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Working Alliance Between Interpretive and Noninterpretive Therapy Services for Deaf Individuals

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This is to certify that the doctoral dissertation by

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Walden University
2017

Abstract

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by

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MA, Norfolk State University, 2009

BA, Radford University, 2006

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Abstract

Deaf individuals typically have access to 2 types of therapeutic services: interpretive (with an interpreter) and noninterpretive (with a sign-fluent therapist). Previous research indicates that the presence of an interpreter may hinder development of working alliance and attachment. There is a lack of empirical evidence assessing the effect of working alliance and attachment based on whether or not therapy incorporates an interpreter. The working alliance theory and the attachment theory were the theoretical foundations for this study. This study examined the difference between the strength of working alliance and attachment to the therapist given the presence or absence of an interpreter in therapy for Deaf individuals (N = 39) utilizing the Working Alliance Inventory and the Client Attachment to Therapist Scale. A multivariate analysis of variance was utilized to examine the differences between interpretive and noninterpretive services. The results indicated that individuals who received noninterpretive services had stronger working alliance and attachment with their therapist, which suggests that the type of therapy services Deaf individuals receive should strongly be considered. Accordingly, an increase of sign-fluent therapists would promote social change by providing more appropriate services that would remove barriers that hinder working alliance and attachment to the therapist.

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Dedication

This dissertation is dedicated to Deaf individuals who continue to advocate for their voices to be heard within society.

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Chapter 1: Introduction to the Study

Deaf individuals who seek out psychotherapy services for mental health issues face the same problems as any other potential client; however, they also face additional obstacles inherent to the linguistic barriers that affect interpersonal communication. To accommodate communication barriers, Deaf clients receiving psychotherapy have two options available to them: interpretive or noninterpretive services. The term deaf utilizing the capital signifies that the individual is culturally deaf (Cohen, 2001). In the context of clinical mental health care, interpretive services utilize an interpreter throughout the therapy process, whereas noninterpretive services are with a sign-fluent provider. Interpretive services are typically found in most areas of clinical practice; however, noninterpretive services are less available (Cornes & Napier, 2005; Vernon & Leigh, 2007).

Research has shown that there are minimal noninterpretive (sign-fluent provider) services available for the Deaf population (Cornes & Napier, 2005; Gill & Fox, 2012; Storch, 2010). This has resulted in the majority of Deaf clients having an interpreter present during therapy sessions (Cornell & Lyness, 2004; Cornes & Napier, 2005; Storch, 2010; Vernon & Leigh, 2007). While interpretive services are invaluable for most, there are also inherent limitations. These limitations include misinterpretation during translation, omitted information, confidentiality and privacy concerns, client discomfort, and limited motivation to participate with therapy services (Gill & Fox, 2012; Napier & Barker, 2004; Searight & Armock, 2013). It is important to note that these limitations are often not a result of ill intent; however, they can negatively impact the alliance between the client and the therapist (Gill & Fox, 2012).

Working alliance encompasses establishing a trusting relationship that allows both parties to work towards common treatment goals (Hanson, Curry, & Bandalos, 2002). Research suggests that working alliance is a strong predictor of more favorable therapeutic outcomes (Owen, Reese, Quirk, & Rodolfa, 2013). When the alliance is negatively impacted, the client's ability to achieve therapeutic success is also hindered (Gill & Fox, 2012). As such, this study assessed if there was a significant difference between the strength of working alliance between the client and the therapist given the type of services (interpretive and noninterpretive) received.

In addition to working alliance, research suggests that the client's attachment style significantly influences the therapeutic bond between the client and the therapist (Mallinckrodt, Coble, & Gantt, 1995). Similarly, interpretation limitations can considerably impact the client's sense of attachment with the therapist. Research indicates that early attachment patterns influence adult attachment experiences, including the therapeutic experience (Mallinckrodt et al., 1995). Therapeutic challenges, such as interpreter limitations, can hinder the client's experience in therapy (Mallinckrodt et al.,1995). This may lead to exacerbating previous negative attachment patterns and negatively impacting the client-therapist alliance (Mallinckrodt et al., 1995). Therefore, to further assess the role of the client-therapist relationship, this study assessed if there was a difference in attachment with the therapist given the type of therapeutic services received.

Background of the Study

There are many ways for a group to be defined as having minority status. Collectively, Deaf individuals comprise a linguistic minority (Hamill & Stein, 2011). Further, the general population often classifies people from the Deaf community as being disabled (Dolnick, 1993;

Lightfoot & Williams, 2009; Porter, 1999; Wilson & Schild, 2014). This has contributed to society viewing Deaf individuals as helpless (Clymer, 1995) and the creation of barriers between Deaf individuals and hearing society (Dolnick, 1993).

With the presence of linguistic barriers, Deaf individuals often experience marginalization from hearing society, including their family (Cohen, 2001; Ladd & Lane, 2013). Research suggests there is a strong relationship between a Deaf individual's limited connection with hearing society and the increased prevalence of psychological disorders (Austen, 2010; Clymer, 1995; Wright et al., 2012). This may be attributed to the notion that Deaf individuals are twice as likely as hearing individuals to experience social disconnectedness that contributes to increased anxiety and depression, among other mental health concerns (Batten, Oakes, & Alexander, 2014; Kushalangar et al., 2011; Kvam, Loeb, & Tambs, 2007). Additionally, marginalization can hinder the development of close interpersonal relationships, which may result in attachment concerns (Mikulincer, Shaver, & Berant, 2013). Attachment style is defined as an individual's sense of attachment based off of previous relationships and experiences that impact current and future relationships (Mikulincer et al., 2013). Consequently, attachment style can significantly impact the working alliance between the client and the therapist (Mikulincer et al., 2013).

Due to language and cultural barriers, Deaf individuals are also more likely than hearing individuals to be misdiagnosed during the psychological assessment process (Connolly, Rose, & Austen, 2006; Sheppard & Badger, 2010). As a result, Deaf individuals may not receive the appropriate mental health treatment to assist in reducing symptomology associated with improvements in their quality of life (Brunson & Lawrence, 2002; Cohen, 2001; Gulin et al.,

2014; Wright et al., 2012). Accordingly, having an interpreter in the room may further impede symptom reduction by hindering the development of a strong alliance between the client and the clinician (Connolly et al., 2006; Culroos, 1996).

Problem Statement

Trusting and confiding in someone can be difficult. The difficulty becomes greater when linguistic barriers impede communication while engaging in therapy (Jean, Sinkovics, & Kim, 2010). Individuals who are Deaf rely on an interpreter to correctly translate vital information between the therapist and themselves. The addition of a third-party can make the client feel uncomfortable and hinder alliance between the client and the clinician (Raval & Smith, 2003). Additionally, the inability to have a conversation in a manner that is comfortable for the Deaf individual may limit the individuals' ability to feel safe and comfortable within the therapeutic environment. There is a lack of empirical evidence demonstrating how the use of interpretive versus noninterpretive services influences working alliance and attachment with Deaf individuals.

Working alliance between client and clinician is a significant component in the therapeutic process and correlates with positive treatment outcomes (Horvath & Luborsky, 1993; Kivlighan, 2007; Patterson, Anderson, & Wei, 2014). Research indicates that the client's sense of attachment is a critical component of the client-therapist working alliance (Mallinckrodt et al., 1995). Despite what is known about working alliance and attachment, there is limited research concentrating on Deaf individuals who receive interpretive versus noninterpretive psychotherapy services (Cornes & Napier, 2005). This research study adds to the literature associated with how the nature of service delivery (interpretive versus noninterpretive psychotherapy for Deaf

individuals) is related to the quality of the client-therapist working alliance and attachment. A statistically significant difference between working alliance and attachment scores signify the need for a shift in the nature of psychotherapeutic service delivery for the Deaf community.

Purpose of the Study

This quantitative study was designed to examine if there was a difference in working alliance and attachment between Deaf individuals receiving interpretive versus noninterpretive services. Client perceptions of the strength of working alliance and attachment were assessed via self-report surveys that were distributed to Deaf individuals receiving psychotherapy services. This research was conducted by utilizing two assessments: The Working Alliance Inventory (WAI) (Horvath & Greenberg, 1994) and the Client Attachment to Therapist Scale (CATS) (Mallinckrodt et al., 1995). This research study adds to the literature on how the quality of working alliance and attachment was related to the nature of service delivery (interpretive versus noninterpretive) that Deaf individuals receive.

Research Questions and Hypotheses

The following research questions were developed after an extensive review of existing research in the field of psychotherapy for Deaf individuals, attachment, and working alliance.

Research Question 1: Is there a difference in client perceptions of working alliance as measured by the Working Alliance Inventory when comparing noninterpretive versus interpretive mental health services for Deaf individuals*?*

H_a1: Deaf individuals receiving noninterpretive therapeutic services will report greater perceived client-therapist alliance than Deaf individuals receiving interpretive therapeutic services.

$H_0$1: There is not a difference in the client-clinician alliance between Deaf individuals receiving interpretive versus noninterpretive therapeutic services.

Research Question 2: Is there a difference in client perceptions of working alliance as measured by the CATS, when comparing noninterpretive and interpretive mental health services for Deaf individuals?

H_a2: Deaf individuals receiving noninterpretive therapeutic services will report greater perceived client-therapist alliance than Deaf individuals receiving interpretive therapeutic services.

$H_0$2: There is not a difference in the client-clinician alliance between Deaf individuals receiving interpretive versus noninterpretive therapeutic services.

H_a3*:* Deaf clients with secure attachment styles receiving noninterpretive services will have greater reported alliance with his/her therapist.

$H_0$3*:* There is not a difference between reported attachment style and alliance as it relates to receiving noninterpretive or interpretive services.

Framework

Many theoretical conceptualizations of what constitutes therapy in mental health share a common emphasis regarding the role of the therapist-client relationship (Corey, 2005; Mallinckrodt et al., 1995). Success in psychotherapy has been linked to the presence of a strong working alliance (Patterson et al., 2014). Without the initial development of rapport, the client may not fully engage in the therapeutic process (Bachelor, Meunier, Laverdiere, & Gamache, 2010; Corso et al., 2012). Additionally, the client may place limited energy towards achieving

treatment goals or not return for additional sessions when working alliance and attachment to the therapist is strong (Bachelor et al., 2010; Corso et al., 2012; Mallinckrodt et al., 1995).

The working alliance theory (Bordin, 1979) provided a strong foundation for understanding the importance of the client-therapist relationship. According to Bordin's theory, there is a need to establish a therapeutic relationship to achieve the mutual agreement of treatment goals (Bordin, 1979; Horvath & Greenberg, 1994). Further, the theory suggests that a strong working alliance is essential to positive therapeutic outcomes (Accurso, Hawley, & Garland, 2013; Bordin, 1979).

The attachment theory (Bowlby, 1969) suggested that an individual's experience of attachment throughout early childhood impacts future interpersonal relationships, including the therapeutic relationship (Levy, 2013; Mallinckrodt et al., 1995). Research supports the theory that attachment patterns may significantly impact the working alliance within the client-therapist relationship (Ainsworth, 1989; Mallinckrodt et al., 1995). For the present study, the working alliance theory and the attachment theory were the basis for the hypothesis that interpretive versus noninterpretive therapy services impacted the dependent variables of working alliance and attachment as measured by the WAI (Horvath & Greenberg, 1994) and the CATS (Mallinckrodt et al., 1995).

Nature of the Study

A quantitative survey design was the methodology for this study. A multivariate analysis of variance (MANOVA) was used to assess for significant differences between interpretive and noninterpretive therapy services (Field, 2013). This process assisted in determining if there was a significant difference between the strength of working alliance and attachment given the type of

psychotherapy services provided to Deaf individuals. Quantitative research has shown to be an effective and consistent method used to measure working alliance and attachment (Corso et al., 2012).

Definitions

*Attachmen*t: Attachment is defined as an individual's attachment experience throughout childhood that influences the individual's present relationships (Mallinckrodt et al., 1995). Specific attachment patterns used in the study include: avoidant attachment, secure attachment, and preoccupied attachment (Mallinckrodt et al., 1995; Obegi, 2008)

Interpretive psychotherapy services: Interpretive psychotherapy services include the use of an interpreter during the therapy sessions to assist in the exchange of communication between the client and the clinician (Cornes & Napier,2005).

Noninterpretive psychotherapy services: Noninterpretive psychotherapy services are those in which the service provider is fluent in American Sign Language and does not need an interpreter to communicate with the Deaf client (Storch, 2010). Noninterpretive psychotherapy services providers can either be hearing or D/deaf. The use of term *sign-fluent provider* is used interchangeably with noninterpretive services throughout this document (Storch, 2010).

Working alliance: Working alliance is defined as the ability for two people to work together successfully to progress towards treatment goals (Botella et al., 2008). The working alliance theory encompasses three main constructs: goal, task, and bond (Horvath & Greenberg, 1994).

Assumptions

The following assumptions were considered to minimize the probability of Type I and II error. The first assumption was that participant responses on the survey measures (WAI and CATS) were an accurate representation of the participants perceived alliance and attachment with the therapist. Secondly, the CATS and WAI have not been validated with the Deaf community; however, they are validated in the English language. The CATS and the WAI are written at approximately a fifth-grade reading level to ensure comprehension to the general population (Horvath, 2016; Mallinckrodt, 2016). Therefore, it was assumed that the participants were able to understand the survey items on the CATS and the WAI. Additionally, it was assumed that the participants responded accurately and honestly to survey questions.

Limitations

There were limitations to the generalizability of the results. The study is nonexperimental design. Therefore, the results did not determine if a cause and effect relationship existed. Secondly, a limitation included potential literacy concerns regarding the Deaf individual's ability to understand survey items. Research suggests that the Deaf population reads at approximately a fourth-grade reading level (Powell, 2005; Levine, 2014). Consultation via e-mail with Horvath and Mallinckrodt indicated that the WAI and the CATS were written at approximately a fifth-grade reading level (Horvath, 2016; Mallinckrodt, 2016). Furthermore, a limitation was the use of convenience sampling. The use of convenience sampling limited the ability to adequately represent the Deaf population.

Significance

The inability to have a conversation in a manner that is comfortable for the Deaf individuals may significantly limit their ability to feel safe and content within the psychotherapeutic environment. Accordingly, this research study contributes to the literature related to how the nature of service delivery (interpretive versus noninterpretive) for Deaf individuals impacted the working alliance and attachment with their therapists. The observation of a negative outcome suggested the need for more robust services that accommodate the needs of the Deaf community. This study implied that there is a significant need for social change regarding the demand for more culturally appropriate services for the Deaf.

Summary

This research study assessed if there was a difference in working alliance and attachment between interpretive and noninterpretive psychotherapy services for Deaf clients. This was necessary due to the limited research comparing interpretive and noninterpretive psychotherapy services for Deaf individuals. Due to the gap in research, mental health service providers are not able to determine if interpretive accommodations can be considered the standard for best practice to facilitate the client-therapist relationship and subsequently treatment gains.

Chapter 2 includes a review of existing literature on Deaf culture, mental health for Deaf individuals, Deaf psychotherapy services, and ethical considerations. Chapter 2 also includes a review of existing literature on the working alliance theory and the attachment theory. Chapter 3 includes the methodology that was utilized to assess for differences in working alliance and attachment between interpretive and noninterpretive psychotherapy services. The population and the sampling procedures for the study is also discussed. Chapter 4 includes the data collection

methods, analysis, and results for the study. Chapter 5 includes the interpretation of the data, limitations, and implications for social change.

Chapter 2: Literature Review

Introduction

This literature review provides an overview of Deaf culture and common mental health services available to the Deaf population. There are two options for a Deaf individual accessing mental health care: interpretive and noninterpretive services. The review provides an overview of the benefits and limitations of these services. This review provides the ethical standards as they relate to accommodations to meet the needs of the Deaf. Additionally, this review emphasizes the importance of a strong working alliance and attachment as being a predictor of successful therapy.

Strategy for Searching Literature

To search the literature, academic databases indexing peer reviewed journal articles were utilized, including Academic Search Complete, ERIC, Google Scholar, PsycARTICLES, PsycEXTRA, PsycINFO, and ProQuest. Further access to a subscription to the Journal of Deaf Education Studies was obtained. The Old Dominion University (Norfolk, VA) Online Library provided additional resources through PsycINFO and PsycARTICLES that were not available in the Walden University Online Library. The following key terms were entered into multiple Boolean searches: *deaf, attachment theory, client attachment to therapist, attachment theory* and *working alliance, mental health*, *deaf* and *therapy, counseling*, *therapy, interpretive, noninterpretive*, *interpreters and mental health*, *interpreters* and *miscommunication*, *sign language* and *therapy*, *sign language* and *deaf therapy*, *working alliance, gender* and *therapy, gender* and *working alliance*, *working alliance* and *deaf*, and *working alliance* and *therapy*.

The Deaf Community

Deaf is defined as an individual who is unable to hear spoken language (Mathos, Kilbourne, Myers, & Post, 2009). The Deaf community identifies themselves based on the letter *d* in the word deaf (Lane, 2005; Vernon, 2006; Vernon & Leigh, 2007). A capital *D* in the term Deaf signifies that the individual is culturally deaf and the lower case *d* denotes a medical term, particularly with individuals who become deaf later in life (Cohen, 2001; Dolnick, 1993; Mathos et al., 2009; Vernon & Leigh, 2007; Williams & Abeles, 2004). When an individual becomes deaf later in life, it is commonly referred to as late-deafened (Kashubeck-West & Meyer, 2008).

Cultural Minority

The Deaf community is considered a minority group in the United States (Porter, 1999). The general population tends to perceive Deaf individuals as being disabled or having a handicap (Dolnick, 1993; Lightfoot & Williams, 2009; Wilson & Schild, 2014). Conversely, the Deaf community identifies as being part of a linguistic minority rather than a category of disability (Dolnick, 1993; Lightfoot & Williams, 2009; Wilson & Schild, 2014). In direct contrast to their perception, medical terminology continues to define deafness as a disability (Williams & Abeles, 2004).

Deaf individuals are often viewed by society as helpless and in need of assistance (Clymer, 1995; de Bruin & Brugmans, 2006; Wilcox, 2006) to the point where they are perceived as having an intellectual disability (de Bruin & Brugmans, 2006). Deaf individuals are categorized as having limited english proficiency (LEP) as they do not typically use English to communicate (Powell,2005). English reading literacy is typically lower than expected for their age and grade for Deaf individuals (Powell, 2005). Research suggests that the average Deaf

individual reads at the fourth-grade level (Levine, 2014; Powell, 2005; Vernon & Miller, 2001). However, low literacy levels are less likely the result of a learning disability and more likely a result of American Sign Language (ASL) being their primary method of communication (Vernon & Miller, 2001; Wilson & Schild, 2014). Despite these differences, language plays a vital role in the Deaf culture. As such, ASL replaces traditionally spoken communication that is relied upon by the hearing population (Ladd & Lane, 2013; Powell, 2005).

A sense of belonging is also an important attribute of the Deaf community. Historically, it has been difficult for Deaf individuals to experience a sense of belonging with members of the hearing society (Cohen, 2001; Ladd & Lane, 2013). Helen Keller discussed that deafness has inhibited people from connecting with others (as cited in Dolnick, 1993). The continued disconnection with society implies a need for increased social support. Conversely, there are limited community resources such as stores, organizations, or public offices that provide accommodations for the Deaf to facilitate their involvement with society (Cohen, 2001). The lack of services and accommodations ultimately increases segregation from the hearing community; resulting in more instances of perceived marginalization (Cohen, 2001; Garberoglio, Cawthon, & Bond, 2014; Michael, Most, & Cinamon, 2013). Marginalization has contributed to feelings of vulnerability and learned helplessness within the Deaf community (Batten et al., 2014; de Bruin & Brugmans, 2006). Such feelings of vulnerability have contributed to a decreased motivation to interact with hearing members of society (Batten et al., 2014; de Bruin & Brugmans, 2006).

Discrimination inhibits productivity and growth in society for any minority group. For the Deaf community, it has resulted in a struggle with individual identity and belongingness

within both the Deaf and hearing society (Cohen, 2001; Cornell & Lyness, 2004). As children, Deaf individuals often feel isolated from society as well as from their families (Sheppard & Badger, 2010). An estimated 90% of Deaf individuals are born to hearing parents (National Institute on Deafness and Other Communication Disorder (NIDCD), 2015). Therefore, a high percentage of Deaf children represent and belong to a different culture from their parents. This may increase identity confusion for the Deaf child (Dolnick, 1993). Research has shown that hearing parents often expect their Deaf children to lip-read instead of learning ASL (Sheppard & Badger, 2010), contributing to an increase of identity confusion concerns (Dolnick, 1993). Research indicates that feelings associated with personal identity or belongingness start at a young age and continue to develop throughout adulthood (Cornell & Lyness, 2004). These feelings can contribute to the uncertainty of identity, mental health concerns, and an extreme disconnect from society (Clymer, 1995; Cornell & Lyness, 2004).

Communication

Approximately 500,000 Deaf individuals use ASL as their primary language (Williams & Abeles, 2004). ASL is classified as a minority language (Powell, 2005; Trovato, 2013). The use of ASL has helped minimize communication barriers for the Deaf population. Despite this, there is limited research on the current use of ASL within the hearing community to bridge the gap of communication (Mitchel, Young, Bachleda, & Karchmer, 2006). However, school systems have begun to offer ASL classes as a means to satisfy foreign language requirements (McDermid, 2009; Mitchell et al., 2006), which allows the hearing portion of society to gain more knowledge of the Deaf culture. Communication devices are available to assist Deaf individuals to communicate with hearing society, such as a Text Telephone or Video Relay Services (LaCheen,

2010). While these technologies are available, most community resources do not have them available to assist with communication (Mathos et al., 2009). Despite the increased presence of ASL and communicative devices in mainstream society, communication continues to be a barrier minimizing the ability for Deaf individuals to adequately connect to society (Dolnick, 1993; Mathos et al., 2009; Trovato, 2013).

Deaf individuals often require a companion or interpreter to be with them in the community to assist in eliminating communication barriers with hearing society (Andrade Pereira & De Carvalho Fortes, 2010). Having to depend on others may cause feelings of inadequacy. Additionally, a lack of communication abilities may also negatively impact multiple aspects of daily life which include independent living, employment, and interpersonal relationships (Garberoglio et al., 2014; Michael et al., 2013).

Mental Health for Deaf Individuals

Research suggests that Deaf individuals are twice as likely than hearing individuals to experience mental health difficulties (Batten et al. 2014; Kushalangar et al., 2011; Kvam et al., 2007; Turner, Windfuhr, & Kapur, 2007). Mental health concerns of Deaf children and adults are often overlooked and not properly treated (Cornes & Brown, 2012; Storch, 2010). As such, there is a significant concern that untreated mental illness within the Deaf population is prevalent (Storch, 2010). Moreover, Deaf individuals are at risk of being misdiagnosed due to inappropriate assessment instruments, as well as communication and cultural barriers (Connolly et al., 2006; Hansmann, Saladin, & Fraser-Mendez, 2010, Levine, 2014; Munro & Rodwell, 2009; Sheppard & Badger, 2010). Consequently, Deaf individuals who receive treatment may be at risk for not receiving suitable interventions (Brunson & Lawrence, 2002; Storch, 2010; Wright

et al., 2012). Therefore, it is vital to understand mental health problems within the Deaf community and the services that are available to them.

Research suggests there is a relationship between a Deaf individual's inability to effectively communicate with hearing society and mental health concerns (Austen, 2010; Clymer, 1995; Wright et al., 2012). Deaf individuals experience the same mental health concerns as the hearing population (Williams & Abeles, 2004). However, research indicates that Deaf individuals are more likely to have decreased self-esteem and quality of life than hearing individuals (Fellinger et al., 2005; Garberoglio et al., 2014; Weisel & Kamara, 2005). Additionally, mental health concerns can often cause a delay in cognitive and social functioning (Cupples et al., 2014), leading to more mental health symptomology. Deaf children internalize and externalize their feelings of isolation, resulting in acting-out behaviors, depression, anxiety, and low self-esteem (Batten et al., 2014; Landsberger, Diaz, Spring, Sheward, & Sculley, 2014). Untreated mental health symptoms in childhood increase the probability of mental health concerns throughout adulthood and negatively impact an individual's overall quality of life (Fellinger et al., 2005; Kvam et al., 2007).

There has long been a need for an expansion of mental health services for the Deaf (Clymer, 1995; Cohen, 2001; Levine, 2014). Deaf individuals have been omitted from mental health services that provide necessary communication accommodations to minimize language barriers (Austen & McGrath, 2006; Cohen, 2001; Gerber, 1983). As a result, Deaf individuals are less likely to seek mental health services than hearing individuals (DeVinney & Murphy, 2002; Mathos et al., 2009). Given the fact that mental health treatment has been shown to improve and maintain the quality of life for individuals (Gulin et al., 2014; Kushalangar et al.,

2011), it is imperative that Deaf individuals receive appropriate services to assist with mental health needs (Cohen, 2001). In order to expand the access to mental health care for Deaf individuals, an increase of sign-fluent providers and access to qualified interpreters are necessary to provide appropriate services.

Mental Health Statistics for Deaf Individuals

Deaf individuals are less likely than the hearing population to seek mental health services due to the lack of providers having knowledge of the Deaf culture (Cornell & Lyness, 2004). In the United States, there are approximately 34 million d/Deaf individuals (Horton, Kim, & Mills, 2012). An estimated 35% to 50% of the Deaf population have a mental health issue or intellectual disability (Cupples et al., 2014; Leppo, Cawthon, & Bond, 2014; Mitchell, 2006; Mitchell & Karchmer, 2006). According to research, mental health professionals may have one or more Deaf clients to service throughout their career (Vernon, 2006). This highlights the need for more service providers to be aware of the accommodations that are necessary to serve this community.

Until the middle of the 1960s, there were no mental health services available specifically for Deaf individuals (Vernon, 2006; Vernon & Leigh, 2007). Instead, it was common that Deaf individuals were placed in psychiatric hospitals with others that were unable to communicate via ASL (Vernon & Leigh, 2007). In the late 1990s, mental health services for the Deaf began to expand (Sussman & Brauer, 1999; Vernon, 1995). Even with an expansion in the mid-1990s, there were only 261 deaf and hard-of-hearing programs (educational and mental health) across the nation (Lane, Hoffmiester, & Bahan, 1996). In fact, in 1996, there were only 20 registered psychologists for the Deaf in the United States (Lane et al., 1996). Today, few changes or

advances have been made to increase mental health services for the Deaf (Levine, 2014; Wilson & Schild, 2014) which limits their access to appropriate services (Vernon & Leigh, 2007).

Psychotherapy for the Deaf Population

Research suggests that mental health services for Deaf individuals are insufficient in meeting their clinical needs (Tribe & Lane, 2009). Appropriate training for mental health professionals is necessary if the clinician chooses to work with the Deaf population (Cohen, 2001; Cornell & Lyness, 2004). Training should include knowledge of the Deaf culture and certification in ASL. Andrade Pereira and De Carvalho Fortes (2010) conducted a qualitative study that examined Deaf individuals' feelings and perceptions regarding interactions with health care professionals. The participants disclosed negative perceptions of health care professionals based on their experiences (Andrade Pereira & De Carvalho Fortes, 2010). They reported experiencing a lack of respect, prejudice, and feeling intimidated (Andrade Pereira & De Carvalho Fortes, 2010). These perceptions impacted how they viewed the quality of services received (Dubow, Geer, & Strauss, 1992). These concerns included cultural competence and providing appropriate accommodations, which are discussed next.

Ethical Standards

Many health care providers are often not knowledgeable of the ethical obligations required to provide appropriate accommodations for Deaf individuals (Mathos et al., 2009; Wilcox, 2006). Having accommodations, such as assistive technology devices or interpreters, could assist in making appointments and having access to the clinician. However, many providers had failed at providing the necessary accommodations even when the individual requested one (Jacobs, Shepard, Suaya, & Stone, 2004; Mathos et al., 2009). This is often due to

the cost and availability of specialty devices and interpreter services (Jacobs et al., 2004; Mathos et al., 2009; Perez-Stable & Karliner, 2012). Mental health providers have an ethical obligation to assure such accommodations are made to ensure that competent services are being provided (Gutman, 2005).

According to the Americans with Disabilities Act (ADA, 1990), Section 504, health care service providers are required to make accommodations available to assist with communication barriers (Ali, 2012; ADA, 1990; Humphries et al., 2013; Vernon, 2006). The ADA and the American Psychological Association's (APA) *Ethical Principles* and *Codes of Conduct* (APA, 2010) provide guidance; however, they do not address particular ethical service considerations for working with the Deaf community (Gutman, 2005). The guidelines do not specify accommodations and considerations for each linguistic minority and are vague regarding the requirement of interpretation services (Gutman, 2005).

The Rehabilitation Act, Section 508, indicates that federal agencies should have the appropriate method of communication technology to provide services to individuals with a disability (Federal Communications Commission, 1998; Humphries et al., 2013). Additionally, the Telecommunication Act, Section 255, requires that telecommunication devices should be designed to be compatible with equipment used by individuals with disabilities (Federal Communications Commission, 1996). Although these federal laws are in place, individuals continue to have limited access to appropriate communication methods (Humphries et al., 2013).

Mental health ethical codes also encompass the notion of competence. It is ethically imperative that Deaf individuals have access to clinicians who are culturally competent (Connolly et al., 2006; Searight & Armock, 2013). Cultural competence includes, but is not

limited to, clinical skills, knowledge of culture, and awareness of necessary accommodations to meet the needs of a client (Gutman, 2005). A culturally competent clinician utilizes interventions that are culturally and individually appropriate (Gutman, 2005). A clinician should signify a high level of cultural competence and formulate the treatment to meet the mental health needs of the client (Sehgal et al., 2011; Tummala-Narra, 2015). As such, providers have an ethical obligation to willingly research and become knowledgeable about an individual's culture and background to ensure that culturally competent services are provided (American Psychological Association, 2010; Gutman, 2005).

Services

Deaf individuals seeking treatment for mental health concerns can receive interpretive or noninterpretive forms of therapy. Some clinicians are both sign-fluent and knowledgeable of the Deaf population's needs, eliminating the necessity for the Deaf individual to search for additional service providers (Cornell & Lyness, 2004). If a sign-fluent provider is not available, Deaf individuals must utilize an interpreter in session to communicate with their therapist. Receiving therapy in ASL is often limited, as there are few therapists who are certified in ASL (Cornell & Lyness, 2004). This is a critical component to treatment, as Deaf persons should have the right to receive therapy their language (de Bruin & Brugmans, 2006). Noninterpretive and interpretive services are both valuable to ensure that Deaf individuals have access to therapy services.

Noninterpretive Services. Noninterpretive services are those in which the service provider is fluent in ASL and does not require an interpreter, eliminating the need for a third party to be present. A sign-fluent clinician should also be knowledgeable of the Deaf culture and

the importance of nonverbal communication including the use of body language and gesturing (Cohen, 2001; Crown, 2008). Because a clinician's nonverbal language can significantly impact the therapy session and the relationship with the client (Laungani, 2004), awareness of nonverbal language such as facial expressions, body movement, and hand gestures should be considered throughout the treatment process (Bedi, 2006; Tepper & Haase, 2001). A sign-fluent clinician should be aware of the impact of gestures and can maintain appropriate nonverbal responses to the client (de Bruin & Brugmans, 2006). Deaf individuals have a sense of trust for professionals who make an effort to learn ASL and the Deaf culture (Gutman, 2005; Mathos et al. 2009). This sense of trust is vital in a therapeutic environment. As such, research suggests Deaf individuals prefer to receive therapeutic services from sign-fluent professionals rather than receiving services with someone who have no knowledge of ASL or the Deaf culture (Leigh, Vash, Powers, & Nettles, 2004; Storch, 2010). Although, noninterpretive services are preferred by Deaf individuals, access to this form of treatment is often limited. Therefore, Deaf individuals often seek treatment with an interpreter present.

Interpretive Services. Deaf individuals often have difficulty finding a sign-fluent mental health provider (Cornes & Napier, 2005; Vernon & Leigh, 2007), which results in reliance on interpretive services instead (Cohen, 2001; Vernon & Miller, 2001). Interpretive services are those in which there is an interpreter in the therapy office assisting in the exchange of communication.

Limitations and Barriers of Interpreting

Interpreters play a vital role in bridging the communication gap between the Deaf client and the mental health provider (de Bruin & Brugmans, 2006; Perez-Stable & Karliner, 2012;

Storch, 2010). Accordingly, effective communication minimizes the risk of harm (Andrade Perira & de Carvalho Fortes, 2010). Despite efforts to reduce the risk of harm, there are barriers and limitations to interpretive services. There are a small number of interpreters who are familiar with mental health terminology and concepts used in clinical settings, which warrants a potential concern for misinterpretation (Connelly et al., 2006; Cornes & Napier, 2005). This could result in misdiagnosis and missing pertinent information reported by the client (e.g., suicidal or homicidal information).

The ability to successfully interpret requires knowledge of culture, not just language or mental health linguistics (Morere, Dean, & Mompremier, 2009; Rodgers, Young, Lovell, & Evans, 2013). The majority of interpreters are not Deaf and thus not part of the Deaf culture (McDermid, 2009). Interpreters have to learn the Deaf culture and clinical terminology to provide the most effective services (McDermid, 2009; Porter, 1999; Wilson & Schild, 2014). Therefore, the lack of mental health linguistics and Deaf culture may pose as a limitation during therapy sessions.

Mental health providers may not be aware of the difference between communicating spoken English and ASL (Berke, 2013). Primarily because some of the English vocabularies are not used similarly in ASL and may not be culturally appropriate (Cornes & Napier, 2005). Interpreters must be mindful of communicating the appropriate alternative (Rodgers et al., 2013). For example, words are often shortened accompanied with gestures instead of utilizing complete sentences (Rodgers et al., 2013). This creates a potential limitation, as the clinical context of the message may be misinterpreted or misunderstood.

Interpreter Certification and Ethical Obligations

In order to provide interpretive services, interpreters are registered with the Registry of Interpreters for the Deaf (RID; Cantrell & Owens, 2007; Culroos, 1996; McDermid, 2009). The RID holds interpreters accountable for adhering to a code of ethics (Culroos, 1996). Interpreters are required to have cultural, linguistic, and audiological knowledge (Culroos, 1996). Deaf individuals also have the ability to become Certified Deaf Interpreters (CDI) to assist interpreters with ensuring information is communicated appropriately (Cantrell & Owens, 2007).

Certified interpreters have to abide by ethical obligations to protect confidentiality (Vernon & Miller, 2001) as do the clinicians (APA, 2010). Confidentiality and privacy are important factors within the therapeutic environment (APA, 2010; Jenkins, 2010). When a client feels as if confidentiality and privacy have been breached, it can diminish the alliance (Jenkins, 2010). According to the APA (2010) ethical code 4.01, Maintaining Confidentiality, and 4.04, Minimizing Intrusion of Privacy Mental Health, providers must ensure that they protect an individual's confidentiality and privacy. Client privacy and confidentiality should be readily evaluated when utilizing an interpreter (Ali, 2012). There are many situations in which the interpreter may have provided services to the individual in another setting, which may create conflicts or embarrassment within and outside of the therapy session (Connolly et al., 2006; Culroos, 1996; de Bruin & Brugmans 2006). This may result in the individual withholding pertinent information (Johnson, Block, & Danis, 2014). Although all parties should understand the role of privacy and confidentiality, the client may be reluctant to divulge personal information with the interpreter in the room (Ali, 2012; Johnson et al., 2014).

Misinterpretation Risks

Interpreting within a clinical setting requires significantly more demands in addition to the complexities inherent to ASL. Complications include displaying body language that is congruent to the conversation and limited clinical verbiage within ASL. Misinterpretation can occur when body language and verbiage is interpreted incorrectly; leading to the possibility of negatively impacting the client's therapy (Cornes & Napier, 2005).

Interpreting within a clinical context involves two distinct constructs, comprehension and production (Barlomiejczyk, 2006; Diaz-Galaz, Padilla, & Baja, 2015). Comprehension requires having a sense of knowledge on the topic to relay the message efficiently to the receiving individual (Barlomiejczyk, 2006), as well as the ability to anticipate and chunk information (Diaz-Galaz et al., 2015; Jing, 2013). Anticipation is when the interpreter uses contextual clues to determine what will be communicated next and prepare for the signs that may be needed (Barlomiejczjk, 2006; Diaz-Galaz et al., 2015). The use of contextual clues poses a risk as the interpreter may accidently sign what is anticipated rather than signing the actual statement.

Sign language interpreters typically chunk information to keep up with the rate of the conversation (Barlomiejczjk, 2006; Jing, 2013). When information is chunked, some information may be inadvertently omitted. Omitting information is often not a result of ill intent, but rather a result of condensing phrases for the purpose of a more rapid interpretation process to adequately facilitate the conversation as a third party (Bartlomiejczyk, 2006). When information is condensed, relevant information is at risk of being withheld from the conversation. Research suggests that omission errors are the most common reasons for linguistic inaccuracies during interpretation (Searight & Armock, 2013; Searight & Searight, 2009; Vernon & Miller, 2001).

Although interpreters are taught not to interject, their interpreter's presence cannot easily be ignored (Brunson & Lawrence, 2002). Production is the use of stylistic strategies such as body language to assist in communicating (Bartlomiejczyk, 2006). An interpreter's non-verbal language may assist in delivering the underlying tone of the message (de Bruin & Brugmans, 2006; Porter, 1999). Even the seating arrangement of an interpreter can impact the therapy session (de Bruin & Brugmans, 2006; Landsberger et al., 2014; Simmons, Rosenbaum, & Sheridan, 1996). If the therapist maintains eye contact with the interpreter rather than the client, the client may engage more with the interpreter rather than the clinician (de Bruin & Brugmans, 2006; Landsberger et al., 2014; Simmons et al., 1996).

Additionally, interpreters may be affected by countertransference. It is the interpreter's responsibility only to project the emotions and the spoken words of the client and the clinician (Brunson & Lawrence, 2002; de Bruin & Brugmans, 2006). However, without having an extensive background or training in mental health care, there is increased opportunity for the interpreter's emotions to hinder the progression of the session (Cohen, 2001; de Bruin & Brugmans, 2006). As such, the interpreter's current feelings, emotions, and body language may be easily portrayed to the client (Brunson & Lawrence, 2002; Searight & Searight, 2009).

Third Party Presence

There is also concern that having a third party in the room during therapy may negatively impact the delivery of therapeutic services. If the clinician is not familiar with the process of having an interpreter, the clinician may display discomfort (de Bruin & Brugmans, 2006). This may ultimately hinder the therapeutic relationship because the client may not understand the

source of the clinician's hesitancy or resistance (Cornes & Napier, 2005; de Bruin & Brugmans, 2006).

Literature supports that Deaf families have reported discomfort having an interpreter present in therapy (Wiley, Gustafson, & Rozniak, 2014). Such discomfort during therapy may hinder the alliance built between the clinician and client (Connolly et al., 2006; Culross, 1996). Additionally, research suggests that the clients were unsure who the therapist was, thus resulting in discomfort and the ability to communicate directly to the service provider (Wiley et al., 2014).

Predictors of Success in Therapy

People seek psychotherapy for a multitude of reasons. Regardless of the presenting concerns, it is important that all clients receive appropriate services, including any accommodations to best serve them (ADA, 1990). Many theoretical conceptualizations of what constitutes therapy in mental health share the common emphasis on the role of the clinician-client relationship (Corey, 2005; Corso et al., 2012; Hanson et al., 2002). This common emphasis suggests that the role of the clinician-client relationship is imperative for facilitating positive treatment outcomes (Corey, 2005; Corso et al., 2012; Falkenström, Granstrom, & Holmqvist, 2013; Hanson et al., 2002). It is critical that an individual who participates in therapy feels comfortable and understood (Norfolk, Birdi, & Patterson, 2009). As previously discussed, Deaf individuals have access to interpretive and noninterpretive services as forms of appropriate accommodations. What is less known, is how these accommodations impact the clinical relationship.

Working Alliance

The concept and role of therapeutic alliance between client and clinician were originally formulated by Sigmund Freud (Corso et al., 2012; Freud, 1958; Hinsehelwood, 2012; Horvath & Luborsky,1993). Freud's theory focused on the client's perception of the clinician, trust, and the aspect of working together towards goals (Owen et al., 2013). Greenson (1965) later utilized Freud's foundation of therapeutic alliance and formulated working alliance, which focused on the collaborative relationship between the client and the clinician (Horvath & Luborksy,1993). The terminology of alliance has been used interchangeably as either therapeutic alliance or working alliance (Horvath & Luborsky, 1993). For the purpose of the study, working alliance was the term utilized to refer to the relationship between the client and the clinician.

The working alliance theory provides a strong foundation from which to understand the importance of the client-clinician relationship (Horvath & Luborsky, 1993; Smits, Luyckx, Smits, Stinckens, & Claes, 2015). Working alliance was adopted by Bordin in 1979, who added that the constructs, bond, task, and goal were significant attributes to therapeutic success as well as the client and clinician relationship (Corso et al., 2012; Horvath & Luborsky, 1993; Smits et al., 2015).

Working alliance is defined as the ability for the clinician and the client to have a trusting relationship while working together towards treatment goals (Corso et al., 2012; Hanson et al., 2002). Alliance has been a reliable indicator in predicting positive therapeutic outcomes (Owen et al., 2013). Research supports that it is important to ascertain the client's perception of the alliance as it relates to the therapy services received (Hanson et al., 2002). Without the development of an alliance, the individual may not fully engage in therapy due to having limited

energy towards achieving goals or may never return to therapy (Bachelor, 2013; Bachelor et al., 2010; Corso et al., 2012). Furthermore, effective communication is essential in developing a working alliance (Thompson & McCabe, 2012). The client and the clinician should converse about desired goals and outcomes of therapy services. According to research, Deaf individuals have a difficult time trusting professionals and may be more resistant to developing therapeutic goals (Williams & Abeles, 2004). Clients should be willing and open to the clinician's feedback, yet feel comfortable enough to communicate when they may disagree. Additionally, the client must be motivated and involved in the therapeutic process for therapy to be successful (Rozmarin et al., 2008). The aspect of motivation is similar to the goal and task constructs of the Working Alliance Theory (Horvath & Greenberg, 1994).

Working Alliance: Goal

According to Bordin's (1979) theory, there is a need to establish a therapeutic relationship to achieve the agreement of goals (Horvath & Greenberg, 1994; Imel, Hubbard, Rutter, & Simon, 2013). The goal is the desired outcome of treatment (Horvath & Greenberg, 1994). The ability for the client and the clinician to mutually agree on goals is therapeutic (Bachelor, 2013). Agreement on goals may also assist in enhancing the client's empowerment towards accomplishing stated goals (Bachelor, 2013; Gellhaus Thomas, Werner-Wilson, & Murphy, 2005). When in distress, a client may find it harder to determine necessary goals to assist in promoting change. As such, the ability for the clinician to assist the client in determining desired goals is a powerful aspect of building alliance (Horvath & Greenberg, 1994).

Working Alliance: Task

Task is defined as the actions of the clinician and the client to achieve agreed upon goals (Gellhaus Thomas et al., 2005; Horvath & Greenberg, 1994). These behaviors include specific interventions to help the individual achieve the desired goal (Horvath & Greenberg, 1994; Imel et al., 2013). The clinician plays a vital role in encouraging the client to put forth an active role in determining treatment objectives (Horvath & Greenberg, 1994). Therefore, the client and the clinician must work together to determine what tasks are necessary to promote therapeutic success.

Working Alliance: Bond

Bond refers to the positive relationship between the clinician and the client (Horvath & Greenberg, 1994). The bond between the client and the clinician predominately begins early in the therapy process (Taber, Leibert, & Agaskar, 2011). The relationship between the client and the clinician is based on the client's feelings, trust, and respect towards the clinician (Horvath & Greenberg, 1994; Taber et al., 2011). These feelings coincide with the effort towards creating goals and actively pursuing tasks (Horvath & Greenberg, 1994). Bordin's theory suggests that the alliance between the client and the clinician encompasses the client seeking change and the clinician assisting in that process (Falkenström et al., 2013; Horvath & Greenberg, 1994). A strong working alliance is when the client and the clinician agree to work with a set of goals to achieve the desired outcome (Horvath & Greenberg, 1994).

Research has consistently discussed that working alliance is an important predictor in determining therapeutic success (Falkenström et al., 2013; Gellhaus Thomas et al., 2005; Hanson et al., 2002). It is important to note that a few studies have indicated that alliance is not a significant predictor of successful therapy (DeRubeis & Feeley, 1990; Falkenström et al., 2013;

Puschner, Wolf, & Kraft, 2008). However, these particular studies employ small samples that may not necessarily be generalizable (DeRubeis & Feeley, 1990; Falkenström et al., 2013; Puschner et al., 2008). Studies have presented that there may not be a direct connection between alliance and client outcomes (DeRubeis, Brotman, & Gibbons, 2005). Such studies argue that other extraneous variables may have had an impact on the therapeutic outcomes aside from the direct relationship (DeRubeis et al., 2005). Despite such research, working alliance has continuously been supported to be a strong predictor towards therapeutic success. Therefore, this study sought to determine if there was a difference in achieved alliance between interpretive and noninterpretive services for Deaf individuals.

Attachment Theory

The attachment theory was developed by John Bowlby (1969) initially as a means to understand the mother-child relationship (Elkins, 2016). The attachment theory suggests that relationship patterns that develop during infancy continue to affect relationship experiences throughout adulthood (Elkins, 2016; Fitton, 2012; Skourteli & Lennie, 2011; Zilberstein, 2014). Research suggests that early attachment patterns may also affect the therapeutic relationship (Dozier, Stovall-McClough, & Albus, 2008; Levy, 2013; Mallinckrodt et al., 1995; Mallinckrodt & Jeong, 2015; Salcuni, 2015; Skourteli & Lennie, 2011). The client-therapist relationship imitates aspects of the caregiver relationship, such as emotional comfort, affection, and security (Holmes, 1999; Skourteli & Lennie, 2011). As such, if these relational needs are not met, the individual may have attachment concerns within interpersonal and professional relationships (Skourteli & Lennie, 2011; Zilberstein, 2014). Research suggests that Deaf individuals experience interpersonal barriers from society and from their family members (Cornell &

Lyness, 2004; Sheppard & Badger, 2010). Due to this increased sense of disconnection from society (Cohen, 2001; Ladd & Lane, 2013), Deaf individuals may develop unhealthy attachment patterns that may impact the client-therapist working alliance.

The attachment theory encompasses three constructs, secure attachment, avoidant attachment, and preoccupied attachment (Mallinckrodt et al., 1995; Skourteli & Lennie, 2011). Research suggests that attachment style has an effect on the alliance between the client and the therapist (Levy, 2013; Mallinckrodt et al., 1995; Mallinckrodt & Jeong, 2015; Obegi, 2008; Salcuni, 2015; Skourteli & Lennie, 2011). John Bowlby's model suggests that during therapy, both the client's and clinician's sense of security is essential for successful therapeutic interventions (Mallinckrodt & Jeong, 2015; Mikulincer, Shaver, & Berant, 2013).

Secure Attachment

Secure attachment is the emotional bond between two people (Elkins, 2016). Secure attachment suggests that an individual feels a sense of safety relying on others for protection and support (Mikulincer et al., 2013). Individuals who have reported secure attachment also reported a positive working alliance within the client-therapist relationship (Mallinckrodt et al., 1995; Skourteli & Lennie, 2011). Research suggests the client may have a lack of motivation to work towards achieving therapeutic goals without a strong bond with the therapist (Obegi, 2008).

Avoidant Attachment

Avoidant attachment is when an individual lacks confidence and consistently pursues reassurance from a person as a means to overcome insecurity (Obegi, 2008). Research suggests that avoidant attachment patterns are correlated with a sense of distrust within personal relationships (Mikulincer et al., 2013). Individuals with avoidant attachment are also likely to be

emotional independent and do not easily emotionally invest in others (Mikulincer et al., 2013). Individuals who reported high levels of avoidant attachment reported less positive alliances within the client-therapist relationship (Mallinckrodt et al., 1995; Skourteli & Lennie, 2011).

Preoccupied Attachment

Preoccupied attachment is when the individual desires to have more involvement with another individual (Mallinckrodt et al., 1995). In the therapeutic setting, this desire may include the individual wanting to have a relationship beyond the therapeutic dynamic (Mallinckrodt et al., 1995). Research suggests that individuals with high scores of preoccupied attachment reported to have a positive working alliance within the client-therapist relationship (Mallinckrodt et al., 1995; Skourteli & Lennie, 2011). Although positive working alliance was reported, research indicated that the client had difficulty with creating and completing therapeutic goals (Mallinckrodt et al., 1995; Skourteli & Lennie, 2011).

Measuring Working Alliance and Attachment

Outcome measures are frequently used to assess working alliance within the therapy setting (Jackson & Furnham, 2000). Working alliance is primarily measured by utilizing self-report inventories (Falkenström, Hatcher, Skjulsvik, Larsson, & Holmqvist, 2015). Research has evaluated the client and the clinician views of working alliance with mental health settings using a variety of instrumentation (Bachelor, 2013); however, the WAI is the most widely used (Falkenström et al., 2015).

The CATS is a relatively new measure that measures alliance via attachment patterns within the client-therapist relationship (Mallinckrodt et al., 1995). Research suggests that the CATS measures different constructs of the client-therapist relationship when compared to the

WAI (Mallinckrodt et al., 1995). Therefore, it provides a comprehensive outlook on potential differences between interpretive and noninterpretive services.

Working Alliance Inventory

Although there is not a validated measure to assess therapeutic outcomes particularly for Deaf individuals, the WAI has been shown to be valid across many distinct cultures and languages (Horvath & Greenberg, 1994). As such, it was expected to be effective in assessing alliance within the Deaf population. Reliability and validity, as well as clinical implications of the WAI, are discussed further in chapter 3.

Client Attachment to Therapist Scale

The CATS is a valid and reliable measure that assesses the client-therapist relationship based on the foundations of the attachment theory (Mallinckrodt et al., 2015). The CATS has been utilized to evaluate alliance and therapeutic outcomes within the psychotherapy setting (Mallinckrodt et al., 1995; Mallinckrodt & Jeong, 2015; Skourteli & Lenni, 2011) The CATS reliability and validity, as well as clinical implications of the CATS, is discussed further in chapter 3.

Demographic Questionnaire

Along with the standardized instruments, participants completed a demographic questionnaire that was developed for the purpose of the study. The questionnaire assesses for gender, age, Deafness, the number of sessions received, and the type of services (interpretive or noninterpretive services) received. Implications for the questionnaire are discussed more in chapter three.

Summary

Overall, this literature review suggests that there is a significant need for more research targeted towards understanding the client-therapist relationship dynamics between available therapeutic services for the Deaf. Deaf individuals continue to have limited access to mental health services. Therefore, it was necessary to determine if there was a difference of the development of working alliance and attachment between interpretive or noninterpretive services for the Deaf.

Chapter 3: Research Method

Introduction

The purpose of this study was to assess the difference in working alliance and attachment for Deaf clients receiving either interpretative or noninterpretive mental health services. This chapter focuses on the methodological considerations for the research study. The rationale for the research design, population, sampling strategy, instrumentation, and analysis are discussed. Furthermore, this chapter includes validity and ethical considerations.

Research Design and Rationale

A quantitative between-group, nonexperimental research procedure was the methodology for this study. Research suggested that a quantitative design was an effective means to analyze data received from the WAI and the CATS (Corso et al., 2012; Ryan, Safran, Doran, & Muran, 2012). Further, a nonexperimental design was employed because this type of research has a high level of external validity. Thus, indicating that it can be generalized to a larger portion of the Deaf population who receive mental health services.

Deaf individuals often require some form of communicative accommodation to benefit from therapy and research suggests that Deaf individuals have adverse outcomes associated with not receiving appropriate psychotherapy accommodations (Andrade Pereira, & De Carvalho Fortes, 2010; Dubow et al., 1992). Therefore, this research assisted in understanding the clinical implications of how working alliance and attachment impacted Deaf clients who receive either interpretative or noninterpretive mental health services.

Methodology

The methodology of the research included a self-report survey design with quantitative analysis. The following includes the chosen population, sampling procedures, recruitment process, data collection, instrumentation, and data analysis for the study.

Population

The targeted population of the study included Deaf individuals who were 18 years of age and older. Culturally Deaf (Deaf at birth) participants were selected for the study, rather than individuals who were diagnosed with deafness later in life. This was to ensure that the Deaf culture was properly represented in the study. Furthermore, the population included individuals who were receiving psychotherapy services at the time of survey completion.

Sampling and Sampling Procedures

Sampling Strategy. A nonprobability, convenience sampling procedure was used to recruit study participants. Convenience sampling is a nonprobability sampling technique used to obtain participants who were available and willing to complete the surveys (Frankfort-Nachmias & Nachmias, 2008; Zechmeister, Zechmeister, & Shaughnessy, 2001). In order to obtain a convenience sample, correspondence with State Associations of the Deaf Affiliates (all fifty States) and Deaf Organizations (specifically, the American Deaf Association, Deaf Advocacy, National Association of the Deaf, National Institute on Deafness and other Communication Disorders, Hands and Voices, and Deaf and Hard of Hearing Alliance) were contacted via electronic mail (Appendix A) to solicit participants who met all inclusion criteria. The organizations that agreed to participate in sharing the study within the Deaf community were provided a letter of cooperation (Appendix B) which included the SurveyMonkey link. The

SurveyMonkey link included the informed consent, debriefing procedures (Appendix C), demographic questionnaire (Appendix D), the WAI (Appendix E), and the CATS (Appendix G) surveys.

Power Analysis. Power analysis was utilized to calculate the effect size, alpha level, and power level for the study based on the number of data points included in the measures. G*Power 3.1.9.2 Statistical Power Analysis (Faul, Erdfelder, Buchner, & Lang, 2009; Faul, Erdfelder, Lang, & Buchner, 2007) was used to determine this information. To support empirical validity of a MANOVA, a power analysis was conducted; a sample of 28 was required to achieve an actual power of .80 and a large effect size of .40 (Cohen, 1992; Faul, Erdelder, Buchner, Lang, 2013; Faul et al., 2009; Faul et al., 2007). A large effect size was used to calculate the estimated sample size to ensure that the results of the power analysis provided a number of participants required to adequately represent the population for the study (Faul et al., 2013). Utilizing an actual power of .80, the total sample size equaled 28 (N= 28) with each group consisting of 14 participants (n = 14) (Faul et al., 2009; Faul et al., 2007).

Sample Size. To achieve empirical validity utilizing a large effect size (Cohen, 1992; Faul et.al., 2013) the sample size of 28 was required. Therefore, there were at least 14 participants in each independent group (interpretive and noninterpretive psychotherapy service) (Faul et al., 2009; Faul et al., 2007).

Procedures for Recruitment, Participation, and Data Collection

Providing a survey online was expected to be a quick and effective method to reach the most individuals within the Deaf community. Participants were recruited utilizing State Association of the Deaf Affiliates (all fifty States) and Deaf organizations who chose to

participate in the recruitment process. Each individual recruited received a participant invitation letter (Appendix I) with the link via SurveyMonkey, which included the informed consent and documentation about the purpose of the research study (to assess working alliance between interpretive and noninterpretive psychotherapy services for Deaf individuals). Additionally, the participants were informed that the assessment was completely anonymous (identifying information was not collected) and the time frame to complete the two surveys (approximately 50 minutes). The participants were reminded that their participation was entirely voluntary and that they could discontinue their participation at any time during the administration without penalty. The participants who exited before completion of both surveys were not included in the analysis.

A demographic questionnaire was utilized to gather information such as Deafness, the number of sessions, gender, age, and with the type of services received. I developed the demographic questionnaire in order to obtain general information (Appendix D) from participants in the study and to ensure the population was accurately represented. The demographic questionnaire was completed utilizing SurveyMonkey capabilities to screen for individuals that were receiving mental health services, culturally Deaf, and 18 years of age or older. Upon clicking the link, the participant was asked to select ‘Yes’ or ‘No’ regarding if the participant was culturally Deaf, 18 years of age or older, and if the participant was receiving psychotherapy services. If the participant selected ‘Yes’ the link proceeded with the informed consent and surveys. If the participant selected ‘No’ the link did not continue to the informed consent and surveys. Once the participant gave consent, as well as meeting all inclusion criteria,

he/she proceeded to the link to complete the two surveys: CATS (Mallinckrodt et al., 1995) and WAI (Horvath & Greenberg, 1994).

Debriefing procedures were provided immediately after the participant completed the surveys. Debriefing procedures included resources to contact their local state Deaf Association Affiliate and information to find a sign-fluent therapist, if desired (Appendix C).

Instrumentation and Operationalization of Constructs

Independent Variable: Type of Service Received

Interpretive Psychotherapy Services. Interpretive services are those in which an individual is receiving psychotherapy services by a therapist who does not use ASL and utilizes a certified sign language interpreter to communicate with the client.

Noninterpretive Psychotherapy Services. Noninterpretive services are those in which a Deaf individual is receiving services from a sign-fluent ASL therapist.

Dependent Variables: Working Alliance and Attachment

Working Alliance Inventory. Although there was not a specific validated measure to assess working alliance for Deaf individuals, the WAI has been shown to be reliable and valid across many different cultures and languages (Horvath & Greenberg, 1994). As such, it was expected to be effective in assessing alliance within the Deaf population. The WAI is a 36-item Likert measure (Bachelor, 2013) that was developed in 1979 (Horvath & Greenberg, 1994) (Appendix E). It was developed based on Bordin's (1979) theory of working alliance. The WAI assesses three main constructs that are theorized to underlie the working alliance theory: task, bond, and goal (Bachelor, 2013; Horvath & Greenberg, 1994). The *goal* subscale measures the client and the clinician agreement on therapeutic goals and the desired outcome of therapy

(Hanson et al., 2002). The *task* subscale measures the agreement of effort between the client and the clinician working towards implemented goals (Hanson et al., 2002). The *bond* scale measures the trust, acceptance, and confidence within the therapeutic relationship (Hanson et al., 2002).

The WAI has been used globally as a reliable and valid outcome measure (Hanson et al., 2002; Horvath & Greenberg, 1994). The WAI has been revised only once from a 5-point Likert rating scale to a 7-point Likert scale to increase the range of the response options (Horvath & Greenberg, 1994). The WAI has demonstrated high internal consistency reliability, with a Cronbach's Alpha ranging from .8 to .9 (Falkenström et al., 2015; Horvath & Greenberg, 1994; Lee, Neimeyer, & Rice, 2013, Smits et al., 2015). In order to ensure content validity, the constructs (bond, task, and goal) were repeatedly assessed to ensure the scales represented the working alliance theoretical foundation (Horvath & Greenberg, 1994). Based on research utilizing subscale items as well as the whole scale, the WAI adequately measures its constructs of bond, task, and goal as a strong predictor of therapeutic outcomes (Bachelor et al., 2010; Horvath & Greenberg, 1994; Lee et al., 2013).

The WAI has also been used to determine correlation among other therapeutic outcomes measures, such as the Counselor Rating Form, Helping Alliance, and the Vanderbilt scales (Horvath & Greenberg, 1994). Horvath and Greenberg (1994) reported covariance with these instruments ranging between 12% -71%. Notable correlations on the subscale level suggests a 37% covariance average, suggesting that not all outcome measures predict similar constructs (Horvath & Greenberg, 1994). Research indicates that the WAI's discriminant validity was less correlated with the Counselor Rating Form (Horvath & Greenberg, 1994). The Counselor Rating Form and the WAI measure different formulations of relationship outcomes (Horvath &

Greenberg, 1994). I sent a permission request letter to the publisher via online submission as requested on their website. Permission to use the WAI for this research study was granted on September 3, 2015 (Appendix F).

Client Attachment to Therapist Scale. The CATS was developed in 1995 to assess the client-therapist relationship based on John Bowlby's (1969) attachment theory (Mallinckrodt et al., 1995; Mallinckrodt & Jeong, 2015). The CATS is a 36- item Likert measure utilizing a 6-point response scale ranging from strongly disagree to strongly agree (Mallinckrodt et al., 1995; Appendix G). The CATS includes three constructs: secure attachment, avoidant/fearful attachment, and preoccupied/merger attachment. Secure attachment measures perceptions of responsiveness and comfort from relationships (Mallinckrodt et al., 1995). Avoidant attachment measures symptoms of anxiety in relationships which cause distress and discomfort (Mallinckrodt et al., 1995). Preoccupied attachment is when someone may be receiving inconsistent responsiveness and emotional comfort from others (Mallinckrodt et al., 1995). Research suggests that attachment patterns have an impact on how the client responds and perceives the therapeutic relationship (Mallinckrodt et al., 1995; Mallinckrodt & Jeong, 2015).

Although the CATS is a relatively new measure, research suggests that it is reliable and valid (Mallinckrodt et al., 1995). Research suggests that the CATS subscales are internally consistent, indicating that it measures the constructs that it is intended to measure (Mallinckrodt et al., 1995). Research suggests that the CATS has sufficient test and retest reliability (r =. 63) (Mallinckrodt et al., 1995). Concurrent validity is reported as having a correlation with the WAI ranging from r =.82 to r = .07 (Mallinckrodt et al., 1995). Research suggests that the correlation is specifically noted between the CATS and the WAI bond subscale (ranging r =.19 to r =. 77)

which focuses on the client-therapist relationship (Mallinckrodt et al., 1995). I sent a request for permission to use the CATS measure to the publisher of the CATS via e-mail. Permission to use the CATS for this research study was granted on December 15, 2015 (Appendix H).

Data Analysis Plan

The data analysis plan began with the recruitment of participants (minimum *N*= 28). It was anticipated to recruit at least 14 participants in each therapy group (interpretive and noninterpretive psychotherapy recipients). It was anticipated that the survey would be available no longer than 1 month in order to collect at least 28 total participants. After the month deadline, the link would be deactivated if the 28 participants were recruited. The raw data from SurveyMonkey was downloaded on a personal laptop. The data were converted into a statistical software analysis program, Statistical Package the Social Sciences (SPSS, version 22). In order to investigate the relationship between alliance and services received, a Multivariate Analysis of Variance (MANOVA) was conducted.

Research Questions

Research Question 1: Is there a difference in client perceptions of working alliance as measured by the Working Alliance Inventory when comparing noninterpretive versus interpretive mental health services for Deaf individuals?

H_a1*:* Deaf individuals receiving noninterpretive therapeutic services will report greater perceived client-therapist alliance than Deaf individuals receiving interpretive therapeutic services.

H_01*:* There is not a difference in the client-clinician alliance between Deaf individuals receiving interpretive versus noninterpretive therapeutic services.

Research Question 2: Is there a difference in client perceptions of working alliance as measured by the CATS, when comparing noninterpretive and interpretive mental health services for Deaf individuals?

H_a2*:* Deaf individuals receiving noninterpretive therapeutic services will report greater perceived client-therapist alliance than Deaf individuals receiving interpretive therapeutic services.

$H_0$2*:* There is not a difference in the client-clinician alliance between Deaf individuals receiving interpretive versus noninterpretive therapeutic services.

H_a3*:* Deaf clients with secure attachment styles receiving noninterpretive services will have greater reported alliance with his/her therapist.

$H_0$3*:* There is not a difference between reported attachment style and alliance as it relates to receiving noninterpretive or interpretive services.

A MANOVA was used to assess if there were differences between the dependent variables (WAI and CATS) and the independent variable (type of services received: interpretive and noninterpretive services).

Threats to Validity

The CATS and the WAI required participants to provide self-reported responses on their perceptions of the quality of the alliance and attachment with their clinician. The CATS and the WAI are well researched as valid self-report inventories (Horvath & Greenberg, 1994; Mallinckrodt et al., 1995). Despite this, there were external and internal factors that may have impacted validity on participant responses.

External Validity

External validity concerns occur when the population is not properly represented (Frankfort-Nachmias & Nachmias, 2008). To minimize this risk, SurveyMonkey settings assisted in controlling to ensure Deaf individuals over the age of 18 currently receiving therapy services were participating. However, there was a possibility that participants were not honest when completing the survey. External validity also occurs when the setting of the study was not held in a natural setting or in a setting that the researcher structured (Frankfort-Nachmias & Nachmias, 2008). Although this study was not held in a structured environment, it was expected that the participants completed the surveys within a natural setting (e.g., home or local library). Additionally, it was assumed that other variables may have impacted working alliance within the therapeutic relationship (e.g., gender, age, and the number of sessions received). Demographic information was collected and taken into consideration as a possible effect contributing to alliance.

Internal Validity

Extrinsic and intrinsic factors may have posed a threat to internal validity. Extrinsic factors may occur within a nonexperimental research design. Extrinsic factors are when differences between participants exist between groups prior to the study (Frankfort-Nachmias & Nachmias, 2008). Intrinsic factors include changes that occurred during the course of the study (Frankfort-Nachmias & Nachmias, 2008). The survey took no more than approximately 1 hour to complete, reducing the effect of maturation and experimental morality. Threats of instrumentation did not occur due to the completion of the items occurring once. Another possible threat to internal validity was an unequal number of participants within both groups who

participated. Additionally, the WAI and the CATS have not been generalized to the Deaf population; as such, literacy levels and understanding of the survey questions were considered to be a possible threat to validity.

Participant Ethical Considerations

Approval to conduct the research was obtained through the Walden University Institutional Review Board. Walden University's approval number for this study was 08-09016-0349912. Participants remained completely anonymous and only basic demographic information was collected (age, gender, Deafness, length of therapy services, and type of therapy services received) to ensure the population was adequately represented. Participants received informed consent about the study within the SurveyMonkey link. The use of SurveyMonkey allowed the researcher to not have access or knowledge of the research participants (SurveyMonkey, 2016). Additionally, participants had the ability to share the link with other potential participants outside of the agency listserv. SurveyMonkey is a highly reputable company that ensures reliability, privacy, and network security (SurveyMonkey, 2016). Additionally, the study was completely voluntary and without compensation for participation. Due to the study being non-experimental there were minimal concerns relating to the direct treatment of the participants. The data were stored on a computer file and a Universal Serial Bus (USB) disk drive which was encrypted with a password. The data will be saved for a minimum of seven years (Drogin, Connell, Foote, & Sturm, 2010).

Summary

The research study used a quantitative survey method utilizing the Client Attachment to Therapist Scale and the Working Alliance Inventory to assess for differences of working alliance

and attachment between interpretive and noninterpretive therapy services for the Deaf. A MANOVA was used to assess if there was a statistically significant difference between working alliance and attachment for Deaf clients receiving interpretive versus noninterpretive psychotherapy services. It was hypothesized that individuals receiving noninterpretive psychotherapy services had a stronger working alliance and attachment than individuals receiving interpretive services.

Chapter 4: Results

Introduction

The purpose of the study was to assess differences in working alliance and attachment for Deaf individuals who received interpretative versus noninterpretive therapy services. The independent variable was defined as the type of therapy services the individual received: interpretive and noninterpretive. The dependent variable for the study was working alliance and attachment as measured by the WAI and the CATS (Horvath & Greenberg, 1994; Mallinckrodt et al., 1995). The WAI consisted of the following subscales: task, bond, and goal (Horvath & Greenberg, 1994). The CATS consisted of the following subscales: avoidant, preoccupied, and secure (Mallinckrodt et al.,1995). Both the CATS and the WAI are designed to measure working alliance within the client-therapist relationship (Horvath & Luborksy,1993; Mallinckrodt et. al., 1995). A multivariate analysis of variance (MANOVA) was used to assess for significant differences between interpretive and noninterpretive therapy services. A MANOVA was chosen as an effective instrument to use due to the ability to evaluate differences between dependent variables with an independent variable (type of therapy service) that has multiple levels (interpretive and noninterpretive). This chapter focuses on the data collection efforts, analysis, and results of the study.

Research Questions

Research Question 1: Is there a difference in client perceptions of working alliance as measured by the Working Alliance Inventory when comparing noninterpretive versus interpretive mental health services for Deaf individuals?

H_a1: Deaf individuals receiving noninterpretive therapeutic services will report greater perceived client-therapist alliance than Deaf individuals receiving interpretive therapeutic services.

$H_0$1: There is not a difference in the client-clinician alliance between Deaf individuals receiving interpretive versus noninterpretive therapeutic services.

Research Question 2: Is there a difference in client perceptions of working alliance as measured by the CATS, when comparing noninterpretive and interpretive mental health services for Deaf individuals?

H_a2: Deaf individuals receiving noninterpretive therapeutic services will report greater perceived client-therapist alliance than Deaf individuals receiving interpretive therapeutic services.

$H_0$2: There is not a difference in the client-clinician alliance between Deaf individuals receiving interpretive versus noninterpretive therapeutic services.

H_a3: Deaf clients with secure attachment styles receiving noninterpretive services will have greater reported alliance with his/her therapist.

$H_0$3: There is not a difference between reported attachment style and alliance as it relates to receiving noninterpretive or interpretive services.

Data Collection

Participants were recruited by utilizing a variety of community organizations which included state associations, Alabama Institute for the Deaf and Blind, Gallaudet University, multiple counseling and church organizations who serve the Deaf population in the United States, LinkedIn, and Facebook. Participants were either sent an e-mail, received a hard-copy, or

accessed the SurveyMonkey link via social media (LinkedIn or Facebook). The organizations who decided to participate disseminated the survey (SurveyMonkey link) via email, social media, or the hard-copy to potential participants. The power analysis indicated a minimum of 28 participants were required to complete the study with 14 in each therapy group (interpretive and noninterpretive psychotherapy recipients).

Recruitment of participants and the collection of data ran from August 2016 through February 2017. This surpassed the proposed 1-month time frame due to limitations in receiving completed survey responses. To increase participant responses, changes were made to the data collection process. These changes included receiving additional Institutional Review Board (IRB) approval to mail-out packets of surveys with the participation invitation letter (Appendix J), organization participation letter (Appendix K), informed consent, survey, and debriefing procedures. Individuals who received a hard-copy of the survey also had the choice to complete the survey online or to mail in the copy with a prestamped envelope to a private P. O. box. The participants were provided self-addressed and stamped envelopes to ensure that they would experience no personal financial expense while completing the survey. Additional IRB approval was granted to access organizations to assist in the recruitment of participants through social media (i.e., Facebook and LinkedIn). IRB approval was also obtained for organizations to announce the study to a large group of individuals and to verbally inform potential participants how to access the survey.

Demographic Information

A demographic questionnaire was utilized to screen for inclusion criteria to ensure the population was accurately represented. Participants were required to be culturally Deaf, 18 years

of age or older, and currently in therapy services to be included in the study. A total of 47 participants accessed the online survey link via e-mail invitation, Facebook, or LinkedIn. Participants who accessed the online survey link were required to respond to demographic information before completing the survey. The SurveyMonkey link ended the survey automatically if individuals did not meet the inclusion criteria. This assisted in ensuring that individuals who did not meet criteria did not have access to the online survey. A total of 27 participants returned the hard copy via U.S. Mail. I reviewed the returned hard copies to determine if the participants met inclusion criteria. Although the informed consent included the inclusion criteria, individuals who did not meet criteria attempted to participate in the study. Out of the 74 participants, 35 participants did not meet inclusion criteria based on their responses from the demographic questionnaire and were deleted prior to analysis. A total of 39 participants met the inclusion criteria and were included in the study.

Demographic characteristics of the participants are shown in Table 1. The majority of the participants were between the age range of 50-59, 30.8% (n = 12). The modal age group was within 30-39 years, 23.1% (n = 9). Participants between the ages of 40-49 represented 2.6% of the sample (n = 1). Overall, participant age ranges were not adequately represented in the sample. The participants were asked their age in ranges rather than their specific age. As a result, the mean age could not be determined.

On the demographic questionnaire, participants had the choice between male and female. Participants were not required to answer this question; however, each participant chose to respond. Gender was relatively equally represented. Females represented 53.5% of the sample (n =21),while males represented 46.2% of the sample (n =18).

The independent variable of the study was the type of therapy services an individual received (i.e., interpretive or noninterpretive). The types of services received were relatively equally represented. Interpretive services represented 48.7% of the sample (n =19). Participants who received noninterpretive services represented 51.3% of the sample (n =20). Participants were asked to report the length of time they have received therapy services. The lengths were provided in ranges; therefore, an exact mean could not be determined. Participants who reported receiving therapy services for longer than 5 months represented 48.7% of the sample (n = 19). Participants who reported receiving therapy services between 15 months represented 23.1% of the sample (n = 9). Individuals who reported receiving therapy for less than 1 month represented 23.1% (n = 9) of the sample.

Table 1
Frequencies of Demographic Variables

Variable	Category	*n*	Percentage
Age	18-20	4	10.3%
	21-29	6	15.4%
	30-39	9	23.1%
	40-49	1	2.6%
	50-59	12	30.8%
	60 or Older	7	17.9%
Gender	Male	18	46.2%
	Female	21	53.8%
Therapy Service	Interpretive	19	48.7%
	Noninterpretive	20	51.3%
Length of Service	Less than 1 month	9	23.1%
	Between 1-5 months	11	28.2%
	Longer than 5 months	19	48.7%

Assumptions

An evaluation of the assumptions of a MANOVA was conducted to assess the validity prior to proceeding with the analysis. I inspected the data for homogeneity of covariance among the dependent variables (Field, 2013; Green & Salkind, 2011). The data were reviewed for equality across participant groups (Field, 2013; Green & Salkind, 2011). The assumption of random sampling was also inspected (Field, 2013; Green & Salkind, 2011). Furthermore, I also inspected the data for multivariate normality (Field, 2013; Green & Salkind, 2011).

Working Alliance Inventory

Box's test of equality of covariance matrices evaluates the assumption of homogeneity of covariance across the dependent variables using $p < .001$ as a criterion (Field, 2013; Green & Salkind, 2011). There was not a significant concern as Box M (10.55) was not significant, F (6,9851.655) = 1.60, p = .142. This indicated that the covariance of matrices was equal across groups. Results of the Box test indicated the assumption of homogeneity has been met and the Wilk's Lamda was an appropriate test to use (Field, 2013).

Levene's test of equality of error variances evaluates the assumption that each variable is equal across the participant groups (Field, 2013; Green & Salkind,2011). The results indicated that the bond subscale was not significant, F (1,37) = 2.99, p = .09. This indicated that the assumption has been bet for the bond subscale (Field, 2013). This strengthened the assumption that the multivariate test statistics were robust for this subscale. The Levene's test indicated that the task subscale was significant, F (1,37) = 6.11, p = .02. The results indicated that the goal subscale was significant, F (1,37) = 6.55, p = .02. Overall, the Levene's test results indicated that the assumption was violated for the task and goal subscales (Field, 2013). The violation of this test may have been due to the unequal group sizes, which caused a mildly distorted error rate (Finch, 2005; Vallegjo & Ato, 2012). Despite the violation of the two subscales, the assumption for the Box's test of covariance was met. This suggested that the MANOVA could still be used; however, due to the robustness of the properties of test criteria, the univariate settings should be considered to further assess the data (Finch, 2005; Vallegjo & Ato, 2012).

In order to meet the assumption that each individual response was independent from another entry, I used random sampling. Individuals were only allowed to access the survey

online once as a means to prevent duplicate survey entries. Therefore, the score on a variable for any one participant was independent of the scores collected by all other participants. This suggested that another participant's score did not influence other scores. This suggested that the assumption of independence was met.

Normality was examined via visual inspection of histograms (Appendix L) and the calculation of skewness and kurtosis (Grimm & Yarnold, 1995). The degree of skewness was calculated and converted into *z* scores. The skewness and kurtosis values for the dependent variables are shown in Table 2. According to Kim (2013), skewness and kurtosis *z*-score levels should be between -1.96 to 1.96. The task subscale was normally distributed, with skewness of -.47 and kurtosis of .93). The bond subscale was not normally distributed with skewness of -2.42 and kurtosis of 3.69. The goal subscale suggested that it was normally distributed and asymmetrical, with a skewness of -1.71 and a kurtosis of 2.72. Although there were moderate concerns with skewness and kurtosis, the data were not transformed because the variance in the sample was more likely a reflection of the distribution between the variables within this population (Doane & Seward, 2011). Additionally, based on the sample size, the distributions between the subscales are likely due to the actual occurrence of differing characteristics between the independent variables (Doane & Seward, 2011).

Table 2

Skewness and Kurtosis Z-Score Values for Dependent Variable Scales

		Skewness	Kurtosis
WAI			
	Task	-.47	.93
	Bond	-2.42	3.69
	Goal	-1.71	2.72

Furthermore, the Kolmogorov-Smirnov test of normality was not significant for the bond and goal subscale scores. This indicated that the assumption of the normality of scores for these two scales was met. However, the task subscale scores were significant, indicating a statistically significant departure from normality for scores on this scale.

To further assess for outliers, descriptive stem-and-leaf plots were generated (Appendix N). Based on the results, it appeared that two interpretive service participants exhibited an interquarterly range that was >3 on the task subscale. Review of the stem-and-leaf plots indicated the outliers affected one out of the three WAI subscales. The same outliers were not found in the goal and bond subscale. Additionally, the review of the multivariate normality indicated moderate concerns with skewness and kurtosis within the task subscale. This supports that the differences within the responses are due to true individual differences within the sample size. Due to the sample size and review of the multivariate normality analysis, the outliers were not removed (Grimm & Yarnold, 1995; Vallejo & Ato, 2012).

Client Attachment to Therapist Scale

Box's test of equality of covariance matrices evaluates the assumption of homogeneity of covariance across the dependent variables using $p < .001$ as a criterion. There was not a significant concern as Box M (8.202) was not significant, F (6,9841.65) = .279, p = .279. This indicates that the covariance of matrices was equal across groups. Results of the Box test indicated the assumption of homogeneity has been met and the Wilk's Lamda was an appropriate test to use (Field, 2013).

Levene's test of equality of error variances evaluates the assumption that each variable is equal across the participant groups. The results indicated that the secure subscale was not significant, F (1,37) = 1.88, p = .18. The results indicated that the preoccupied subscale was not significant, F (1,37) = .002, p = .97. This indicated that the assumption has been met for the secure and preoccupied subscales (Field, 2013). This strengthened the assumption that the multivariate test statistics are robust for theses subscales. The results indicated that the avoidant subscale was also significant, F (1.37) =7.98, p = .01. Overall, the Levene's test results indicated that the assumption was violated for the avoidant subscale (Field, 2013). As previously mentioned, this violation of this test may have been due to the unequal group sizes, which caused a mildly distorted error rate (Finch, 2005; Vallegjo & Ato, 2012). Despite the violation of the avoidant subscale, the assumption for the Box's test of covariance was met. This suggested that the MANOVA could still be used; however, due to the robustness of the properties of test criteria, the univariate settings should be taken into account to further assess the data (Finch, 2005; Vallegjo & Ato, 2012).

In order to meet the assumption that each individual response was independent from the others, the use of random sampling was utilized. Individuals were only allowed to access the survey online once as a means to prevent duplicate survey entries. Therefore, the score on a variable for any one participant is independent of the scores collected by all other participants. This suggested that another participant's score did not influence other scores so the assumption of independence was met.

Normality was examined via visual inspection of histograms (Appendix M) and the calculation of skewness and kurtosis (Grimm & Yarnold, 1995). The degree of skewness was calculated and converted into *z* scores. The skewness and kurtosis values for the dependent variables are shown in Table 3. According to Kim (2013), skewness and kurtosis *z*-score levels should be between -1.96 to 1.96. The secure subscale was normally distributed, with a skewness of .44 and kurtosis of -1.46. The preoccupied subscale was normally distributed, with a skewness of 1.68 and kurtosis of -.35. The avoidant subscale was normally distributed, with skewness of .73 and kurtosis of -.70. Although there were moderate concerns with skewness and kurtosis, the data were not transformed because the variance in the sample was more likely a reflection of the distribution between the variables within this population (Doane & Seward, 2011). Additionally, based on the sample size, the distributions between the subscales are likely due to the actual occurrence of differing characteristics between the independent variables (Doane & Seward, 2011).

Table 3

Skewness and Kurtosis Z-Score Values for Dependent Variable Scales

		Skewness	Kurtosis
CATS	Secure	.44	-1.46
	Preoccupied	1.68	-.35
	Avoidant	.73	-.70

Furthermore, the Kolmogorov-Smirnov test of normality was not significant for the, secure, avoidant, and preoccupied subscale scores. This indicated that the assumption of the normality of scores for the CATS subscales were met.

To further assess for outliers, descriptive stem-and-leaf plots were generated (Appendix O). Based on the results, one interpretive service participant exhibited an inter-quarterly range that was >3 on the preoccupied subscale. Review of the stem-and-leaf plots indicated the outliers affected one out of the three CATS subscales. The same outliers were not consistent through each subscale. Furthermore, no concerns were identified within the preoccupied subscale where outliers were found. This supports that the differences within the responses are due to true individual differences within the sample size. Due to the sample size and review of the multivariate normality analysis, the outliers were not removed (Grimm & Yarnold, 1995; Vallejo & Ato, 2012).

Reliability Analysis

Reliability analysis was conducted to determine if the WAI and the CATS were reliable measures for use with the participants in this study. Cronbach's alpha for the WAI as a scale was

0.96, which suggests the measure has good reliability. The Cronbach's alpha for the CATS scale was .59, which suggests sufficient reliability. Research on the development of the CATS indicated consistent negative correlations between each subscale (preoccupied, avoidant, and secure) (Mallinckrodt et al., 1995). Previous research suggested that low correlations indicate that the subscales measure distinct aspects of the client-therapist relationship (Mallinckrodt et. al., 1995). Post-hoc analysis was unable to be conducted due to not having more than three or more values under the independent variable (Bulmer, 1979; Grimm & Yarnold, 1995).

MANOVA Results

In order to assess differences between interpretive and noninterpretive therapy services a MANOVA was utilized. Prior to running the MANVOA, composite scores were derived for the WAI and the CATS. The MANOVA calculated the differences between working alliance and attachment given the type of therapy services the participant received across the dependent variables (working alliance and attachment).

Research Question 1

The first research question sought to determine if there was a significant difference in working alliance between interpretive and noninterpretive services. Composite scores were calculated for the WAI subscales (bond, task, and goal). Utilizing the composite scores, a MANOVA was used to determine if there was a significant difference between the type of therapy services Deaf individuals received. Using an alpha level of .05, results of the MANOVA indicated a statistically significant difference (Wilks' $\lambda = .72$, $F\ (3,35) = 4.54$, $p < .05$, multivariate $\eta p^2 = .28$). Based on the findings of the MANOVA, the null hypothesis for the first

research question was rejected. The alternative hypothesis for the first research question was supported.

Table 4

Multivariate Analysis of Variance Results: Working Alliance Inventory

	Value	*F*	*Sig.*	ηp^2
Wilks' Lambda	.720	4.54	.009*	.28

Note. * $p \leq .05$

Due to the statistically significant results of the MANOVA, the test of between subject effects was conducted to further analyze the differences between groups. The test of between-subject effects provides results of the univariate ANOVAS for each WAI subscale (Table 5). The results of the univariate ANOVAs for the bond subscale did not indicate statistically significant differences between service types, F (1, 37) = 2.37, $p > .05$. The goal subscale results did not indicate significant differences between groups, F (1,37) = .339, $p > .05$. However, the results of the univariate ANOVAs for the task subscale indicated a significant difference between the two types of services, F (1, 37) = 4.70, $p < .05$. Overall, the results indicated that the task subscale was the primary difference between the interpretive and noninterpretive therapy service groups. This suggests that there was not a difference in the individuals' abilities to create goals or establish a bond with their therapist based on the type of services received.

Table 5

Test of Between Subjects Effects: WAI

	F	Sig.	ηp2
Task	4.69	.037	.113
Bond	1.44	.237	.038
Goal	.937	.339	.025

Research Question 2

The second research question examined the differences in client perceptions of alliance as measured by the CATS, when comparing noninterpretive and interpretive psychotherapy services for Deaf individuals. Composite scores were calculated for the CATS subscales (preoccupied, avoidant, and secure), prior to analysis. Utilizing the CATS composite scores, a MANOVA was used to determine if there was a significant difference between interpretive and noninterpretive services. Using an alpha level of .05, the MANOVA assessed for differences between the type of therapy services received based on the CATS. Results indicated statistically significant differences (Wilks' $\lambda = .74$, $F\ (3,35) = 4.15$, $p < .05$, multivariate $\eta p^2 = .26$). Based on the findings of the MANOVA, the null hypothesis for the second research question was rejected. The alternative hypothesis for the second research question was supported.

Table 6

Multivariate Analysis of Variance Results: CATS subscales

	Value	*F*	*Sig.*	*ηp²*
Wilks' Lambda	.74	4.15	.013*	.26

Note. * $p \leq .05$

Due to the statistically significant results of the MANOVA, the test of between subject effects was conducted to further analyze the differences between groups. The test of between-subject effects provides results of the univariate ANOVAS for each CATS subscale (Table 7). The test of between-subject effects provides results of the univariate ANOVAs to determine significant differences between groups based on each subscale. The results of the univariate ANOVA for the preoccupied subscale, F (1,37) = 8.27, p <.05, were significant. The results of the univariate ANOVA for the avoidant subscale was not significant, F (1, 37) = .2.40, p > 05. The results of the univariate ANOVA for the secure subscale, F (1, 37) = 5.63, p < .05 was significant. Results indicate that Deaf clients with secure attachment styles had greater alliance with their therapist. Therefore, the second hypothesis was support and the null hypothesis was rejected.

Table 7

Test of Between Subjects Effects: CATS

	F	*Sig.*	*ηp2*
Secure	5.63	.023	.132
Avoidant	2.40	.129	.061
Preoccupied	8.27	.007	.183

Descriptive Statistics: WAI

To further assess the direction of statistical significance of client perceptions of working alliance between noninterpretive and interpretive mental health services for Deaf individuals, descriptive statistics were analyzed (Table 8). Results indicated statistically significant differences for the task subscale based on the type of services received. A review of the means indicated there was a 9.35-point difference between both groups. Individuals who received noninterpretive services ($\mu = 58.35$; $\sigma = 16.31$) reported greater alliance via the task subscale than individuals who received interpretive services ($\mu = 49.00$; $\sigma = 9.58$).

Table 8

Descriptive Statistics Between Type of Therapy Services: WAI

	Variable	Mean	Std.
Interpretive			
	Task*	49.00	9.58
	Bond	55.16	8.96
	Goal	53.37	8.90
Noninterpretive	Task*	58.35	16.31
	Bond	60.05	15.41
	Goal	57.30	15.42

Note. * $p \leq .05$

Descriptive Statistics: CATS

To further assess the direction of statistical significance of client perceptions of attachment between noninterpretive and interpretive mental health services for Deaf individuals, descriptive statistics were analyzed (Table 9). Results indicated that individuals who received noninterpretive services ($\mu = 66.05$; $\sigma = 12.39$) reported higher levels of secure attachment with their therapist as compared to individuals who received interpretive services ($\mu = 57.63$; $\sigma = 9.48$). Similarly, individuals who received noninterpretive ($\mu = 30.50$; $\sigma = 9.39$) services reported higher levels of preoccupied attachment than individuals who received interpretive services ($\mu = 21.26$; $\sigma = 10.65$).

Table 9

Descriptive Statistics Between Type of Therapy Services: CATS

	Variable	Mean	Std.
Interpretive			
	Secure*	57.63	9.48
	Preoccupied*	21.26	10.65
	Avoidant	35.79	8.11
Noninterpretive	Secure*	66.05	12.39
	Preoccupied*	30.50	9.39
	Avoidant	30.50	14.05

Note. * $p \leq .05$

Summary

The goal of this research study was to determine whether there was a significant difference in client attachment and alliance for Deaf individuals provided different therapeutic services (interpretive and noninterpretive). Based on the MANOVA analysis, the alternative hypothesis regarding differences between interpretive and noninterpretive services was significant. The overall results support the premise that Deaf individuals receiving noninterpretive services are more likely to report higher levels of working alliance and attachment with their therapist.

The next chapter provides an interpretation of the findings. The limitations of the study are discussed in chapter 5. Additionally, the next chapter includes recommendations for further research and implications for social change.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of this study was to determine if there was a difference in working alliance and attachment between Deaf individuals receiving interpretive and noninterpretive psychotherapy services. Client perceptions of the strength of working alliance and attachment to their therapist were assessed via two self-report surveys (the WAI and the CATS). The intent of this study was to better understand the role of alliance in relation to the nature of service delivery (interpretive versus noninterpretive) for Deaf individuals. This chapter includes interpretation of the findings, limitations of the study, implications for social change, and recommendations for future research.

Interpretation of the Findings

Working Alliance

Working alliance is defined as the ability for the clinician and the client to have a trusting relationship while working together towards treatment goals (Corso et al., 2012; Hanson et al., 2002). Without the development of an alliance, the individual may not actively engage in working towards therapeutic goals (Bachelor, 2013; Bachelor et al., 2010; Corso et al., 2012). There has been a significant amount of research in the examination of working alliance in the therapy setting (Horvath & Lubrosky, 1993). Research supports that it is important to understand the client's perception of alliance as it relates to the therapy services received (Hanson et al., 2002). Notably, previous research has lacked in assessing if alliance was impacted given the presence or absence of an interpreter.

The overall results of this study indicated that Deaf individuals who received noninterpretive services reported a greater working alliance than Deaf individuals who received interpretive services. This suggested that individuals who have a sign-fluent therapist reported a stronger therapeutic relationship with their clinician than those who have an interpreter present. Descriptive statistics indicated that individuals who received noninterpretive services reported working effectively towards tasks with their clinician to achieve their mutually agreed upon goals significantly more than individuals who received interpretive services. Research has suggested that the clinician plays a vital role in encouraging the client to put forth an active role in achieving treatment objectives (Horvath & Greenberg, 1994). Ultimately, individuals who actively work towards tasks in therapy have an increased chance of accomplishing treatment goals (Owen et al., 2013). This study suggested that individuals who have a sign-fluent provider were more likely to actively work towards treatment goals to achieve positive treatment outcomes.

Research suggests that Deaf individuals have a difficult time trusting professionals (Williams & Abeles, 2004). This lack of trust may hinder their ability to formulate a strong bond and develop effective treatment goals (Williams & Abeles, 2004). This study indicated that there was not a statistically significant difference between bond and goal given the type of therapy services received. Overall, individuals receiving both services types reported a strong bond and ability to develop treatment goals with their therapist.

Descriptive statistics indicated that 48.7% of the participants were in therapy longer than 5 months. It is likely that the time frame of treatment impacted the client perception of bond and agreement of goals. Clients who are in treatment longer would be expected to have adequately

developed a bond and an agreement on goals with a therapist given the length of time. Notably, even though there was not a difference in the perception of bond and goals, participants who received services with a sign-fluent provider reported significantly higher scores on the task subscale. This indicates that they were better able to actively put into practice what they have learned in therapy to meet treatment goals successfully.

Attachment Theory

Deaf individuals experience communication barriers from society and their family members (Cornell & Lyness, 2004; Sheppard & Badger, 2010). These communication barriers hinder the ability to form positive interpersonal relationships and interact with the community, thus resulting in marginalization from society. Due to marginalization, negative attachment patterns start at a young age and increase through adulthood (Cohen, 2001; Cornell & Lyness, 2004; Ladd & Lane, 2013). These attachment patterns contribute to the likeliness that Deaf individuals will also experience poor alliance with their therapist (Levey, 2013; Mallinckrodt et al., 1995). Notably, this study examined attachment patterns as it was related to alliance given the type of therapy services Deaf individuals received. The outcome indicated that individuals who received therapy services with a sign-fluent provider reported more secure attachment to their therapist than individuals who utilized an interpreter during session.

The results also suggested that individuals who received noninterpretive services reported higher secure attachment with their therapist than individuals with interpretive services. Research has supported that individuals who report an increase of secure attachment experience a sense of trust and security with their therapist (Mikulincer et al., 2012). Similar to previous literature (Obegi, 2008), results indicated that participants who reported secure attachment patterns

conveyed a greater motivation towards achieving therapeutic goals without reporting a statistically significant strong bond with their therapist.

This study suggested that individuals who received noninterpretive services reported wanting to have more contact with their therapist than individuals that received interpretive services. This is consistent with previous research, as individuals who report higher levels of preoccupied attachment have reported a positive working alliance with their therapist (Mallinckrodt et al., 1995; Skourteli & Lennie, 2011). Additionally, individuals who reported preoccupied attachment had difficulties with creating and completing therapeutic goals (Mallinckrodt et al., 1995; Skourteli & Lennie, 2011). This study implies that individuals who have a sign-fluent provider reported higher rates of task completion. This suggests that individuals who reported preoccupied attachment and have a sign-fluent provider are more likely to complete tasks than individuals who utilize an interpreter in session.

There was not a significant difference between avoidant attachment patterns given the type of therapy services received. Avoidant attachment encompasses feelings of limited confidence and the attempt to gain consistent reassurance from others as a means to overcome insecurities (Obegi, 2008). A review of the literature indicated that individuals who reported high levels of avoidant attachment would have limited alliance with their therapist (Mallinckrodt et al., 1995; Skourteli & Lennie, 2011). Therefore, the lack of significance within the avoidance scale is expected given that there was not a significant difference in the working alliance bond scale. This indicates that there was not a significant discrepancy regarding individuals' perceptions of therapeutic bond given the type of services received.

Limitations of the Study

Although the study indicated certain significant findings, results are to be interpreted with caution due to possible limitations that may have impacted the study. The study used a convenience sampling technique and had a small sample size ($N = 39$). Small sample sizes and convenience sampling caused limitations in the ability to generalize and represent the entire population.

The WAI and the CATS have not been previously validated for use with the Deaf population. This study was unable to ascertain if Deaf respondents' literacy levels and understanding of the survey questions impacted the observed results. Research suggested that the average person in the Deaf population reads at approximately a fourth-grade reading level (Levine, 2014; Powell, 2005). Additionally, reading abilities were not screened prior to survey completion. The WAI and the CATS are written at approximately a fifth-grade reading level (Horvath, 2016; Mallinckrodt, 2016). This could have impacted the respondent from being able to adequately understand the survey items.

This survey relied upon the participants' self-report. There are multiple disadvantages to self-report data including inaccurate self-reporting, bias, and responding in a manner consistent with perceived social desirability (Gagné & Godin, 2005). Furthermore, due to the study taking place at a single moment in time, the participants self-report may have been influenced by their state of mind at the moment of survey completion. For example, participants that recently had a positive or negative experience in the therapy office may have allowed emotions to influence their responses to the surveys.

Suggestions for Future Research

This research study identified that individuals who received services with a sign-fluent provider reported greater alliance and attachment with their therapist. Although results signify statistical significance, reported limitations may have impacted the results of the study. Therefore, it is recommended that further research continue to assess for differences in alliance between interpretive and noninterpretive services for Deaf individuals.

This study did not assess the individual's direct comfort level with an interpreter present in session. The presence of an interpreter could positively or negatively impact the individual discussing personal concerns in the therapy session. Therefore, it is recommended that further research assess client perceptions of having an interpreter present in the therapy session. Additionally, it would be beneficial for research to assess clinicians' perceived comfort level of having an interpreter present in session and how that may impact their perceived alliance with their client.

Descriptive statistics indicated that 48.7% of the participants have been engaged in therapy for longer than five months. Future research should assess the role of alliance and attachment within the beginning stages of therapy. Implications for this could include assessing if the individual attends a second appointment after the clinical intake and overall dropout rates.

The CATS and the WAI are not empirically validated for Deaf individuals. This suggests that further research can assess direct validity and reliability of the CATS and WAI in measuring alliance and attachment within the Deaf population. It is recommended that these measures be interpreted in ASL. The translation to ASL will assist in the validity and reliability in assessing alliance and attachment with the Deaf population.

Implications

Previous research has indicated that Deaf individuals experience marginalization, vulnerability, identity confusion, and discrimination (Batten et al. 2014; Cohen, 2001; Dolnick, 1993; Shebbard & Badger, 2010). These feelings can lead to the increase of mental health concerns (Clymer, 1995; Cornell & Lyness, 2004). More specifically, Deaf individuals are twice as likely as hearing individuals to experience mental health concerns due to marginalization, vulnerability, and identity confusion (Batten et al., 2014; Kushalanger et al., 2011). Despite the increased need for mental health services, few advances have been made to provide appropriate therapy services for the Deaf (Sussman & Brauer, 1999; Vernon & Leigh, 2007; Wilson & Schild, 2014). There continues to be limited availability of sign-fluent therapists to serve the Deaf population (Vernon & Leigh, 2007; Wilson & Schild, 2014). This study indicated that there is a significant difference between an individual receiving services with and without an interpreter present. Overall, this study supported that individuals who received therapy with a sign-fluent provider reported greater alliance and attachment with their therapist. This study also indicated that individuals with a sign-fluent provider reported higher levels of therapeutic goal completion. Similar to previous research, the results for this study signify a need for social change regarding the need for more sign-fluent clinicians.

Research has indicated that mental health professionals are likely to provide therapy with at least one Deaf individual throughout their career (Vernon,2006). When this opportunity arises, many organizations are not knowledgeable of the ethical obligations and accommodations that are necessary to provide the appropriate services for Deaf individuals (Mathos et al., 2009;

Wilcox, 2006). In order to prevent inadequate services for the Deaf community, organizations and licensed professionals should increase their cultural knowledge of the Deaf community.

Mental health care providers also have an ethical obligation to ensure that they are providing necessary accommodations for the Deaf (Gutman, 2005). Clinicians should increase their knowledge of the guidelines that apply to the requirement of providing necessary accommodations to assist with decreasing communication barriers (ADA, 1990; Federal Communications Commission, 1996; Federal Communications Commission, 1998). Due to communication barriers, Deaf individuals are often misdiagnosed, which increases the risk of not receiving suitable interventions (Brunson & Lawrence, 2002; Connolly et al., 2006). This study supported that individuals who received therapy with a sign-fluent provider indicated an increase of task completion. Therefore, the interventions that were received in therapy aided in their therapeutic success. This implies the need for social change of awareness and training of the ethical and legal accommodations that are necessary to provide appropriate therapeutic services.

In addition to accommodations, treatment providers should become competent in understanding the Deaf culture (Connolly et al., 2006; Searight & Armock, 2013). Cultural competence is embedded in the APA's *Ethical Principles and Codes of Conduct* (American Psychological Association, 2010) for each clinician to have knowledge of their client's cultural background. In order to increase cultural competence, formal training should be available for clinicians operating at all levels within the mental health community. More specifically, training should include knowledge of the Deaf culture, ethical and legal obligations of providing interpreter services, communication devices available, and awareness of available resources.

Conclusion

This study contributes to the literature on working alliance and attachment given the type of therapy services Deaf individuals receive. Results indicate significant findings that individuals who utilize noninterpretive services report a greater alliance and attachment with their provider. Furthermore, this study adds to the literature that utilizing an interpreter significantly impacts the working alliance within the therapeutic relationship. The findings were consistent with previous studies, which discussed potential barriers utilizing interpretive services. Additionally, this study suggests implication for social change regarding the need for more culturally appropriate services for Deaf individuals. This also suggests implications for social change regarding the education and training that should be provided for mental health professionals who work with the Deaf community.

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Appendix A: Organization Request Letter

Dear (Organization)

My name is Sherri Armistead Spain. I am a doctoral student at Walden University's Clinical Psychology Program. I am kindly requesting your participation in a doctoral research study that I am conducting titled: Client-Therapist Working Alliance within Interpretive and Noninterpretive Mental Health Services for Deaf Individuals.

The intention of this research is to assess client-therapist working alliance within interpretive and noninterpretive services for Deaf individuals. Working alliance is described as the working relationship between the client and the therapist to develop and treatment goals and to actively work towards these goals in therapy as a means to research therapeutic success. I am requesting that you assist in the dissemination of the research study to Deaf individuals within your organization/agency/listserv.

If you are willing to disseminate the research study, your role is to send the Participation Invitation Letter (an attached document within this e-mail), which explains the purpose of the research, the informed consent, and has the survey link, to your listserv. This will allow potential participants to gain knowledge about the study and read the informed consent before deciding to participate. The survey link will bring participants to an online questionnaire designed using an application called Survey Monkey. The questionnaire includes a simple demographic questionnaire, the Working Alliance Inventory, and the Client Attachment to Therapist Scale. The link also provides informed consent and debriefing information for the potential participant.

Overseeing this dissertation research is Dr. Matthew Fearrington, Professor of Psychology at Walden University. If you have any questions regarding this research study, please feel free to contact the Walden University Institutional Review Board at irb@waldenu.edu. Walden University's approval number for this study is 08-09-16-0349912 and it expires on August 8, 2017.

Your participation in the research will be of great importance to assist in social change in ensuring that Deaf individuals are receiving adequate and effective psychotherapy services by assessing the strength of working alliance within interpretive and noninterpretive services.

Thank you for your time and participation

Sincerely,
Sherri Armistead Spain, M.A. M.S, Doctoral Student, Walden University

Appendix B: Letter of Cooperation

Dear _____

We have recently been in contact in regards to requesting your participation in a doctoral research study that I am conducting titled:

Client-Therapist Working Alliance within interpretive and noninterpretive Mental Health Services for Deaf Individuals.

Thank you for your willingness to participate by sending the survey Deaf individuals on your listserv.

As a reminder, the intention of this research is to assess client-therapist working alliance within interpretive and noninterpretive services for Deaf individuals.

Please send the attached SurveyMonkey link which explains the purpose of the research to your listserv. Enclosed please find a link which will bring you to an online questionnaire designed using an application called Survey Monkey. The questionnaire includes a simple demographic questionnaire and the Working Alliance Inventory and the Client Attachment to Therapist Scale.

Overseeing this dissertation research is Dr. Matthew Fearrington, Professor of Psychology at Walden University.

If you have any questions regarding this research study, please feel free to contact the Walden University Institutional Review Board at irb@waldenu.edu.

Your participation in the research will be of great importance to assist in social change in aiding the research to ensure that Deaf individuals are receiving adequate and appropriate therapeutic services by assessing the strength of working alliance within interpretive and noninterpretive services.

Thank you for your time and participation

Sincerely,

Sherri Armistead, M.A. M.S, Doctoral Student, Walden University

Appendix C: Debriefing

Dear Participant

Thank you for your participation a doctoral research study that I am conducting titled: Working Alliance between Interpretive and Noninterpretive Mental Health Services for Deaf Clients. The intention of this research is to examine whether there is a statistical significant difference between interpretive and noninterpretive therapy services for Deaf individuals.

All the information you provided in the study will be confidential. Notably, there is no way to identify your responses in the data archive generated by SurveyMonkey.

If you have concerns regarding services that you are currently receiving, please contact your local Regional Deaf Affiliate. You can search for your local Deaf Affiliate utilizing this enclosed URL https://nad.org/community/state-association-affiliates.

If you are interested in finding a sign-fluent and/or therapist near you, the following URL will lead you to an advanced search http://www.deafcounseling.com/about-the-center/.

Please, contact your current therapist if participation in the study has caused you concerns or caused any form of distress.

If you have any questions about participant rights, you may contact the Walden University IRB at irb@waldenu.edu.

Your participation in the research will be of great importance to assist in social change in therapy services for Deaf individuals.

Thank you for your time and participation

Appendix D: Demographic Questionnaire

Please select the appropriate box for each question:

1) Gender

   □ Male
   □ Female

2) What is your age
   □18-20
   □21-29
   □30-39
   □40-49
   □50-50
   □60 or older
   □17 or younger

3) Please select the answer that is true to you.
   □I am culturally Deaf (Deaf since birth)
   □I became deaf later in life
   □I am hard of hearing
   □I am not either D/d or hard of hearing

4) Are you currently receiving mental health or therapy services?
   □Yes
   □No

5) Time from of current therapy services
   □Less than 1 month
   □Between 1 month to 5 months
   □Longer than 5 months

6) Type of therapy provided

   □ Interpretive (I use an interpreter in session)

   □ Noninterpretive (I have a sign fluent therapist)

Appendix E: Working Alliance Inventory

Working Alliance Inventory

Form C

Instructions

On the following pages there are sentences that describe some of the different ways you might have thought or felt about your therapist . As you read the sentences mentally insert the name of your therapist in place of _____in the text.

Below each statement inside there is a seven point scale:

1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always

If the statement describes the way you ***always*** felt (or thought) circle the number 7; if it ***never*** applied to you circle the number 1. Use the numbers in between to describe the variations between these extremes.

This questionnaire is **CONFIDENTIAL**; only the research team will see your answers.

Work fast, your first impressions are the ones we would like to see.
(PLEASE DON'T FORGET TO RESPOND TO ***EVERY*** *ITEM*.)

Thank you for your cooperation.

1. I felt uncomfortable with _____.						
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
2. _____ and I agreed about the things I will need to do in therapy to help improve my situation.						
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
3. I was worried about the outcome of the sessions.						
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
4. What I was doing in therapy gave me new ways of looking at my problem.						
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
5. _____ and I understood each other.						
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
6. _____ perceived accurately what my goals were.						
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
7. I find what I was doing in therapy confusing.						
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
8. I believe _____ liked me.						
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
9. I wish _____ and I could have clarified the purpose of our sessions.						
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
10. I disagreed with _____ about what I ought to get out of therapy.						
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
11. I believe the time _____ and I were spending together was not spent efficiently.						
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always

12. _____ did not understand what I was trying to accomplish in therapy.						
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
13. I was clear on what my responsibilities were in therapy.						
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
14. The goals of the sessions were important for me.						
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
15. I find what _____ and I were doing in therapy was unrelated to my concerns.						
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
16. I feel that the things I did in therapy helped me to accomplish the changes that I wanted.						
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
17. I believe _____ was genuinely concerned for my welfare.						
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
18. I was clear as to what _____ wanted me to do in those sessions.						
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
19. _____ and I respected each other.						
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
20. I feel that _____ was not totally honest about his/her feelings toward me.						
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
21. I was confident in _____ 's ability to help me.						
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
22. _____ and I were working towards mutually agreed upon goals.						
1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always

23.	I feel that _____ appreciated me.						
	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
24.	We agreed on what was important for me to work on.						
	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
25.	As a result of the therapy I became clearer as to how I might be able to change.						
	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
26.	_____ and I trusted one another.						
	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
27.	_____ and I had different ideas on what my problems were.						
	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
28.	My relationship with _____ was very important to me.						
	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
29.	I had the feeling that if I said or did the wrong things, _____ would stop working with me.						
	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
30.	_____ and I collaborated on setting goals for my therapy.						
	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
31.	I was frustrated by the things I was doing in therapy.						
	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
32.	We had a good understanding of the kind of changes that would be good for me.						
	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
33.	The things that _____ was asking me to do did not make sense.						
	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always

34.	I did not know what to expect as the result of my therapy.						
	1 Never	2 Rarely	3 Occasionally	4 Sometimes	5 Often	6 Very Often	7 Always
35.	I believe the way we were working with my problem was correct.						
	1 Never	2 Rarely	3 Occasionally	4 Sometimes	5 Often	6 Very Often	7 Always
36.	I feel _____ cared about me even when I did things that he/she did not approve of.						
	1 Never	2 Rarely	3 Occasionally	4 Sometimes	5 Often	6 Very Often	7 Always

Appendix F: Working Alliance Inventory Approval

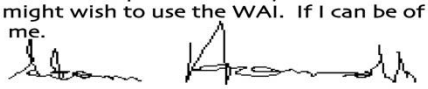
Dear Mrs. Armistead

You have permission to use the Working Alliance Inventory (WAI) for the investigation:

"Working Allaince between interpretive and non-interpretive mental health services for deaf clients"

This limited copyright release extends to all forms of the WAI for which I hold copyright privileges, but limited to use of the inventory for not-for-profit research, and does not include the right to publish or distribute the instrument(s) in any form.

I would appreciate if you shared the results of your research with me when your work is completed so I may share this information with other researchers who might wish to use the WAI. If I can be of further help, do not hesitate to contact me.



Appendix G: Client Attachment to Therapist Scale

<< Client Attachment to Therapist Scale >>

Instructions. These statements refer to how you currently feel about your counselor. Please try to respond to every item using the scale below to indicate how much you agree or disagree with each statement.

1	2	3	4	5	6
strongly disagree	**somewhat disagree**	**slightly disagree**	**slightly agree**	**somewhat agree**	**strongly agree**

____ 1. I don't get enough emotional support from my counselor.

____ 2. My counselor is sensitive to my needs.

____ 3. I think my counselor disapproves of me.

____ 4. I yearn to be "at one" with my counselor.

____ 5. My counselor is dependable.

____ 6. Talking over my problems with my counselor makes me feel ashamed or foolish.

____ 7. I wish my counselor could be with me on a daily basis.

____ 8. I feel that somehow things will work out OK for me when I am with my counselor.

____ 9. I know I could tell my counselor anything and s/he would not reject me.

____ 10. I would like my counselor to feel closer to me.

____ 11. My counselor isn't giving me enough attention.

____ 12. I don't like to share my feelings with my counselor.

____ 13. I'd like to know more about my counselor as a person.

____ 14. When I show my feelings, my counselor responds in a helpful way.

____ 15. I feel humiliated in my counseling sessions.

____ 16. I think about calling my counselor at home.

____ 17. I don't know how to expect my counselor to react from session to session.

____ 18. Sometimes I'm afraid that if I don't please my counselor, s/he will reject me.

____ 19. I think about being my counselor's favorite client.

____ 20. I can tell that my counselor enjoys working with me.

____ 21. I suspect my counselor probably isn't honest with me.

____ 22. I wish there were a way I could spend more time with my counselor.

____ 23. I resent having to handle problems on my own when my counselor could be more helpful.

____ 24. My counselor wants to know more about me than I am comfortable talking about.

____ 25. I wish I could do something for my counselor too.

____ 26. My counselor helps me to look closely at the frightening or troubling things that have happened to me.

____ 27. I feel safe with my counselor.

____ 28. I wish my counselor were not my counselor so that we could be friends.
____ 29. My counselor is a comforting presence to me when I am upset.
____ 30. My counselor treats me more like a child than an adult.
____ 31. I often wonder about my counselor's other clients.
____ 32. I know my counselor will understand the things that bother me.
____ 33. It's hard for me to trust my counselor.
____ 34. I feel sure that my counselor will be there if I really need her/him.
____ 35. I'm not certain that my counselor is all that concerned about me.
____ 36. When I'm with my counselor, I feel I am his/her highest priority.

Subscale 1: Secure (14 items: 1*, 2, 5, 8, 11*, 14, 17*, 20, 23*, 26, 29, 32, 34, 36).

Subscale 2: Avoidant/fearful (12 items: 3, 6, 9*, 12, 15, 18, 21, 24, 27*, 30 33, 35).

Subscale 3: Preoccupied/merger (10 items: 4, 7, 10, 13, 16, 19, 22, 25, 28, 31).

* These items should be reverse keyed (i.e. 6 = 1, 5 = 2, etc.).

Appendix H: Client Attachment to Therapist Scale Approval

Sherri,

Thanks for your interest. You don't have to ask for permission, because the scale is in the public domain. Nevertheless, I have attached the article and some more recent work that might interest you.

Best wishes,
-Brent

****

Brent Mallinckrodt, Ph.D.
Associate Dean for Graduate Studies,

Appendix I: Participation Invitation Letter

Dear Invitee,

My name is Sherri Spain. I am a doctoral student at Walden University's Clinical Psychology Program. I am kindly requesting your participation in a doctoral research study that I am conducting titled: Client-Therapist Working Alliance within Interpretive and Noninterpretive Mental Health Services for Deaf Individuals.

The purpose is to assess for differences in the client-therapist working alliance within therapy services for Deaf individuals given the presence of an ASL interpreter or ASL fluent provider.

The study involves completing basic demographic information and two surveys: Working Alliance Inventory (Horvath & Greenberg, 1994) and Client Attachment to Therapist Scale (Mallinckrodt, Coble, Gantt, 1995).

Participation is completely voluntary and you may withdraw from the study at any time. The study is completely anonymous; therefore, it does not require you to provide your name or any other identifying information.

If you would like to participate in the study please read the Informed Consent letter below. To begin the study, click the survey link at the end.

Your participation in the research will be of great importance to assist in social change in ensuring that Deaf individuals are receiving adequate and effective psychotherapy services by assessing the strength of working alliance within interpretive and noninterpretive services.

Thank you for your time and participation

Sincerely,
Sherri Spain, M.A. M.S, Doctoral Student, Walden University

Appendix J: Participation Invitation Letter with mail-in option

Dear Invitee,

My name is Sherri Spain. I am a doctoral student at Walden University's Clinical Psychology Program. I am kindly requesting your participation in a doctoral research study that I am conducting titled: Client-Therapist Working Alliance within Interpretive and Noninterpretive Mental Health Services for Deaf Individuals.

The purpose is to assess for differences in the client-therapist working alliance within therapy services for Deaf individuals given the presence of an ASL interpreter or ASL fluent provider.

The study involves completing basic demographic information and two surveys: Working Alliance Inventory (Horvath & Greenberg, 1994) and Client Attachment to Therapist Scale (Mallinckrodt, Coble, Gantt, 1995).

Participation is completely voluntary and you may withdraw from the study at any time. The study is completely anonymous; therefore, it does not require you to provide your name or any other identifying information.

If you would like to participate in the study please read the Informed Consent letter below. To begin the study, you may choose to complete the survey online (by going to the URL link listed on the informed consent) or complete the paper copy that was provided to you. If you decide to complete the paper format of the survey, please place it in the self-addressed and stamped envelope when it is completed then place it in the USPS mail.
Your participation in the research will be of great importance to assist in social change in ensuring that Deaf individuals are receiving adequate and effective psychotherapy services by assessing the strength of working alliance within interpretive and noninterpretive services.

Thank you for your time and participation

Sincerely,
Sherri Spain, M.A. M.S, Doctoral Student, Walden University

Appendix K: Organization Request Letter: with mail-in option

Dear (Organization),

My name is Sherri Armistead Spain. I am a doctoral student at Walden University's Clinical Psychology Program. I am currently conducting a doctoral research study titled: Client-Therapist Working Alliance within Interpretive and Noninterpretive Mental Health Services for Deaf Individuals.

The intention of this research is to assess client-therapist working alliance within interpretive and noninterpretive services for Deaf individuals. Working alliance is described as the working relationship between the client and the therapist to develop and treatment goals and to actively work towards these goals in therapy as a means to research therapeutic success.

I am kindly requesting that you assist in the dissemination of the research study to Deaf individuals within your organization/agency/listserv.

If you are willing to disseminate the research study, your role is to send the Participation Invitation Letter along with the informed consent, survey, and self-addressed and stamped envelopes that was provided in this package to eligible participants.
This will allow potential participants to gain knowledge about the study and read the informed consent before deciding to participate. The potential participants will have the ability to choose completing the survey online or via the paper format provided to them. The survey link is an online method using SurveyMonkey, listed on the informed consent. If the paper form was provided to an individual, I am requesting that you provide them all documents (participant invitation letter, survey, informed consent, envelope, and debriefing procedures). The questionnaire includes a simple demographic questionnaire, the Working Alliance Inventory, and the Client Attachment to Therapist Scale. The link also provides informed consent and debriefing information for the potential participant.

Overseeing this dissertation research is Dr. Matthew Fearrington, Professor of Psychology at Walden University.

If you have any questions regarding this research study, please feel free to contact the Walden University Institutional Review Board at irb@waldenu.edu. Walden University's approval number for this study is 08-09-16-0349912 and it expires on August 8, 2017.
Your participation in the research will be of great importance to assist in social change in ensuring that Deaf individuals are receiving adequate and effective psychotherapy services by assessing the strength of working alliance within interpretive and noninterpretive services.

Thank you for your time and participation
Sincerely,
Sherri Armistead Spain, M.A. M.S, Doctoral Student, Walden University

Appendix L: Histograms: WAI

The results of the histogram with normal curve:

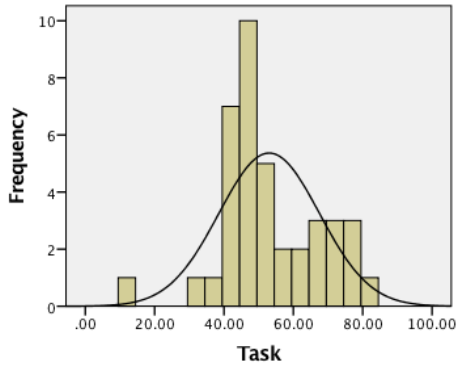


Figure 1. Histogram of WAI: task subscale scores.

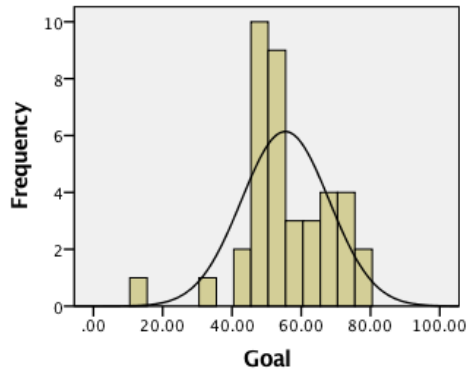


Figure 2. Histogram of WAI: goal subscale scores.

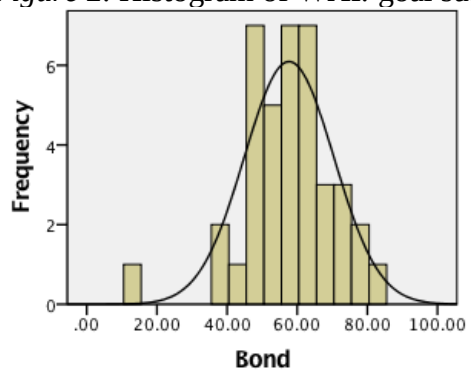


Figure 3. Histogram of WAI: bond subscale scores.

Appendix M: Histograms: CATS

The results of the histogram with normal curve:

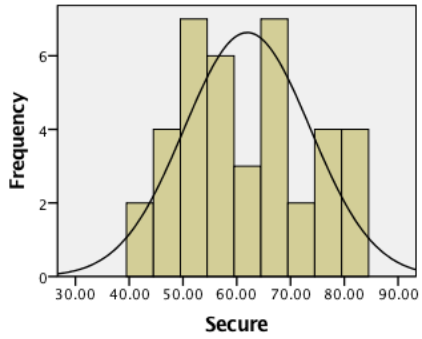


Figure 4. Histogram of CATS: secure subscale scores.

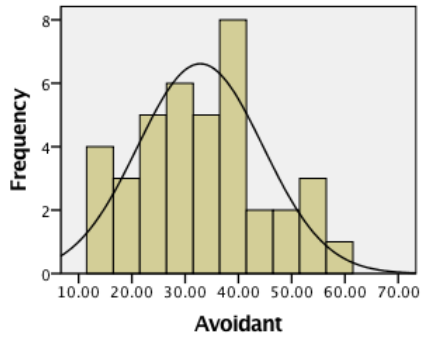


Figure 5. Histogram of CATS: avoidant subscale scores.

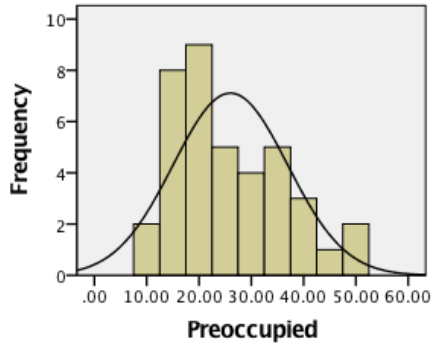


Figure 6. Histogram of CATS: preoccupied subscale scores.

Appendix N: Stem and Leaf Plots: WAI

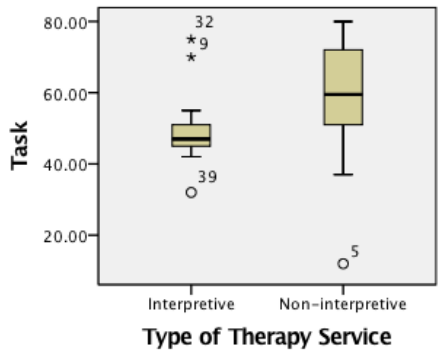


Figure 7. Stem and Leaf: Bond

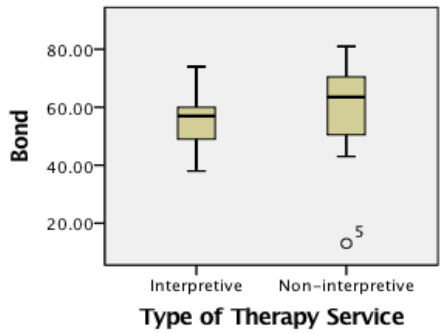


Figure 8. Stem and Leaf: Bond

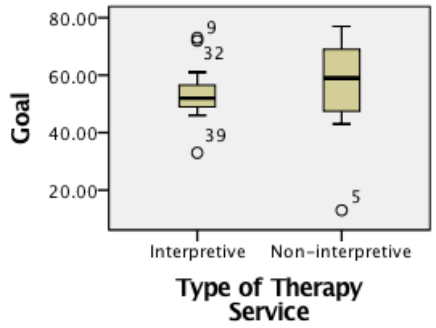


Figure 9. Stem and Leaf: Goal

Appendix O: Stem and Leaf Plots: CATS

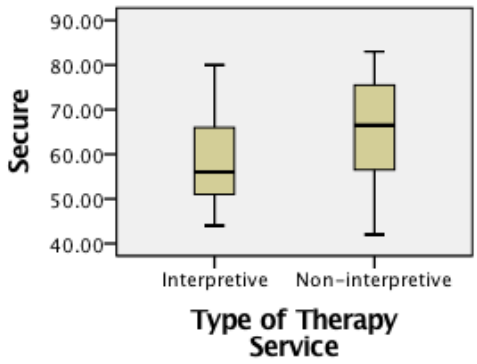


Figure 10. Stem and Leaf: Secure Attachment

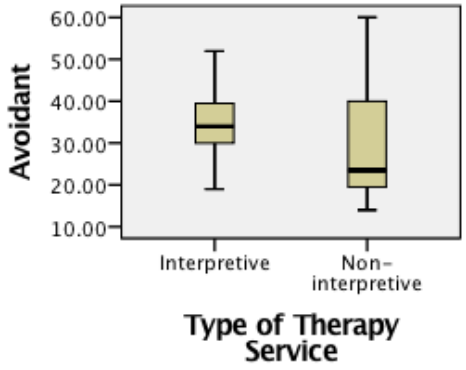


Figure 9. Stem and Leaf: Avoidant Attachment

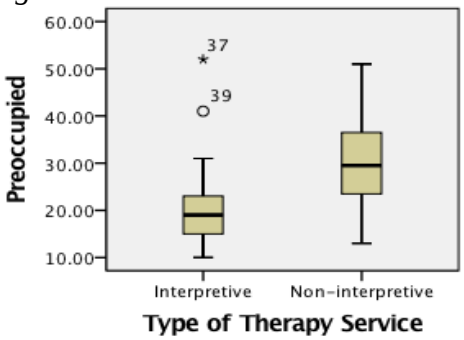


Figure11. Stem and Leaf: Preoccupied