling and Development, 93, 14-24. DOI: 10.1002/j.1556-6676.2015.00177*

Goodley, D. (2014). Against a politics of victimisation: disability culture and self- advocates with learning difficulties. In *Disability, culture and identity* (pp. 119- 144). Routledge.

Gould, K. R., Ponsford, J. L., Johnston, L., & Schonberger, M. (2011). The nature, frequency and course of psychiatric disorders in the first year after traumatic brain injury: A prospective study. *Psychological Medicine, 41,* 2099–2109. doi:10.1017/S003329171100033X

Granello, D. H., & Young, M. E. (2012). *Counseling today: Foundations of professional identity*. Boston, MA: Pearson.

Guillemin, M., & Gillam, L. (2004). Ethics, reflexivity and "ethically important moments" in research. *Qualitative Inquiry, 10,* 261–280. doi:10.1177/1077800403262360

Hays, P. (2016). *Addressing cultural complexities in practice: Assessment, diagnosis, and therapy* (3rd ed.). Washington, DC: American Psychological Association.

Harlow, J. M. (1868). Recovery from the passage of an iron bar through the head. *Publication of the Massachusetts Medical Society*, 2, 327–346. doi:10.1177/0957154X9300401407

Hoge, C. W., Goldberg, H. M., & Castro, C. A. (2009). Care of war veterans with mild traumatic brain injury: Flawed perspectives. *New England Journal of Medicine, 360,* 1588–1591. doi:10.1056/NEJMp0810606

Hollon, S. D., & Beck, A. T. (2004). Cognitive and cognitive-behavioral therapies. In M. J. Lambert (Ed.), *Bergin and Garfield's handbook of psychotherapy and behavior change* (5th ed., p. 447–492). New York, NY: John Wiley & Sons.

Hsieh, M. Y., Ponsford, J., Wong, D., Schonberger, M., Taffe, J., & McKay, A. (2012). Motivational interviewing and cognitive behavior therapy for anxiety following traumatic brain injury: A pilot randomised controlled trial. *Neuropsychological Rehabilitation, 22,* 585–608. doi:10.1080/09602011.2012.678860

Huckans, M., Pavawalla, S., Demadra, T., Kolessar, M., Seelye, A., Roost, N., … Storzbach, D. (2010). A pilot study examining effects of group based cognitive strategic training treatment on self-reported cognitive problems, psychiatric symptoms, functioning and compensatory strategy us in OIF/OEF combat veterans with persistent mild cognitive disorder and history of traumatic brain injury. *Journal of Rehabilitation Research and Development, 47,* 43–60. doi:10.1682/JRRD.2009.02.0019

Iverson, G. L., & Schatz, P. (2015). Advanced topics in neuropsychological assessment following sport-related concussion. *Brain Injury, 29,* 263–275. doi:10.3109/02699052.2014.965214

Jackson, D. L., Purc-Stephenson, R., & Gillaspy, J. A. (2009). Reporting practices in confirmatory factor analysis: An overview and some recommendations. *Psychological Methods, 14,* 6–23. doi:10.1037/a0014694

Jones, K. D., Young, T., & Leppma, M. (2010). Mild traumatic brain injury and post- traumatic stress disorder in returning Iraq and Afghanistan war veterans: Implication for assessment and diagnosis. *Journal of Counseling & Development, 88,* 372–376. doi:10.1002/j.1556-6678.2010.tb00036.x

Jorge, R. E., Robinson, R. G., Moser, D., Tateno, A., Crespo-Farcarro, B., & Arndt, S. (2004). Major depression following traumatic brain injury. *Archives of General Psychiatry, 61,* 42–50. doi:10.1001/archpsyc.61.1.42

Judd, D., & Wilson, S. L. (2005). Psychotherapy with brain injury survivors: An investigation of the challenges encountered by clinicians and their modifications to therapeutic practice. *Brain Injury, 19,* 437–449. doi:10.1080/02699050400010994

Kaplan, D. (2012). Licensure reciprocity: A critical public protection issue that needs action. *Counseling Today.* January 25. Retrieved from http://ct.counseling.org/2012/01/licensure-reciprocity-a-critical-public-protection-issue-that-needs-action/

Kat, L., Schipper, K., Knibbe, J., & Abma, T. A. (2010). Acquired brain injury: A patient's journey. *BMJ, 340,* Art. 808. doi:10.1136/bmj.c808

Kay, T., Harrington, D. E., Adams, R., Anderson, T., Berrol, S., Cicerone, K., … Malec, J. (1993). Definition of mild traumatic brain injury. *Journal of Head Trauma Rehabilitation, 8,* 86–88. doi:10.1097/00001199-199309000-00010

Kaye, H. S. (2009). Stuck at the bottom rung: Occupational characteristics of workers with disabilities. *Journal of Occupational Rehabilitation, 19,* 115–128. doi:10.1007/s10926-009-9175-2

Kivlighan, D.M., Hill, C.E., Gelso, C.J. & Baumann, E. (2016). Working alliance, real relationship, session quality, and client improvement in psychodynamic psychotherapy: a longitudinal actor partner interdependence model. *Journal of Counseling Psychology*, 63, 149-161. doi.10.1037/cou0000134

Kline, R. B. (2015). *Principles and practice of structural equation modeling* (4th ed.). New York, NY: The Guilford Press.

Klonoff, P. (2010). *Psychotherapy for families after brain injury.* New York, NY: Guilford Press.

Kondrat, D.C. & Early, T. J. (2010). An exploration of working alliance in mental health case management. *Social Work Research*, *34*, 201-211.

Kress, V. E., Hoffman, R. M., & Eriksen, K. (2010). Ethical dimensions of diagnosing: Considerations for clinical mental health counselors. *Counseling and Values, 55,* 101–112. doi:10.1002/j.2161-007X.2010.tb00024.x

Ku, H.J., Landon, T.J., Connor, A. & Chen (2016). Managing Anxiety in Clinical Supervision. Journal of Rehabilitation, 82, 18-27.

Lambert, M. J., Bergin, A. E., & Garfield, S. L. (2004). Introduction and historical overview. In M. J. Lambert (Ed.), *Bergin and Garfield's handbook of psychotherapy and behavior change* (5th ed., p. 447–492). New York, NY: John Wiley & Sons.

Lance, C. E., Butts, M. M., & Michels, L. C. (2006). The sources of four commonly reported cutoff criteria: What did they really say? *Organizational Research Methods*, *9*(2), 202-220. https://doi.org/10.1177/1094428105284919

Livneh, H., & Antonak, R. F. (2005). Psychosocial adaptation to chronic illness and disability: A primer for counselors. *Journal of Counseling & Development, 83,* 12– 20. doi:10.1002/j.1556-6678.2005.tb00575.x

Lustig, D.C., Strauser, D.R, Rice, N. D. & Rucker, T. F. (2002). The relationship between working alliance and rehabilitation outcomes. *Rehabilitation Counseling Bulletin*, 46, 25-33.

Macmillan, M. (2000). *An odd kind of fame: Stories of Phineas Gage*. Cambridge, MA: MIT Press.

Magyar-Moe, J. L. (2009). *Therapist's guide to positive psychological interventions.* Academic press.

Malojcic, B., Mubrin, Z., Coric, B., Susnic, M., & Spilich, G. (2008). Consequences of mild traumatic brain injury on information processing assessed with attention and short-term memory tasks. *Journal of Neurotrauma, 25,* 30–37. doi:10.1089/neu.2007.0384

Maucieri, L. (2012). Traumatic brain injury: what counselors need to know. *The Wisconsin Counseling Journal*, 46-60

Mansour, A., & Lajiness-O'Neill, R., (2015). Call for an integrative and multi- disciplinary approach to traumatic brain injury (TBI*). Psychology, 6,* 323–374. doi:10.4236/psych.2015.64033

McMillan, J. H. (2012). *Educational research: Fundamentals for the consumer* (6th ed.). Boston, MA: Pearson.

Mead, M. A., Hohenshil, T. H., & Singh, K. (1997). How the DSM system is used by clinical counselors: A national study. *Journal of Mental Health Counseling*, *19*, 383–401.

Miller, B. L., & Cummings, J. L. (1999). *The human frontal lobes: Functions and disorders*. New York, NY: Guilford Press.

Miller, D. C. (2013). *Essentials of school neuropsychological assessment* (2nd ed.). Hoboken, NJ: Wiley & Sons.

Myers, J. E., Sweeney, T. J., & White, V. E. (2002). Advocacy for counseling and counselors: A professional imperative. *Journal of Counseling & Development, 80,* 394–402. doi:10.1002/j.1556-6678.2002.tb00205.x

National Conference of State Legislatures. (2015). *Traumatic brain injury legislation.* Retrieved from http://www.ncsl.org/research/health/traumatic-brain-injury- legislation.aspx

Ng, R. M. K. (2005). Cognitive therapy supervision—a pilot study. *Hong Kong Journal of Psychiatry, 15,* 122–126. Retrieved from http://easap.asia/index.php/find-issues/past-issue/item/438-122-6-cognitive

Novakovic-Agopian, T., Chen, A. J. W., Rome, S., Abrams, G., Castelli, H., Rossi, A., … Esposito, M., (2011). Rehabilitation of executive functioning with training in attention regulation applied to individually defined goals: A pilot study bridging theory, assessment, and treatment. *Journal of Head Trauma Rehabilitation, 26,* 325–338. doi:10.1097/HTR.06013e3181flead2

Oddy, M., Alcott, D., Francis, E., Jenkins, K., & Fowlie, C. (1999) Methods of evaluation in a cognitive-behavioural rehabilitation programme for brain injury: The experience of Ticehurst House and Unsted Park Hospital. *Neuropsychological Rehabilitation, 9,* 373–384. doi:10.1080/096020199389446

Online Sunshine. (2017). *The 2017 Florida Statutes.* Retrieved from http://www.leg.state.fl.us/statutes/index.cfm?App_mode=Display_Statute&Search_String=&URL=0300-0399/0381/Sections/0381.745.html

Ownsworth, T., & Fleming, J. (2005). The relative importance of metacognitive skills, emotional status, and executive function in psychosocial adjustment following acquired brain injury. *Journal of Head Trauma Rehabilitation, 20,* 315–332. doi:10.1097/00001199-200507000-00004

Patterson, F. L., & Staton, A. R. (2009). Adult-acquired traumatic brain injury: Existential implication and clinical consideration. *Journal of Mental Health Counseling, 31,* 1–11. doi:10.17744/mehc.31.2.1p42572p01435173

Park, E.H., Ha, G., Lee, S., Lee, Y. Y., Lee, S.M. (2019). Relationship between the Supervisory Working Alliance and Outcomes: A meta-analysis. *Journal of Counseling and Development, 97, 437- 446.* DOI: 10.1002/jcad.12292

Polit, D., & Beck, C. T. (2006). The content validity index: are you sure you know what's being reported? Critique and recommendations. *Research in Nursing & Health, 29,* 489–497. doi:10.1002/nur.20147

Ponsford, J., Lee, N. K., Wong, D., McKay, A., Haines, K., Downing, M., Alway, Y., Furtado, C., & O'Donnell, M.L. (2020). Factors Associated with Response to Adapted Cognitive Behavioral Therapy for Anxiety and Depression Following Traumatic Brain Injury, *Journal of Head Trauma Rehabilitation*, 35, p 117-126 doi: 10.1097/HTR.0000000000000510

Rath, J. F., Simon, D., Langenbahn, D. M., Sherr, R. L., & Diller, L. (2003). Group treatment of problem-solving deficits in outpatients with traumatic brain injury: A randomized outcome study. *Neuropsychological Rehabilitation, 13,* 461–488. doi:10.1080/09602010343000039

Ratts, M.J., Singh, A.A., Nassar-McMillan, S., Butler, S. K., & McCullough, J.R. (2016). Multicultural and social justice counseling competencies: guidelines for the counseling profession. *Journal of Multicultural Counseling and Development, 44*, 28-48.doi:10.1002/jmcd/12035

Ritchie, L., Wright-St Clair, V. A., Keogh, J., & Gray, M. (2014). Community integration after traumatic brain injury: A systematic review of the clinical implications of measurement and service provision for older adults. *Archives of Physical Medicine and Rehabilitation, 95,* 163–174. doi:10.1016/j.apmr.2013.08.23

Roozenbeek, B., Maas, A. I. R., & Menon, D. K. (2013). Changing patterns in the epidemiology of traumatic brain injury. *Nature reviews. Neurology, 9,* 231–236 doi:10.1038/nrneurol.2013.22

Ruff, R. M., Iverson, G. L., Barth, J. T., Bush, S. S., Broshek, D. K., & NAN Policy and Planning Committee. (2009). Recommendations for diagnosing a mild traumatic brain injury: A National Academy of Neuropsychology education paper. *Archives of Clinical Neuropsychology, 24,* 33–10. doi:10.1093/arclin/acp006

Rust, J.P., Raskin, J.D., & Hill, M.S. (2013). Problems of professional competence among counselor trainees: programmatic issues and guidelines. *Counselor Education & Supervision, 52*, 30- 42.doi:10.1002/j.1556-6978.2013.00026

Sabella, S.A. (2020). Validation of a Brief Form of the Supervisory Working Alliance Inventory.Rehabilitation Counseling Bulletin, 63, 115-124.doi:10:1177/0034355219846652

Sadock, B. J., & Sadock V. A. (2003). *Kaplan and Sadock's synopsis of psychiatry: Behavioral sciences/Clinical psychiatry* (9th ed.). Philadelphia, PA: Lippincott Williams & Wilkins.

Sanborn, A. N., Griffiths, T. L., & Shiffrin, R. M., (2007). *Uncovering mental representations with Markov chain Monte Carlo.* Paper presented at the Neural Information Processing Systems Conference.

Schunk, D. H. (2000). *Learning theories: An educational perspective*. Upper Saddle River, NJ: Prentice Hall.

Seel, R. T., Macciocchi, S., & Kreutzer, J. S. (2010). Clinical considerations for the diagnosis of major depression after moderate to severe TBI. *Journal of Head Trauma Rehabilitation, 25,* 99–112. doi:10.1097/HTR.0b013e3181ce3966

Selassie, A., Zaloshnja, E., Langlois, J., Miller, T., Jones, P., & Steiner C. (2008). Incidence of long-term disability following traumatic brain injury hospitalization, United States, 2003. *Journal of Head Trauma Rehabilitation, 23,* 123–131. doi:10.1097/01.HTR.0000314531.30401.39

Shankle, W., & Amen, D. (2004). *Preventing Alzheimer*. New York, NY: Penguin Group.

Shiffrin, R. M., & Atkinson, R. C. (1969). Storage and retrieval processes in long-term memory. *Psychological Review, 76,* 179–193. doi:10.1037/h0027277

Shiffrin, R. M. & Schneider, W. (1977). Controlled and automatic human information processing: II. Perceptual learning, automatic attending, and a general theory. *Psychological Review, 84,* 127–189. doi:10.1037/0033-295X.84.2.127

Silverberg, N. D., Hallam, B. J., Rose, A., Underwood, H., Whitfield, K., Thornton, A. E., & Whittal, M. L. (2013). Cognitive-behavioral prevention of post-concussion syndrome in at-risk patients: a pilot randomized controlled trial. *Journal of Head Trauma Rehabilitation, 28,* 313–322. doi:10.1097/HTR.0b013e3182915cb5

Snow, J. (2012). *Qualtrics Survey Software: Handbook for research professionals*. Provo, UT: Qualtrics Labs. Retrieved from http://cloudfront.qualtrics.com/q1/wp-content/uploads/2012/02/QualtricsSurveySoftware.pdf

Sohlberg, M.M., McLaughlin, K.A., Todis, B., Larsen, J., Glang, A. (2001). What does it take to collaborate with families affected by brain injury? A preliminary model. Journal of Head Trauma Rehabilitation, 16, p. 498-511.

Soo, C., & Tate, R. (2009). Psychological treatment for anxiety in people with traumatic brain injury. *Cochrane Database of Systematic Reviews, 18,* Art. CD005239. doi:10.1002/14651858.CD005239.pub2

Stagg, K., Douglas, J., & Iacono, T. (2020). The perspectives of allied health clinicians on the working alliance with people with stroke-related communication impairment. *Neuropsychological Rehabilitation* doi:10.1080/09602011.2020.1778491

Steel, R. T., Macciocchi, S., & Kreutzer, J. S. (2010). Clinical considerations for the diagnosis of major depression after moderate to severe TBI. *Journal of Head Trauma Rehabilitation, 25,* 99–112. doi:10.1097/HTR.0b013e3181cd3966

Strauser, D.R., Lustig, D.C., & Donnell, C. (2004). The relationship between working alliance and therapeutic outcomes for individuals with Mild Mental Retardation. Rehabilitation Counseling Bulletin, 47, p. 215-223.

Stucky, K. (2012). Psychotherapy after brain injury: Principles and techniques: A Review—*Psychotherapy After Brain Injury: Principles and Techniques,* by Klonoff, Pamela S. (2010). New York, Guilford Publications, Inc. *Journal of the International Neuropsychological Society, 18,* 176–178. doi:10.1017/S1355617711001640

Stuss, D. T., & Benson, D. F. (1986). *The frontal lobes.* New York, NY: Raven Press.

Tabachnick, B. G., & Fidell, L. S. (2014). *Using multivariate statistics* (6th ed.). Boston, MA: Pearson.

Tate, R., Kennedy, M., Ponsford, J., Douglas, J., Velikonja, D., Bayley, M., & Stergiou- Kita, M. (2014). INCOG recommendations for management of cognition following traumatic brain injury, Part 111: Executive function and self-awareness. *Journal of Head Trauma Rehabilitation, 29,* 338–352. doi:10.1097/HTR.000000000000068

Taylor, L. A., Kreutzer, J. S., Demm, S. R., & Meade, M. A. (2003). Traumatic brain injury and substance abuse: A review and analysis of the literature. *Neuropsychological Rehabilitation, 13,* 165–188. doi:10.1080/09602010244000336

Thielsen, V.A. & Leahy M.J. (2001). Essential knowledge and skills for effective clinical supervision in rehabilitation counseling. *Rehabilitation Counseling Bulletin,* 44, 196-208.

Tsaousides, T., Warshowsky, A., Ashman, A., Cantor, J. B., Spielman, L., & Gordon, W. A. (2009). Relationship between employment-related self-efficacy and quality of life following traumatic brain injury. *Rehabilitation Psychology, 54,* 299–305. doi:10.1037/a0016807

van Delft-Schreurs, H. M., van Bergen, J. J. M., de Jongh, M. A. C., van de Sande, P., Verhofstad, M. H. J., & de Vries, J. (2014). A cross-sectional study of psychological complaints and quality of life in severely injured patients. *Quality of Life Research, 23,* 1353–1362. doi:10.1007/s11136-013-0546-y

Wechsler, D. (2009). *Wechsler Memory Scale—fourth edition*. San Antonio, TX: Pearson.

Weiss, E. L., Coll, J. E., Gerbauer, J., Smiley, K., & Carillo, E. (2010). The military genogram: A solution-focused approach for resiliency building in service members and their families. *Family Journal, 18,* 395–406. doi:10.1177/1066480710378479

Whelan-Goodinson, R., Ponsford, J., Johnston, L., & Grant, F. (2009). Psychiatric disorders following traumatic brain injury: their nature and frequency. *Journal of Head Trauma Rehabilitation, 24,* 324–332. doi:10.1097/HTR.0b013e3181a712aa

Williams, W. H., & Wilson, B. A. (1999). Outcome measures for survivors of acquired brain injury in day and outpatient neurorehabilitation programmes. *Neuropsychological Rehabilitation, 9,* 421–436. doi:10.1080/096020199389482

Winer, J. P., Wadsworth, W., Forgeard, M., Pinder-Amaker, S., Björgvinsson, T., & Beard, C. (2018). Development and implementation of a single-session diversity and multicultural psychology group intervention within an academic psychiatric hospital. *The Behavior Therapist*, 41, 327-

Woo, H., Goo,M., Lee, M. (2016). A content analysis of research on disability: American Counseling Association journals between 2003 and 2013. Journal of Multicultural Counseling and Development, 44, 228-244. doi:10.1002/jmcd.12051

Wright, G.W. & Reese, R.J. (2015). Strengthening cultural sensitivity in mental health counseling for deaf clients. *Journal of Multicultural Counseling and Development, 43*, 275-284.

Wright, J. H., Basco, M. R., & Thase, M. E. (2006). *Learning cognitive behavior therapy: An illustrated guide*. Arlington, VA: American Psychiatric.

Ylvisaker, M., Turkstra, L. S., & Coelho, C. (2005). Behavioral and social interventions for individuals with traumatic brain injury: A summary of the research with clinical implications. *Seminars in Speech and Language, 26,* 256–267. doi:10.1055/s-2005-922104

Yong, A. G., & Pearce, S. (2013). A beginner's guide to factor analysis: Focusing on exploratory factor analysis. *Tutorials in Quantitative Methods for Psychology, 9,* 79–94. doi:10.20982/tqmp.09.2. p079

Zelenchich, L., Kazantzis N., Wong, D., McKenzie, D., Downing, M., & Ponsford, J. (2020). Predictors of working alliance in cognitive behavior therapy adapted for traumatic brain injury. *Neuropsychological Rehabilitation, 30, 1682-1700*. doi: 10.1080/09602011.2019.1600554.

APPENDIX A:

SEVERITY

Criteria	Mild	Moderate	Severe
Structural imaging	Normal	Normal or abnormal	Normal or abnormal
Loss of consciousness	< 30 minutes	30 minutes to 24 hours	> 24 hours
Alteration of consciousness/mental state	A moment to 24 hours	> 24 hours	> 24 hours
Posttraumatic amnesia	0–1 day	> 1 and < 7 days	> 7 days
Glasgow coma scale (best available score in 24 hours)	13–15	9–12	3–8
Abbreviated Injury Severity Scale	1–2	3	4–6

Note: Adapted from (*Multidisciplinary Postacute Rehabilitation for Moderate to Severe Traumatic Brain Injury in Adults,* p. ES-2, by Brasure et al., 2012, Rockville MD: Agency for Healthcare research and Quality.)

APPENDIX B:

INSTITUTIONAL REVIEW

RESEARCH INTEGRITY AND COMPLIANCE
Institutional Review Boards, FWA No. 00001669
12901 Bruce B. Downs Blvd., MDC035 • Tampa, FL 33612-4799
(813) 974-5638 • FAX (813) 974-7091

December 23, 2016

Michelle Bradham-Cousar
USF Lakeland - Division of Education
P.O. Box 89761
Tampa, FL 33689

RE: **Exempt Certification**
IRB#: Pro00026299
Title: TBI Version#1 12/22/2016

Dear Ms. Bradham-Cousar:

On 12/23/2016, the Institutional Review Board (IRB) determined that your research meets criteria for exemption from the federal regulations as outlined by 45CFR46.101(b):

(2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liabilityor be damaging to the subjects' financial standing, employability, or reputation.

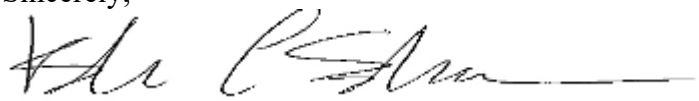
As the principal investigator for this study, it is your responsibility to ensure that this research is conducted as outlined in your application and consistent with the ethical principles outlined in the Belmont Report and with USF HRPP policies and procedures.

Please note, as per USF HRPP Policy, once the Exempt determination is made, the application is closed in ARC. Any proposed or anticipated changes to the study design that was previously declared exempt from IRB review must be submitted to the IRB as a new study prior to initiation of the change. However, administrative changes, including changes in research personnel, do not warrant an amendment or new application.

Given the determination of exemption, this application is being closed in ARC. This does not limit your ability to conduct your research project.

We appreciate your dedication to the ethical conduct of human subject research at the University of South Florida and your continued commitment to human research protections. If you have any questions regarding this matter, please call 813-974-5638.

Sincerely,



Kristen Salomon, Ph.D., Vice Chairperson USF Institutional Review Board

APPENDIX C:

INFORMED CONSENT FORM

Informed Consent to Participate in Research
Information to Consider Before Taking Part in this Research Study

Pro # 00026299

Researchers at the University of South Florida (USF) study many topics. To do this, we need the help of people who agree to take part in a research study. This form tells you about this research study. We are asking you to take part in a research study that is called: Traumatic Brain Injury: Counselor Comfort and Knowledge. The person who is in charge of this research study is Michelle Bradham-Cousar. This person is called the Principal Investigator.

Purpose of the Study
The purpose of this study is to explore professional counselors' level of understanding of a Traumatic Brain Injury (TBI). TBI is defined for this survey by the CDC (2016) as being "caused by a bump, blow or jolt to the head or a penetrating head injury that disrupts the normal function of the brain."

Why are you being asked to take part?
We are asking you to take part in this research study because you have master's degree (or higher degree) in rehabilitation counseling, mental health counseling, community counseling, career counseling, counseling psychology or a closely related field.

Study Procedures
If you take part in this study, you will be asked to participate in an electronic survey, composed through Qualtrics. The survey will not ask for identifying information. It can be taken at your convenience.

Alternatives/Voluntary Participation/Withdrawal
You have the alternative to choose not to participate in this research study.

You should only take part in this study if you want to volunteer; you are free to participate in this research or withdraw at any time. There will be no penalty or loss of benefits you are entitled to receive if you stop taking part in this study.

Benefits and Risks
"We are unsure if you will receive any benefits by taking part in this research study". This research is considered to be minimal risk.

Compensation
We will not pay you for the time you volunteer while being in this study.

Privacy and Confidentiality
We must keep your study records as confidential as possible. It is possible, although unlikely, that unauthorized individuals could gain access to your responses because you are responding online.

Certain people may need to see your study records. By law, anyone who looks at your records must keep them completely confidential. The only people who will be allowed to see these records are: *Principal Investigator, advising professor/dissertation committee and the University of South Florida Institutional Review Board (IRB)*.

- It is possible, although unlikely, that unauthorized individuals could gain access to your responses. Confidentiality will be maintained to the degree permitted by the technology used. No guarantees can be made regarding the interception of data sent via the Internet. However, your participation in this online survey involves risks similar to a person's everyday use of the Internet. If you complete and submit an anonymous survey and later request your data be withdrawn, this may or may not be possible as the researcher may be unable to extract anonymous data from the database.

Contact Information
If you have any questions about your rights as a research participant, please contact the USF IRB at (813) 974-5638 or contact by email at RSCH-IRB@usf.edu. If you have questions regarding the research, please contact the Principal Investigator at xxxxxxxxxxxxxxxx.

We may publish what we learn from this study. If we do, we will not let anyone know your name. We will not publish anything else that would let people know who you are. You can print a copy of this consent form for your records.

I freely give my consent to take part in this study. I understand that by proceeding with this survey that I am agreeing to take part in research and I am 18 years of age or older.

Below is the link to the survey:
https://usf.az1.qualtrics.com/SE/?SID=SV_bgEn59TnLQy2zK5

APPENDIX D:

EXPERT PANEL

Questions 1-8 will ask you about your knowledge information, skills acquired through experience or education to aid in working with individuals with a brain injury.

1. I have knowledge of the different types of Traumatic Brain Injury.
   a. strongly agree
   b. agree
   c. neither
   d. disagree
   e. strongly disagree

Expert:

Does this question reflect Knowledge? Select below for Question 1				
5=highly relevant	4=quite relevant	3=somewhat relevant	2= relevant	1=not relevant

2. I have an understanding of the different lobes in the brain and their function.
   a. strongly agree
   b. agree
   c. neither
   d. disagree
   e. strongly disagree

Expert:

Does this question reflect Knowledge? Select below for Question 2				
5=highly relevant	4=quite relevant	3=somewhat relevant	2= relevant	1=not relevant

3. I know and understand the Diagnostic Criteria located in the DSM-V under neurocognitive disorder.
   a. strongly agree
   b. agree
   c. neither
   d. disagree
   e. strongly disagree

Expert:

Does this question reflect Knowledge? Select below for Question 3				
5=highly relevant	4=quite relevant	3=somewhat relevant	2= relevant	1=not relevant

4. My knowledge of TBI has resulted in improved client outcomes for my clients. Improved outcomes are defined as social competence, behavior regulation, acceptance, realism and self-awareness, social awareness, acceptance and employability.
   a. strongly agree
   b. agree
   c. neither
   d. disagree
   e. strongly disagree

Expert:

Does this question reflect Knowledge? Select below for Question 4				
5=highly relevant	4=quite relevant	3=somewhat relevant	2= relevant	1=not relevant

5. I have received instruction on how to use the DSM-V for classification of a TBI.
   a. strongly agree
   b. agree
   c. neither
   d. disagree
   e. strongly disagree

Expert:

Does this question reflect Knowledge? Select below for Question 5				
5=highly relevant	4=quite relevant	3=somewhat relevant	2= relevant	1=not relevant

6. I have received training on assessments, executive function and general brain anatomy.
   a. strongly agree
   b. agree
   c. neither
   d. disagree
   e. strongly disagree

Expert:

Does this question reflect Knowledge? Select below for Question 6				
5=highly relevant	4=quite relevant	3=somewhat relevant	2= relevant	1=not relevant

7. The skills I received in my graduate program prepared me in understanding of TBI and successful treatment options.
    a. strongly agree
    b. agree
    c. neither
    d. disagree
    e. strongly disagree

Expert:

Does this question reflect Knowledge? Select below for Question 7				
5=highly relevant	4=quite relevant	3=somewhat relevant	2= relevant	1=not relevant

8. I am thankful that during my counseling supervision sessions, I was provided with guidance and direction to work with brain injured individuals.
    a. strongly agree
    b. agree
    c. neither
    d. disagree
    e. strongly disagree

Expert:

Does this question reflect Knowledge? Select below for Question 8				
5=highly relevant	4=quite relevant	3=somewhat relevant	2= relevant	1=not relevant

Questions 9-16 will ask you about your comfort level in developing a working alliance (joint effort) to develop an effective relationship with clients that have a brain injury.

9. I am comfortable with assessing the appropriate counseling services for individuals with a TBI.

Counseling Services are defined as career services, individual therapy, psychotherapy, group therapy, rehabilitation services, assessment, guidance and advisement.

    a. strongly agree
    b. agree
    c. neither
    d. disagree
    e. strongly disagree

Expert:

Does this question reflect Working Alliance\Comfort? Select below for Question 9				
5=highly relevant	4=quite relevant	3=somewhat relevant	2= relevant	1=not relevant

10. I take comfort with having the opportunity to be an advocate for clients with a diagnosis of TBI.
   a. strongly agree
   b. agree
   c. neither
   d. disagree
   e. strongly disagree

Expert:

Does this question reflect Working Alliance\Comfort? Select below for Question 10				
5=highly relevant	4=quite relevant	3=somewhat relevant	2= relevant	1=not relevant

11. I am comfortable with working with a client that has a DSM-V diagnosis of neurocognitive disorder (i.e. TBI).
   a. strongly agree
   b. agree
   c. neither
   d. disagree
   e. strongly disagree

Expert:

Does this question reflect Working Alliance\Comfort? Select below for Question 11				
5=highly relevant	4=quite relevant	3=somewhat relevant	2= relevant	1=not relevant

12. I am able to redirect impulsive behavior, forgetfulness and increased agitation in order to help facilitate the growth of compensatory skills (coping skills).
   a. strongly agree
   b. agree
   c. neither
   d. disagree
   e. strongly disagree

Expert:

Does this question reflect Working Alliance\Comfort? Select below for Question 12				
5=highly relevant	4=quite relevant	3=somewhat relevant	2= relevant	1=not relevant

13. I am comfortable with integrating a neuropsychological report into counseling services with my clients.
   a. strongly agree
   b. agree
   c. neither
   d. disagree
   e. strongly disagree

Expert:

Does this question reflect Working Alliance\Comfort? Select below for Question 13				
5=highly relevant	4=quite relevant	3=somewhat relevant	2= relevant	1=not relevant

14. I can comfortably provide consultation to other counselors as it relates to a client with a TBI.
   a. strongly agree
   b. agree
   c. neither
   d. disagree
   e. strongly disagree

Expert:

Does this question reflect Working Alliance\Comfort? Select below for Question 14				
5=highly relevant	4=quite relevant	3=somewhat relevant	2= relevant	1=not relevant

15. I am comfortable with reading and using a neuropsychological report when developing a treatment plan.
   a. strongly agree
   b. agree
   c. neither
   d. disagree
   e. strongly disagree

Expert:

Does this question reflect Working Alliance\Comfort? Select below for Question 15				
5=highly relevant	4=quite relevant	3=somewhat relevant	2= relevant	1=not relevant

16. I am at ease when providing counseling supervision techniques to help trainee counselors work with clients with a TBI diagnosis.
   a. strongly agree
   b. agree
   c. neither
   d. disagree

e. strongly disagree

Expert:

Does this question reflect Working Alliance\Comfort? Select below for Question 16				
5=highly relevant	4=quite relevant	3=somewhat relevant	2= relevant	1=not relevant

Questions 17-24 will ask about your self-awareness (in other words how well you self reflect on your skills, attitudes, education, experience and events) as related to working with individuals with a brain injury.

17. I am prepared to work with individuals that have a dual diagnosis such as depression and individuals with a brain injury TBI.
a. strongly agree
b. agree
c. neither
d. disagree
e. strongly disagree

Expert:

Does this question reflect Self Awareness? Select below for Question 17				
5=highly relevant	4=quite relevant	3=somewhat relevant	2= relevant	1=not relevant

18. I am well versed in treatment intervention strategies for individuals with a TBI.
a. strongly agree
b. agree
c. neither
d. disagree
e. strongly disagree

Expert:

Does this question reflect Self Awareness? Select below for Question 18				
5=highly relevant	4=quite relevant	3=somewhat relevant	2= relevant	1=not relevant

19. Since the release of the DSM-V, I believe the trainings I have received on neurocognitive disorders, as they relate to TBI, has equipped me to provide effective service to this population of clients.
a. strongly agree
b. agree
c. neither
d. disagree
e. strongly disagree

Expert:

Does this question reflect Self Awareness? Select below for Question 19				
5=highly relevant	4=quite relevant	3=somewhat relevant	2= relevant	1=not relevant

20. I am aware that TBI causes a wide range of cognitive and behavioral deficiencies.

a. strongly agree
b. agree
c. neither
d. disagree
e. strongly disagree

Expert:

Does this question reflect Self Awareness? Select below for Question 20				
5=highly relevant	4=quite relevant	3=somewhat relevant	2= relevant	1=not relevant

21. I am aware that executive function affects planning, organizing and goal setting.

a. strongly agree
b. agree
c. neither
d. disagree
e. strongly disagree

Expert:

Does this question reflect Self Awareness? Select below for Question 21				
5=highly relevant	4=quite relevant	3=somewhat relevant	2= relevant	1=not relevant

22. I am aware that the affected regions of the brain are directly correlated to the functional ability of the individual.

a. strongly agree
b. agree
c. neither
d. disagree
e. strongly disagree

Expert:

Does this question reflect Self Awareness? Select below for Question 22				
5=highly relevant	4=quite relevant	3=somewhat relevant	2= relevant	1=not relevant

23. I believe I have the responsibility to be an advocate for clients with a diagnosed disability (including TBI).

a. strongly agree
b. agree
c. neither
d. disagree
e. strongly disagree

Expert:

Does this question reflect Self Awareness? Select below for Question 23				
5=highly relevant	4=quite relevant	3=somewhat relevant	2= relevant	1=not relevant

24. I have the confidence to lead a discussion in a training or workshop about TBI (i.e. neurocognitive).

a. strongly agree
b. agree
c. neither
d. disagree
e. strongly disagree

Expert:

Does this question reflect Self Awareness? Select below for Question 24				
5=highly relevant	4=quite relevant	3=somewhat relevant	2= relevant	1=not relevant

Expert Reviewer Comments:

Part 1—Demographics

A. Where there any questions that need adjusting or clarification or removal?

APPENDIX E:

PARTICIPANT

Consent I freely give my consent to take part in this study. I understand that by proceeding with this survey that I am agreeing to take part in research and I am 18 years of age or older. By clicking 'yes' below you are consenting to participate in this study.

- ❍ Yes
- ❍ No

Participant Survey Instrument

NOTE: These results will only be reported by group rather than individually.

Part 1: Background/Demographics

Questions	
How old are you?	
Please identify your Gender.	Male Female
Select one from the box.	White Black or African American American Indian or Alaska Native Asian Native Hawaiian or Pacific Islander Hispanic\ Latino Other
Relationship Status	Single Divorced Married Separated Partnership

What is your counseling specialty?	Career
	Clinical
	Mental Health
	Marriage & Family
	Rehabilitation Counseling
	Counselor Educator
	Substance Abuse
	College
	Psychologist
	Trauma and Grief
	Social Work
Do you have an interest in working with clients with a diagnosis of TBI?	Yes
	No
What is your preferred theory?	Cognitive
	Interpersonal
	Psychoanalytic
	Social Cognitive
	Solution Focused
	Adlerian
	Person-Centered
	Existential
	Gestalt
	Reality or Choice theory
How long have you worked as a Counselor?	0
	1–4 yrs.
	5–9 yrs.
	10–14 yrs.
	15–19 yrs.
	20–24 yrs.
	24yrs+
What type of training have you had in Brain Injury?	Workshop
	Employment training
	In-service
	Conference
	Seminar
	Webinar
	Journal Publication
	Graduate class\coursework

Please identify your degree.	Master's degree PhD. PsyD. Ed.S. Bachelor
What type of professional license do you hold?	Certified Rehabilitation Counselor Certified Brain Injury Specialist Licensed Mental Health Counselor Licensed Professional Counselor Certified Addictions Professional National Certified Counselor National Certified School Counselor Licensed Marriage & Family Therapist Certified Clinical Mental Health Counselor Master Addictions Counselor Licensed Clinical Professional Counselor Licensed Professional Clinical Counselor Licensed Clinical Social Worker
Please estimate the number of clients that you have worked with that had a diagnosis of TBI.	1-10 11-20 21-30 31-40 41-50 51 +
What is your primary work setting?	Agency Government Self-Employment Group Practice School University Hospital Volunteer
Please identify your city and zip code	

Part 2:

Response Record:

We want to know your level of understanding of a Traumatic Brain Injury (TBI). TBI is defined for this survey by the CDC (2016) as being "caused by a bump, blow or jolt to the head or a penetrating head injury that disrupts the normal function of the brain". Please fill out the survey honestly. This information will only be analyzed in-group summary form.

Please read the following statements carefully and circle the number that shows how much you agree or disagree.

Questions 1-8 will ask you about your knowledge information, skills acquired through experience or education to aid in working with individuals with a brain injury.

1. I have knowledge of the different types of Traumatic Brain Injury.
   a. strongly agree
   b. agree
   c. neither
   d. disagree
   e. strongly disagree

2. I have an understanding of the different lobes in the brain and their function.
   a. strongly agree
   b. agree
   c. neither
   d. disagree
   e. strongly disagree

3. I know and understand the Diagnostic Criteria located in the DSM-V under neurocognitive disorder.
   a. strongly agree
   b. agree
   c. neither
   d. disagree
   e. strongly disagree

4. My knowledge of TBI has resulted in improved client ”consumer” outcomes for my clients “consumer”. Improved outcomes are defined as behavior regulation, social awareness and employability.
   a. strongly agree
   b. agree
   c. neither
   d. disagree
   e. strongly disagree

5. I have received instruction on how to use the DSM-V for classification of a TBI.
   a. strongly agree
   b. agree
   c. neither
   d. disagree
   e. strongly disagree

6. I have received instruction on assessments for classification of a TBI.
   a. strongly agree
   b. agree
   c. neither

d. disagree
e. strongly disagree

7. I received training in my graduate program to prepare me in the understanding of executive functioning.
a. strongly agree
b. agree
c. neither
d. disagree
e. strongly disagree

8. During my counseling supervision sessions, I was provided with guidance and direction to work with brain injured individuals
a. strongly agree
b. agree
c. neither
d. disagree
e. strongly disagree

Questions 9-16 will ask you about your comfort level in developing a working alliance (joint effort) to develop an effective relationship with clients that have a brain injury.

9. I am competent with advocating for the appropriate counseling service needs for individuals with a TBI. Counseling Services are defined as career services, individual therapy, psychotherapy, group therapy, rehabilitation services, assessment, guidance and advisement.
a. strongly agree
b. agree
c. neither
d. disagree
e. strongly disagree

10. I am competent with advocating for clients ”consumer” with a diagnosis of TBI.
a. strongly agree
b. agree
c. neither
d. disagree
e. strongly disagree

11. Through establishing client ”consumer” rapport, I am confident with linking clients with a TBI (neurocognitive disorder) with other agencies for continued services.
a. strongly agree
b. agree
c. neither
d. disagree
e. strongly disagree

12. I am competent in addressing issues such as impulsivity, agitation, and memory deficits by assisting clients with developing compensatory skills and positive coping skills.
   a. strongly agree
   b. agree
   c. neither
   d. disagree
   e. strongly disagree

13. I am comfortable with integrating a neuropsychological report into counseling services with my clients.
   a. strongly agree
   b. agree
   c. neither
   d. disagree
   e. strongly disagree

14. I can comfortably provide consultation to other counselors as it relates to a client ”consumer” with a TBI.
   a. strongly agree
   b. agree
   c. neither
   d. disagree
   e. strongly disagree

15. I am likely to use the neuropsychological report findings to enhance the working alliance to inform treatment with the client ”consumer” and their family.
   a. strongly agree
   b. agree
   c. neither
   d. disagree
   e. strongly disagree

16. I am competent with providing counseling supervision techniques to help trainee counselors with establishing a working relationship with clients ”consumers” with a TBI.
   a. strongly agree
   b. agree
   c. neither
   d. disagree
   e. strongly disagree

Questions 17-24 will ask about your self-awareness (in other words how well you self reflect on your skills, attitudes, education, experience and events) as related to working with individuals with a brain injury.

17. I am able to critically evaluate the progress of a client ”consumer” with a TBI and make the necessary adjustments to the clinical approach or treatment plan.
   a. strongly agree
   b. agree
   c. neither
   d. disagree
   e. strongly disagree

18. I am able to recognize when a TBI case falls outside of my zone of competency (my strengths and limitations) and I can make an appropriate referral.
   a. strongly agree
   b. agree
   c. neither
   d. disagree
   e. strongly disagree

19. I seek out new and clarifying information about appropriate interventions for individuals with a TBI, when needed.
   a. strongly agree
   b. agree
   c. neither
   d. disagree
   e. strongly disagree

20. I am aware that TBI causes a wide range of cognitive and behavioral deficiencies.
   a. strongly agree
   b. agree
   c. neither
   d. disagree
   e. strongly disagree

21. I accept feedback from peers and supervisors about my skills, and when encountering a difficult TBI case.
   a. strongly agree
   b. agree
   c. neither
   d. disagree
   e. strongly disagree

22. I am aware that the affected regions of the brain are directly correlated to the functional ability of the individual.
   a. strongly agree
   b. agree
   c. neither
   d. disagree

e. strongly disagree

23. I believe I have the responsibility to be an advocate for clients with a diagnosed disability (including TBI).
   a. strongly agree
   b. agree
   c. neither
   d. disagree
   e. strongly disagree

24. It is important for me to participate in continuing education workshops to improve my knowledge and skills in the area of TBI.
   a. strongly agree
   b. agree
   c. neither
   d. disagree
   e. strongly disagree

APPENDIX F:

SURVEY CODING

Theoretical framework	Defined *Oxford Dictionary* (2016)	Question	Literature reference	Codes	
(Knowledge)	Knowledge information, skills acquired through experience or education	I have knowledge of the different types of Traumatic Brain Injury.	CDC, 2015	strongly agree	-5
				agree	-4
				neither	-3
				disagree	-2
				strongly disagree	-1
		I have an understanding of the different lobes in the brain and their function.	Miller, 2013	strongly agree	-5
				agree	-4
				neither	-3
				disagree	-2
				strongly disagree	-1
		I know and understand the Diagnostic Criteria located in the in the DSM-V under neurocognitive disorder.	APA, 2013	strongly agree	-5
				agree	-4
				neither	-3
				disagree	-2
				strongly disagree	-1
		My knowledge of TBI has resulted in improved client outcomes. <u>Improved outcomes</u> are defined as social competence, behavior regulation, acceptance, realism and self-awareness, social awareness, acceptance and employability.	Ben-Yishay & Daniels-Zide, 2000; Bishop, 2005; Coetzer, 2007; Judd & Wilson, 2002; Ylvisaker, Turkstra & Coelho, 2005	strongly agree	-5
				agree	-4
				neither	-3
				disagree	-2
				strongly disagree	-1

		I have received instruction to use the DSM-V for classification of a TBI.	APA, 2013	strongly agree agree neither disagree strongly disagree	-5 -4 -3 -2 -1
		I received training on assessments, executive function and general brain anatomy	Mansour & Lajiness-O'Neill, 2015	strongly agree agree neither disagree strongly disagree	-5 -4 -3 -2 -1
		The skills I received in my graduate program prepared me in understanding of TBI and successful treatment options.	Soo & Tate, 2009	strongly agree agree neither disagree strongly disagree	-5 -4 -3 -2 -1
		I am thankful that during my counseling supervision sessions, I was provided with guidance and direction to work with brain injured individuals.	Soo & Tate, 2009	strongly agree agree neither disagree strongly disagree	-5 -4 -3 -2 -1
Collaboration (Working Alliance)	Comfort (physical ease and well-being), relational skills, joint effort	I am comfortable with assessing the appropriate counseling services for individuals with a TBI. *Counseling Services* are defined as career services, individual therapy, psychotherapy, group therapy, rehabilitation services, assessment, guidance and advisement.	Patterson & Staton, 2009	strongly agree agree neither disagree strongly disagree	-5 -4 -3 -2 -1
		I take comfort with having the opportunity to be an advocate for clients with a diagnosis of TBI.	Myers, Sweeney, & White, 2002	strongly agree agree neither disagree strongly disagree	-5 -4 -3 -2 -1

		I am comfortable with working with a client that has a DSM-V diagnosis of neurocognitive disorder (i.e. TBI).	APA, 2013	strongly agree agree neither disagree strongly disagree	-5 -4 -3 -2 -1
		I am able to redirect impulsive behavior, forgetfulness and increased agitation in order to help facilitate the growth of compensatory skills (coping skills).	Ruff et al., 2009	strongly agree agree neither disagree strongly disagree	-5 -4 -3 -2 -1
		I am comfortable with integrating a neuropsychological report into counseling services with my clients.	Barisa & Barisa, 2001; Dillahunt-Aspillaga et al. 2015; Mansour & Lajiness-O'Neill, 2015	strongly agree agree neither disagree strongly disagree	-5 -4 -3 -2 -1
		I can comfortably provide consultation to other counselor's as it relates to a client with a TBI.		strongly agree agree neither disagree strongly disagree	-5 -4 -3 -2 -1
		I am comfortable with using a neuropsychological report when developing a treatment plan.	Novakovic-Agopian et al., 2011	strongly agree agree neither disagree strongly disagree	-5 -4 -3 -2 -1
		I am at ease when providing counseling supervision techniques to help trainee counselors work with clients with a TBI diagnosis.		strongly agree agree neither disagree strongly disagree	-5 -4 -3 -2 -1
Self Exploration (Self-Reflection/ Self-awareness)	Awareness, attitudes (thinking & feeling), exploring the meaning of events	I am prepared to work with individuals that have a dual diagnosis of TBI and depression.	Whelan-Goodinson, 2009	strongly agree agree neither disagree strongly disagree	-5 -4 -3 -2 -1
		I am well versed in treatment intervention strategies for individuals with a TBI.	Stucky, 2012	strongly agree agree neither disagree strongly disagree	-5 -4 -3 -2 -1

Since the release of the DSM-V, I believe the trainings I have received on neurocognitive disorders, as relative to TBI, has equipped me to provide efficient service to this population of clients.	APA, 2013	strongly agree	-5
		agree	-4
		neither	-3
		disagree	-2
		strongly disagree	-1
I am aware that TBI causes a wide range of cognitive and behavioral deficiencies.	Mansour, & Lajiness-O'Neill, 2015	strongly agree	-5
		agree	-4
		neither	-3
		disagree	-2
		strongly disagree	-1
I am aware that executive function affects planning, organizing and goal setting.	Cicerone et al., 2000	strongly agree	-5
		agree	-4
		neither	-3
		disagree	-2
		strongly disagree	-1
I am aware that the affected regions of the brain are directly correlated to the functional ability of the individual.	Mansour & Lajiness-O'Neill, 2015; Miller, 2013; Shankle & Amen, 2004	strongly agree	-5
		agree	-4
		neither	-3
		disagree	-2
		strongly disagree	-1
I believe I have the responsibility to be an advocate for clients with a diagnosis (including TBI).	Myers, Sweeney & White, 2002	strongly agree	-5
		agree	-4
		neither	-3
		disagree	-2
		strongly disagree	-1
I have the confidence to lead a discussion in a training or workshop about TBI (i.e. neurocognitive)		strongly agree	-5
		agree	-4
		neither	-3
		disagree	-2
		strongly disagree	-1

APPENDIX G:

ITEM CONTENT ANALYSIS

Table E1

Content Validity Index 1

Item description	Rater 1	Rater 2	Rater 3	Rater 4	Rater 5	Rater 6	Number or agreement	I-CVI
Scale Item 1	2	5	4	5	5	5	5	0.833333
Scale Item 2	2	5	5	5	5	5	5	0.833333
Scale Item 3	2	5	3	5	5	5	5	0.833333
Scale Item 4	2	0	4	5	5	5	4	0.666667
Scale Item 5	2	5	1	5	5	5	4	0.666667
Scale Item 6	2	5	5	4	0	5	4	0.666667
Scale Item 7	2	5	2	4	4	5	4	0.666667
Scale Item 8	3	2	1	3	5	1	3	0.5
Scale Item 9	2	5	2	5	5	5	4	0.666667
Scale Item 10	2	5	2	4	0	4	3	0.5
Scale Item 11	0	5	2	5	5	5	4	0.666667
Scale Item 12	2	5	2	5	5	5	4	0.666667
Scale Item 13	2	5	4	4	5	5	5	0.833333
Scale Item 14	2	5	2	3	5	2	3	0.5
Scale Item 15	2	5	2	4	5	5	4	0.666667
Scale Item 16	2	5	2	4	5	2	3	0.5
Scale Item 17	2	5	2	5	5	2	3	0.5
Scale Item 18	2	5	2	4	5	2	3	0.5
Scale Item 19	2	5	2	4	5	2	3	0.5
Scale Item 20	5	3	4	5	5	1	5	0.833333
Scale Item 21	4	5	2	4	5	1	4	0.666667
Scale Item 22	5	5	4	5	5	1	5	0.833333

Scale Item 23	5	5	2	4	5	4	5	0.833333
Scale Item 24	4	5	2	3	5	2	4	0.666667
Demographics	Forensics counseling 24 yrs exp	Career 20–24 years experience	Gov’ t counselor 20–24 yrs	Rehabilitation, 10–14 yrs	Social worker, 21–30 yrs	Neuropsychologist	S-CVI/Ave	0.666667
							Total agreement	0
							S-CVI/UA	0

Table E2

Content Validity Index 2

Item description	Rater 1	Rater 2	Rater 3	Rater 4	Rater 5	Rater 6	Number or agreement	I-CVI
Scale Item 1	2	5	4	5	5	5	5	0.833333333
Scale Item 2	2	5	5	5	5	5	5	0.833333333
Scale Item 3	2	5	3	5	5	5	5	0.833333333
Scale Item 4	4	5	5	5	5	4	6	1
Scale Item 5	4	5	4	5	5	5	6	1
Scale Item 6	4	3	5	5		5	5	0.833333333
Scale Item 7	4	5	5	4	4	5	6	1
Scale Item 8	4	5	5	3	5	5	6	1
Scale Item 9	5		4	3	5	5	5	0.833333333
Scale Item 10	4	5	4	4		5	5	0.833333333
Scale Item 11	4	5	5	3	5	5	6	1
Scale Item 12	5	5	5	5	5	5	6	1
Scale Item 13	2	5	4	4	5	5	5	0.833333333
Scale Item 14	3	5	5	4	5	2	5	0.833333333
Scale Item 15	5	5	5	5	5	5	6	1
Scale Item 16	5	5	5		5	3	5	0.833333333

Scale Item 17	3	5	5	5	5	5	6	1
Scale Item 18	5	5	5	4	5	5	6	1
Scale Item 19	5	5	5	3	5	5	6	1
Scale Item 20	5	3	4	5	5	1	5	0.833333333
Scale Item 21	5	5	5	4	5	5	6	1
Scale Item 22	5	5	4	5	5	1	5	0.833333333
Scale Item 23	5	5	2	4	5	4	5	0.833333333
Scale Item 24	5	5	5	4	5	5	6	1
							S-CVI/Ave	0.916666667
							Total agreement	12
							S-CVI/UA	0.038194444
							Total agreement ave	5.545454545

Note. CVI = content validity index.

APPENDIX H:

ITEM-TOTAL STATISTICS

	Scale mean if item deleted	Scale variance if item deleted	Corrected item-total correlation	Squared multiple correlation	Cronbach's alpha if item deleted
I have knowledge of the different types of Traumatic Brain Injury. – Selected Choice	50.30	223.575	.644	.683	.920
I have an understanding of the different lobes in the brain and their function.	50.44	225.472	.602	.618	.921
I know and understand the Diagnostic Criteria located in the DSM-V under neurocognitive disorder.	50.38	231.712	.527	.573	.922
My knowledge of TBI has resulted in improved client "consumer" outcomes for my clients "consumer". Improved outcomes are defined as behavior regulation, social awareness and employability.	50.32	223.024	.733	.802	.919
I have received instruction on assessments for classification of a TBI.	49.89	221.988	.612	.967	.921
I have received instruction on assessments for classification of a TBI.	49.84	220.000	.649	.967	.920
I received training in my graduate program to prepare me in the understanding of executive functioning.	49.86	224.981	.517	.586	.923
During my counseling supervision sessions, I was provided with guidance and direction to work with brain injured individuals.	49.33	232.863	.325	.599	.926
I am competent with advocating for the appropriate counseling service needs for individuals with a TBI.	50.48	220.059	.713	.800	.919

I am competent with advocating for clients “consumer” with a diagnosis of TBI.	50.60	224.798	.722	.775	.919
Through establishing client “consumer” rapport, I am confident with linking clients with a TBI (neurocognitive disorder) with other agencies for continued services.	50.55	227.779	.591	.649	.921
I am competent in addressing issues such as impulsivity, agitation, and memory deficits by assisting clients with developing compensatory skills and positive coping skills.	50.41	224.634	.657	.672	.920
I am comfortable with integrating a neuropsychological report into counseling services with my clients.	50.30	218.713	.728	.764	.919
I can comfortably provide consultation to other counselors as it relates to a client “consumer” with a TBI.	50.14	213.731	.819	.830	.917
I am likely to use the neuropsychological report findings to enhance the working alliance to inform treatment with the client “consumer” and their family.	50.40	221.298	.709	.691	.919
I am competent with providing counseling supervision techniques to help trainee counselors with establishing a working relationship with clients “consumers” with a TBI.	49.90	219.199	.657	.646	.920
I am able to critically evaluate the progress of a client “consumer” with a TBI and make the necessary adjustments to the clinical approach or treatment plan.	50.41	219.995	.799	.805	.918
I am able to recognize when a TBI case falls outside of my zone of competency (my strengths and limitations) and I can make an appropriate referral.	50.90	239.171	.240	.622	.926
I seek out new and clarifying information about appropriate interventions for individuals with a TBI, when needed.	50.77	234.848	.427	.593	.924
I am aware that TBI causes a wide range of cognitive and behavioral deficiencies.	51.30	240.686	.312	.691	.925
I accept feedback from peers and supervisors about my skills, and when encountering a difficult TBI case.	51.04	235.540	.421	.669	.924

I am aware that the affected regions of the brain are directly correlated to the functional ability of the individual.	51.03	241.027	.214	.414	.926
I believe I have the responsibility to be an advocate for clients "consumers" with a diagnosed disability (including TBI).	51.04	236.346	.336	.509	.925
It is important for me to participate in continuing education workshops to improve my knowledge and skills in the area of TBI.	51.18	239.037	.279	.488	.926

APPENDIX I:

FREQUENCY TABLE

	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
I have knowledge of the different types of Traumatic Brain Injury. – Selected Choice	4	10	10	31	17
I have an understanding of the different lobes in the brain and their function.	2	11	8	30	21
I know and understand the Diagnostic Criteria located in the DSM-V under neurocognitive disorder.	1	5	18	35	13
My knowledge of TBI has resulted in improved client "consumer" outcomes for my clients "consumer". Improved outcomes are defined as behavior regulation, social awareness and employability.	2	7	15	34	14
I have received instruction on assessments for classification of a TBI.	9	14	11	27	11
I have received instruction on assessments for classification of a TBI.	9	15	9	26	11
I received training in my graduate program to prepare me in the understanding of executive functioning.	8	15	13	23	13
During my counseling supervision sessions, I was provided with guidance and direction to work with brain injured individuals.	15	20	12	21	3

I am competent with advocating for the appropriate counseling service needs for individuals with a TBI.	4	5	10	27	25
I am competent with advocating for clients “consumer” with a diagnosis of TBI.	2	6	7	36	21
Through establishing client “consumer” rapport, I am confident with linking clients with a TBI (neurocognitive disorder) with other agencies for continued services.	3	2	11	33	23
I am competent in addressing issues such as impulsivity, agitation, and memory deficits by assisting clients with developing compensatory skills and positive coping skills.	3	7	7	39	16
I am comfortable with integrating a neuropsychological report into counseling services with my clients.	5	10	11	24	22
I can comfortably provide consultation to other counselors as it relates to a client “consumer” with a TBI.	7	13	8	25	18
I am likely to use the neuropsychological report findings to enhance the working alliance to inform treatment with the client “consumer” and their family.	3	8	9	30	22
I am competent with providing counseling supervision techniques to help trainee counselors with establishing a working relationship with clients “consumers” with a TBI.	10	14	8	25	14

I am able to critically evaluate the progress of a client "consumer" with a TBI and make the necessary adjustments to the clinical approach or treatment plan.	2	9	8	33	20
I am able to recognize when a TBI case falls outside of my zone of competency (my strengths and limitations) and I can make an appropriate referral.	1	2	2	32	35
I seek out new and clarifying information about appropriate interventions for individuals with a TBI, when needed.		4	5	38	25
I am aware that TBI causes a wide range of cognitive and behavioral deficiencies.				20	52
I accept feedback from peers and supervisors about my skills, and when encountering a difficult TBI case.			7	23	42
I am aware that the affected regions of the brain are directly correlated to the functional ability of the individual.	1	2	3	28	38
I believe I have the responsibility to be an advocate for clients "consumers" with a diagnosed disability (including TBI).		5	2	19	46
It is important for me to participate in continuing education workshops to improve my knowledge and skills in the area of TBI.		2	4	13	53