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Culturally Responsive Adaptations to Trauma Identification and Treatment with Deaf and Hard of Hearing Youth

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**Culturally Responsive Adaptations to Trauma Identification and Treatment with
Deaf and Hard of Hearing Youth**

by

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Dedication

To all the DHH individuals whom I have had the pleasure of meeting. Thank you, it was
an honor.

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**Culturally Responsive Adaptations to Trauma Identification and Treatment with
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By

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Traumatic experiences occur often in the lives of children and adolescents; in fact, up to two-thirds of experience at least one or more traumatic events before adulthood. For children and adolescents who are d/Deaf or hard or hearing (DHH), research suggests that rates of interpersonal abuse, including sexual abuse, physical abuse, domestic violence, and bullying, are much higher than that experienced by hearing counterparts. Available literature discusses trauma symptom presentation and effective therapy practices with DHH adults, but little description is available regarding DHH children and adolescents. Nineteen Deaf Mental Health Care (DMHC) providers completed a 29-item Demographic Survey and responded to 17 semi-structured interview questions regarding their conceptualizations of trauma within DHH child and adolescent populations, their perspectives on client presentations and contributing factors, and their approaches

to trauma identification and treatment. Using a Grounded Theory approach to data analysis, this study explored overall results as well as comparisons and contrasts between participants. Fourteen themes emerged as findings to this study, and within each theme, cultural differences between deaf and hearing participants were explored. Overall findings include: participants' identification of communication and familial isolation experiences as highly traumatic, various indicators of trauma within cognitive, behavioral, affective, interpersonal, intrapersonal domains of functioning, and clear preference for the clinical interview as a trauma identification tool. Deaf specific findings include: emphasis on behavioral-physical indicators of trauma and emphasis on treatments that include important development of decision-making, and personal agency. Hearing specific findings include: emphasis on degree of interpersonal struggle. Limitations and future directions are discussed.

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Chapter 1 Introduction

Traumatic experiences occur unexpectedly, are damaging, shocking, pose threat to physical or psychological integrity, render the individual unprepared to respond, and may result in subjective feelings of horror, or helplessness (APA, 2000). Events typically considered traumatic, including sexual abuse, physical abuse, emotional abuse, domestic, community, or school violence, neglect, bullying, serious emergencies such as motor vehicle accidents, natural or other disasters such as fire, war, terrorism and/or refugee conditions, medical trauma such as burns or accidents, life-threatening illnesses such as cancer, and the sudden death of a parent, relative or peer. However, due to the subjective nature of trauma, children and adolescents may present with trauma symptoms following a situation that is entirely unique and separate from the list of events and circumstances previously mentioned. Regardless of the specific details of the traumatic incident, trauma-exposed children experience profoundly subjective emotional, cognitive, and physiological reactions that alter their sense of safety and security (NCTSN Core Curriculum on Childhood Trauma Task Force, 2012).

Substantial research has found that most American children and adolescents, up to two-thirds in fact, experience at least one, if not more, traumatic events by age sixteen (Copeland, Keeler, Angold, & Costello, 2007; Perfect, Turnley, Carlson, Yohannan, & Giles, 2016). Given the pervasiveness of traumatic experience and exposure found in child and adolescent populations, it is feasible to consider trauma a significant public health concern that directly impacts children's ability to achieve important emotional milestones, healthy social development, effective coping skills, and a positive quality of

life. For traumatized children to function well at home, in school, and in their communities, we must consider the nature and impact of traumatic experience (The United States Center for Disease Control and Prevention, 2013). We know that 13.4% of children exposed to trauma go on to develop post-traumatic stress disorder (PTSD), but that a variety of traumatic responses exist, particularly among children and adolescents (Cohen, Mannarino, & Deblinger, 2006; Overstreet & Chafouleas, 2016). The current Diagnostic and Statistical Manual of Mental Disorders, Fifth edition (DSM-5) lists reactive attachment disorder, disinhibited social engagement disorder, acute stress disorder, and adjustment disorder as other trauma-related diagnoses.

To actively address trauma as a public health concern, we must develop appropriate identification measures and tools, as well as culturally responsive treatment approaches. A wealth of established measures and evidence-based treatments exist. The National Child Traumatic Stress Network (NCTSN) has made tremendous strides in compiling and disseminating important information related to childhood trauma. The NCTSN advocates strongly for the use of evidence-based approaches used in conjunction with a comprehensive consideration of individual characteristics unique to the child and his/her culture. While symptom reduction is a primary clinical goal when serving children, adolescents, and their families, trauma treatment is a complex endeavor. Ultimately, the treatment must address the fundamental clinical challenges faced by traumatized children: forming healthy attachments, learning to self-regulate and cope, developing beliefs that they are in control of their own fate, developing effective problem

solving skills, developing a positive sense of self and finally establishing new or adaptive meaning to their traumatic experience/s.

For children and adolescents from understudied and underrepresented cultural and linguistically diverse minority groups, less is known about the nuanced role trauma plays in daily life. Deaf and hard of hearing (DHH) populations represent one such understudied and underrepresented group. Although small in number, the DHH population is remarkably diverse and wide heterogeneity across most demographic features is noted (Schild, 2007). This heterogeneity calls for an even greater clinical attention to specificity regarding the child's unique experience to accurately identify and effectively treat trauma. The literature consistently indicates elevated rates of interpersonal trauma, including sexual, physical, and emotional abuse, as well as domestic violence in this population (Sullivan & Knutson, 2000; Sullivan, Vernon, & Scanlon (1987). The literature has also recently identified a unique form of traumatic experience consistently expressed by deaf clients: information deprivation trauma. Information deprived clients express a lack of knowledge or awareness of impending events as well as past events, which renders them helpless and unable to seek safety (Schild & Dalenberg, 2012).

Currently, few measures and treatments exist to aid mental health professionals as they address the traumatic experiences of their DHH clients in treatment. In terms of measurement of trauma symptoms of DHH groups, available research involves adults (Glickman, 2013). This body of research suggests that trauma responses, and in particular, PTSD responses as defined by current DSM-5 indicators, do not totally reflect trauma

responses within the DHH group. Specifically, this research shows that dissociation responses may be elevated or may ‘look different’ among DHH groups when compared to expressions of trauma among hearing populations (Schild & Dalenberg (2012). Clearly this represents important progress in the field of Deaf Mental Health Care (DMHC), however this research did not involve children or adolescents. The same can be said for most of the literature regarding trauma treatment for DHH individuals. Neil Glickman, a leader in the field of DMHC, has modified cognitive-behavioral therapy (CBT) approaches and discussed application in his landmark text, *Deaf Mental Health*, but only one chapter in his text, reviewed herein, is devoted to discussing trauma treatment with deaf children (Bishop, 2013).

This study explores the perspectives of current DMHC providers serving DHH children and adolescents. Their definitions and conceptualizations of trauma within this DHH population are explored, their perspectives on client presentations and indicators of trauma are described, and their current approaches to trauma identification and treatment are reported. Finally, this study also draws comparisons and contrasts between the deaf and hearing participants in the study, to highlight important cultural differences in the conceptualization and practice of deaf versus hearing mental health care providers.

Chapter 2 Literature Review

The literature review that follows is divided into two main sections: first, a review of what is known regarding traumatic experience, trauma identification, and trauma treatment in general child and adolescent populations. There follows a review of what is known regarding traumatic experience, trauma identification, and trauma treatment within DHH populations, focusing, to the extent possible, on DHH children and adolescents.

Traumatic experience: a clinical description

The American Psychiatric Association's (2013) Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), contains a section devoted to the description of trauma- and stressor-related disorders, all of which explicitly require exposure to a traumatic event or circumstance as a primary diagnostic criterion. Currently listed are diagnostic criteria for the following disorders: reactive attachment disorder, disinhibited social engagement disorder, posttraumatic stress disorder (PTSD), acute stress disorder, and adjustment disorder. Despite what appears to be a wide variety of clinical presentations resulting from exposure to trauma, several key features highlight the exact definition of a traumatic experience.

Specifically, traumatic experiences can be described in terms of the timing, nature, and consequence of the event. In terms of timing, the American Psychiatric Association (APA) defines traumatic events as sudden or unexpected, often rendering the individual unprepared or unaware of an impending situation. The nature of a traumatic event is often

damaging or shocking, or it may pose as threatening to life or bodily integrity. The consequence of a traumatic event is one of subjective feeling of intense horror, or extreme helplessness. Examples of events considered traumatic by the APA include witnessing or experiencing sexual abuse, physical abuse, domestic, community, or school violence, neglect, bullying, serious emergencies such as motor vehicle accidents, natural or other disasters such as fire, war, terrorism and/or refugee conditions, medical trauma such as burns or accidents, life-threatening illnesses such as cancer, and the sudden death of a parent, relative or peer. Ultimately, traumatic experiences render an individual unprepared or unable to respond with sufficient or appropriate coping resources, which result in a state of significant overwhelm even after the event has passed.

The NCTSN also highlights key concepts for understanding child traumatic stress. Twelve principles are emphasized, including: traumatic experiences are inherently complex, childhood trauma occurs within the broad ecology of a child's life, traumatic events often generate secondary adversities, children exhibit a wide range of reactions to trauma, danger and safety are core concerns for trauma-exposed children, the experience(s) affect the family and broader care systems, protective factors can reduce the adverse impact of trauma, trauma adversities can influence developmental competencies, developmental neurobiology is directly involved in the child's trauma reaction, cultural factors are interwoven with the traumatic response and recovery, legal and ethical issues often impact trauma recovery, and providers working with trauma-exposed children often experience secondary, or vicarious trauma, themselves (NCSTN Core Curriculum on Childhood Trauma Task Force, 2012).

One might easily assume traumatic events, given the acuity of timing and severity of their nature and consequence, occur infrequently in the lives of children and adolescents. Research, however, has suggested that most children experience one or more traumatic or adverse events at some point throughout childhood. For example, Perfect, Turnley, Carlson, Yohannan, and Giles (2016) conducted a systematic review of 83 empirical prevalence studies and found that nearly two out of every three school-age youth has experienced at least one traumatic event by age 17. Older studies consistently report similar findings. In a 2007 study of 1,420 US children, more than two-thirds reported experiencing at least one traumatic event by age sixteen, with 13.4% of those children developing some form of post-traumatic stress symptoms (Copeland, Keeler, Angold, & Costello, 2007).

Ultimately, childhood exposure to trauma represents a significant public health concern. The United States Center for Disease Control and Prevention describes mental health in childhood as “characterized by the achievement of development and emotional milestones, healthy social development, and effective coping skills, such that mentally healthy children have a positive quality of life and can function well at home, in school, and in their communities (2013, p.2).” Certainly, exposure to one or more traumatic events during childhood can directly impact healthy social development, the development of effective coping skills and quality of life. Thus, effective identification and treatment of trauma represents an essential topic of study, particularly for cultural or linguistic minority groups who may be significantly understudied and underrepresented in the research literature.

The impact of trauma on childhood functioning

As highlighted by the NCTSN, of the many children exposed to traumatic or adverse events, not all develop the same traumatic response (2012). Psychological distress following exposure to a traumatic event is variable (American Psychiatric Association, 2013). In fact, research has consistently shown that only a small percentage of these children go on to meet full criteria for Post-Traumatic Stress Disorder (PTSD) (Cohen, Mannarino, & Deblinger, 2006). Available research suggests that a primary contributing factor to the development of PTSD may be the endorsement of a cognitive attributional style that is internal and marked by hopelessness (Gray, Pumprey, & Lombardo, 2002). Ultimately, this means that the individuals attribute the cause of the event to their own actions, rather than to an external force such as an abuser or misfortune. This suggests that the individual's subjective experience, that is, how they come to understand and make sense of the event has a significant influence on the emergence of PTSD symptoms. Rosenman (2002) even found that individuals who experienced simultaneous helplessness and terror during an event were twice as likely to develop PTSD. For those children who do go on to develop a PTSD response, such responses usually begin within the first three months of experiencing a traumatic event, and can surface at any age (APA, 2013). However significant evidence has emerged to suggest that some symptoms of PTSD may emerge as a "delayed expression" of the experience. Essential features of PTSD include re-experiencing the event (in the form of flashbacks or nightmares), avoidance of stimuli associated with the event, significant changes in mood and thought after the event, and marked arousal or reactivity. (See

Appendix A for PTSD Criteria from the *Diagnostic and Statistical Manual of Mental Disorders, DSM-5*).

Although only a small percentage of children who experience develop full-blown PTSD, it is critical to understand that traumatic events can yield wide ranges of impact upon children's lives (Gray, Pumphrey, & Lombardo, 2003). That is, certain traumatic experiences or combinations of experiences do not directly yield, any one specific "profile" of symptoms. Responses to trauma can vary widely and in many cases may be completely unique to each individual child (Cohen, Mannarino, & Deblinger, 2006). In fact, a traumatic event may not directly result in any one set of responses, even for siblings in similar environments who may have been exposed to similar treatment or experiences, which suggests that the experience of trauma is filtered through each individual child's subjective lens. The term *multifinality* is used to describe how a given risk factor or initial state can lead to disparate outcomes during the course of development across different individuals' lives (Wilmshurst, 2011) and can be applied directly to outcomes of a traumatic experience.

Overstreet and Chafouleas (2016) emphasize that signs of trauma exposure in children can be expressed in ways beyond "typical" traumatic stress reactions, particularly so for those from diverse cultural or linguistic backgrounds. The literature has described how children who have experienced trauma, and especially those who meet criteria for PTSD, often develop symptoms across several domains of functioning, including affective, behavioral, and cognitive, which will now be described. Please see *Communicating Trauma: Clinical Presentations and Interventions with Traumatized*

Children for additional description of the impact of trauma on domains of childhood functioning, and specifically the impact on linguistic development (Yehuda, 2015).

Cognitively, children strive to make sense of their experience and to understand why a terrible event has occurred. In other words, attributing reasons or causes behind various events is a fundamental human practice. Oftentimes with trauma, there may not be a rational or easily explainable cause of the event and as a result, children may develop irrational beliefs about what factors led to their traumatic experiences. For example, children may take complete responsibility for what occurred, or they may believe that they could have done something to intervene and change the outcome of the situation. They may ultimately come to believe that they are shameful, bad, or unworthy of good things and that they somehow deserve what happened. Further, children may come to believe that the world is largely unsafe and unpredictable. Regarding areas of brain-based functioning, research has shown the impact of post-traumatic arousal on executive functioning, attention, and educational underachievement, which may resemble symptoms of Attention Deficit Hyperactivity Disorder (ADHD) (Glaser, 2000).

Behaviorally, a hallmark symptom of trauma is the marked avoidance of reminders or ‘triggers’ that may cue the child and activate arousal responses. At some point, it becomes impossible for the child to avoid all trauma triggers, and when avoidance cannot be effectively employed, dissociation, or the numbing and disconnection from sensory experience often occurs. Other behavioral responses to trauma include maladaptive coping strategies, such as drug use, self-injury, tantrums, acting out, and/or sexualized behaviors. Some children may even develop a *traumatic*

bond with an abuser to ensure their safety; they may align with an abuser out of self-preservation and behave in compliant ways that they would not choose otherwise (Cohen, Mannarino, & Deblinger, 2006).

Affectively, many children become dysregulated, including significant mood changes and difficulty tolerating distressing or negative mood states. They often continue to feel hyper-arousal, sensitivity, fear, depression, and anger long after the traumatic event has passed. The brains of children who have been in life-threatening or harmful circumstances may continue to perceive danger, or be ‘triggered’ by reminders of the trauma, and may release large amounts of adrenergic neurotransmitters, further increasing the amount of anxiety experienced by the child (Cohen, Mannarino, & Deblinger, 2006). Depressive feelings often result from a loss of trust in others, a concrete loss such as a loved one, a loss of bodily integrity, or a lack of hope for a safe and happy future. This may lead the child to experience a negative self-image, lowered self-esteem, and even feel suicidal.

Interpersonally, many children who experience trauma, and specifically those who experience sexual, physical, or emotional abuse, struggle to develop a stable, healthy or secure sense of self, struggle to develop attachments and trusting relationships with others, may be unskilled at establishing healthy relational boundaries, or may re-enact patterns of inappropriate dynamics with peers or adults.

Factors affecting impact of traumatic experience

Trauma occurs indiscriminately in the lives of children and adolescents; that is, adverse experiences of abuse, violence, neglect, bullying, sudden medical illnesses, and natural disasters have been found to occur within and across all cultures, races, genders, socio-economic backgrounds, religions, and age groups. Certainly, children and adolescents in general represent a highly vulnerable population, as their wellbeing is highly dependent upon caretakers' treatment. However, certain populations or groups of children have been found to be more susceptible to traumatic exposure and it is important to consider the ways in which such groups may be more vulnerable to traumatic experience. Such factors are considered *pre-traumatic risk factors*

Specifically, children with disabilities are up to ten times more likely, to experience some type of maltreat than children without disabilities (Durity, Gary, Mallah, Nicolaisen, Oxman, Sterritt, & Stewart, 2004). Children facing additional physical, developmental, intellectual, emotional or behavioral disabilities are particularly vulnerable to poly-victimization and subsequent overwhelm (Sullivan, 2009; Sullivan & Knutson, 2000). Additional disabilities may be related to or caused by prior traumatic exposure, the influence of family genetics and/or psychiatric history, or childhood temperament, all of which represent significant pre-traumatic risk factors. Environmental factors such as socioeconomic status, education levels, and family dysfunction also play a role (APA, 2013). Children from impoverished, under-resourced, or disadvantaged backgrounds are also more likely to experience inadequate access to social programs,

recreation, nutrition and health-care, rendering them more susceptible to bullying and social or medical neglect (Jones & Offord, 1989).

Peritraumatic factors, or those that occur during an adverse event, can influence the expression of traumatic responses. Research suggests the greater the polyvictimization, or the higher the number of victimization experiences, as well as the greater the severity of the trauma, the greater the likelihood for significant, long-lasting impact on functioning (Turner, Finkelhor, & Ormrod, 2010). This is known as the severity, or “dose” effect, also known as complex trauma (NCTSN, 2012). For example, higher levels of trauma exposure are related to higher levels of anxious and depressive disorders (Copeland, Keeler, Angold, & Costello, 2007). The greater the severity of a traumatic event, the greater the likelihood for perceived threat to life or bodily integrity, as well as the actual likelihood for personal injury or interpersonal violence (APA, 2013).

Posttraumatic factors, or those that occur immediately or soon after the occurrence of an adverse event, have a significant impact on the outcome and trajectory of the individual’s recovery from trauma. Children’s responses to trauma appear to be highly dependent on their parents’ or caretakers’ reactions, such that if parents respond in resilient ways and demonstrate coping and effective emotion regulation, children are less likely to develop trauma-symptoms (Foa, Keane, Friedman, & Cohen 2008). Ultimately, negative appraisals of the event, whether by the family or by the individual child, seem to be directly linked to endorsed coping strategies and to the child’s overall well being. Therefore, social and family support, family stability and resiliency, as well as the modeling of adaptive coping to trauma represent important posttraumatic factors (APA,

2013). Depending on factors such as the child's sources of physical, emotional, and social safety and support, resiliency, and pre-existing coping strategies, trauma responses in children can vary considerably.

Trauma symptom identification using tools and measures

Effective early screenings as well as comprehensive assessments are two critical tools used to identify the needs of children and adolescents in school-based and community mental and behavioral health settings (US Centers for Disease Control and Prevention, 2013; National Association of School Psychologists, 2009; Whitcomb & Merrell, 2013). For the most effective treatment of trauma, clinicians must first fully assess and determine the extent to which children are experiencing hallmark signs and symptoms of PTSD (Foa, Keane, Friedman, & Cohen 2008). For those who do not meet full criteria for PTSD, responses to trauma still impact daily functioning in significant ways and these should be examined in depth to the fullest extent possible.

Several tools currently exist specifically for the assessment of traumatic exposure, traumatic response, and PTSD symptoms. The National Child Traumatic Stress Network (NCTSN) compiled a comprehensive, but certainly not completely exhaustive, list of standardized measures to assess complex trauma, all of which are designed for use with children or adolescents (in some cases can be used with adults as well) and can be reviewed here: <http://www.nctsn.org/content/standardized-measures-assess-complex-trauma>. The current list includes 47 different measures and identifies important features of the measures including domains of assessment (e.g. affect dysregulation, somatization,

self-perception, relations with others, dissociation, anger, anxiety, depression, attachment, cognition, family functioning, resilience, coping, strengths, trauma exposure/history, and PTSD symptoms). For example, the *Child and Adolescent Needs and Strengths-Trauma Comprehensive* (CANS Trauma) (Kisiel et. al, 2011) contains a measure of trauma exposure, while the *Trauma Symptom Checklist for Young Children* (TSCYC) (Briere, et. al, 2001) contains a measure of traumatic stress. Although not all tools include items that align perfectly with current diagnostic criteria in the DSM-5 (in fact, some tools are quite dated), many can help clinicians organize their understanding of a client's trauma responses.

Child clinical interviews represent another tool, used often by clinicians when making diagnostic determinations. In fact, child clinical interviews represent one of the most popular and commonly used assessment methods (Whitcomb & Merrill, 2013). The clinical interview is a purposeful, structured conversation, initiated and directed by the clinician. The clinical interview is considered a structured activity, meaning several domains of inquiry typically must be covered under the direction of the clinician, including what the client can report regarding their

- a.) Medical history,
- b.) Developmental history,
- c.) Social-emotional functioning,
- d.) Family and peer relationships,
- e.) Educational progress and school adjustment,
- f.) Community involvement, and

g.) Intrapersonal functioning.

Importantly, the clinical interview allows for a high degree of flexibility. Furthermore, Whitcomb & Merrill (2013) state the clinical interview provides the clinician with “the opportunity to observe the client directly under structured conditions” (pg. 161) and attend to client features such as activity level, attention span, interaction with the environment, distractibility, impulsivity, reaction to praise or frustration, social and communication skills with the interviewer, ease of separation from caregivers, and range of affect. This suggests the multi-purpose, multi-dimensional nature of the clinical interview, which renders it highly client-centered.

Trauma treatments in general populations

Certainly, the function of a trauma measure or child clinical interview is to identify and more deeply understand specific features of a client’s traumatic response. Beyond this function, the broader power of a trauma measure lies in its potential to inform treatment goals and approaches. Considering the needs of traumatized children and adolescents specifically, Blaustein and Kinniburgh (2010) encourage clinicians to understand the fundamental clinical challenges faced by traumatized children, including: forming attachments, learning to self-regulate or cope, developing beliefs that they are in control of their own fate, developing effective problem solving skills, developing a positive sense of self and also establishing new or adaptive meaning to the traumatic experience. In some cases, trauma symptoms can be well understood within an anxiety- or fear-based context, and a cohesive cognitive-behavioral approach toward the treatment

of the underlying fear response and associated cognitive distortions, affective dysregulation, and/or interpersonal struggles is appropriate. Warranted in such cases are developmentally appropriate interventions to manage or correct mood, anger, cognitions and behaviors. However, individuals who meet criteria for Post-Traumatic Stress Disorder and experience flashbacks, nightmares, or other ‘re-experiencing’ features of the event require additional psychoeducation specific to the type of trauma experienced, must build sufficient self-soothing and coping strategies to address PTSDI symptoms, and may engage in prolonged exposure for PTSD treatment (Foa, Keane, Friedman, & Cohen, 2008).

The DSM-5 encourages the need to conceptualize the treatment of trauma in a flexible, client-centered manner; thus, trauma treatment must implement not only evidence-based practices, but also must also incorporate conceptualization of relevant individual, linguistic, and cultural factors. In 2005, The National Child Traumatic Stress Network (NCTSN) began a compilation of *Empirically Supported Treatments and Promising Practices* for use with traumatized children and their families. The compilation included interventions for youth, which ranged from those rigorously evaluated to those deemed promising and newly emerging. In 2007, a 14-member expert panel convened at the NCTSN’s annual conference to review evaluation criteria for trauma treatment interventions. As a result of the panel, a Culture-Specific Information Intervention Template was developed for the original list of treatments and information regarding important language issues, cultural adaptations, and intervention delivery methods were included for each intervention. The *Trauma-Informed Interventions:*

Clinical and Research Evidence and Culture-Specific Information Project currently reviews 22 treatments, including: Adapted Dialectical Behavior Therapy for Special Populations (DBT-SP), Attachment, Self-Regulation, And Competency: A Comprehensive Framework for Intervention with Complexly Traumatized Youth (ARC), Cognitive Behavioral Intervention for Trauma in Schools (CBITS), Culturally Modified Trauma Focused Treatment (CM-TFT), Parent-Child Interaction Therapy (PCIT), Sanctuary Model, Trauma-Focused Cognitive Behavioral Therapy (TF-CBT), Trauma-Focused Cognitive Behavioral Therapy for Child Traumatic Grief (TG-CBT), among several others. This important resource is found at www.Nctsn.org/resources/topics/treatments-that-work/promising-practices.

Although no single trauma treatment is appropriate for all children who have experienced trauma, there are clearly several evidence-based approaches that are appropriate for many children from diverse cultural groups, as identified by the *Trauma-Informed Interventions: Clinical and Research Evidence and Culture-Specific Information Project* (de Arellano, Ko, Danielson, & Sprague, 2008). One treatment, Trauma-Focused Cognitive Behavioral Therapy (TF-CBT) warrants discussion. TF-CBT was originally developed for work with children who have been sexually abused (Cohen, Deblinger, Mannario, & Steer, 2004) and it has since been shown to be effective with other types of traumas, such as natural disasters, terrorism, and repeated trauma (Little & Akins-Little, 2009; CATS Consortium, 2010; Woodworth, Black, Tremblay, & Carpenter, 2012). As a model, TF-CBT has been used with individuals from diverse backgrounds; at least two current adaptations for use with Latino and Native American cultural groups

exist (Child Sexual Abuse Task Force and Research & Practice Core, National Child Traumatic Stress Network, 2004).).

Broadly, TF-CBT treatment includes key components such as psycho-education on trauma, relaxation skills training to cope with unpleasant feelings and physical sensations related to trauma, exposure strategies, such as the discussion of traumatic events at an appropriate pace, a “narrative” or story of the traumatic event as a way for the individual to gain distance and mastery over the event, and correction of distorted cognitions related to the trauma. TF-CBT is implemented through eight phases given the acronym, PRACTICE (Psycho-education/Parenting; Relaxation; Affective Expression; Cognitive Coping Skills; Trauma Narrative and Cognitive Processing; In Vivo Mastery of Trauma Reminders; Conjoint Parent-Child Session; and Enhancing Safety /Development).

DHH groups: A description of the population

Schild (2007) reminds us of the remarkable diversity present within the Deaf and hard of hearing (DHH) population and encourages consideration of heterogeneity across both demographic and deafness-related variables. DHH individuals comprise a mere 0.1% of the general school age population receiving special education services in the United States and thus represent a distinct cultural-linguistic minority group (United States, Department of Education, Office of Special Education and Rehabilitative Services, 2014). Demographically, clear variation exists with regard to race, ethnicity, country of origin, religion, family background, gender, and sexual orientation (Schild, 2007). Thus,

a variety of complex intersectional identities exist and must be considered holistically within the DHH population. Just like any distinct population, a comprehensive understanding of DHH people includes “biological, developmental, educational, vocational, legal, social, and cultural aspects” (Schild & Dalenberg, 2012, p.117). When the term deaf is used with a lowercase ‘d’ deaf refers to the audiological condition of not being able to perceive sound, while use of the uppercase ‘D’ Deaf, refers “to a particular group of people who share a language and a culture” (Padden & Humphries, 1988, p. 2). Many DHH individuals refer to themselves as belonging to the capital ‘D’ “Deaf” community and value this as an essential component of their identity. Ladd (2003) uses the term ‘Deafhood’ to describe a collective experience of exclusion from the majority Hearing society, desire to create alternative social organizations and safe havens, and the recognition of and distinction between Deaf versus Hearing worlds. Ultimately, how DHH individuals come to self-identify in regard to their hearing status is deeply personal and is a developmental process like any other personally salient identity marker (National Child Traumatic Stress Network, 2004).

In terms of communication modalities and language preferences unique to DHH groups, use of a visually-based modality, and an emphasis on the role of visual access to information and communication is primary (Baker & Cokely, 1980; Child Sexual Abuse Task Force and Research & Practice Core, National Child Traumatic Stress Network, 2004; Woll & Ladd). Some DHH individuals use American Sign Language (ASL) as a primary mode of communication while others utilize Signed Exact English (SEE), speechreading, simultaneous communication (known as simcom, a combination of sign

and speechreading), or home sign, which is a unique and idiosyncratic sign system developed within the family context of home, often used between the parent and child as well as with siblings. Other DHH individuals may utilize spoken language and listening. (Pollard, 1998; Connolly, Rose, & Austen, 2006).

Preferences for language and communication modalities are often influenced by early educational experiences, or lack thereof, including the nature or ‘type’ of early educational programming (Marschark & Hauser, 2012). DHH students are placed in four general classroom environments, including regular school settings that do not involve the use of resource rooms, regular education settings that also include a resource room assignment, self-contained classrooms in regular schools, and special schools such as residential and day schools for the deaf. Today, more than 80% of children who are DHH are educated in mainstream, public school settings (Gallaudet Research Institute, 2006). It is also predicted that the number of DHH students who are educated in public school settings will continue to increase, thus shifting the socio-cultural and educational landscape for DHH students (Antia, Kreimeyer, Metz, & Spolsky, Hintermair, 2010).

Deafness-related variables, often considered significant from a medical and educational, but not cultural, perspective include aspects related to degree of hearing levels, type of hearing loss, age of onset, and cause or etiology of hearing loss (Fellinger, Holzinger, & Pollard, 2012; Schild, 2007). Regarding degrees of hearing loss, audiometric tests will place individuals into one of five distinct categories: mild, moderate, moderately severe, severe, and profound (Keith, 1996). These categories relate directly to the experience of perceiving sound. Individuals unable to perceive sounds

between 26 to 40 dB (whispers or faint speech) are considered to have *mild* hearing loss, while individuals unable to perceive sound between 41 to 55 dB (normal conversational speech) are considered to have *moderate* hearing loss. Individuals with *severe* hearing loss cannot perceive sound at 71 to 90 dB (at this level amplification devices may not aid in understanding normal speech patterns) while individuals with hearing loss at greater than 91 dB are considered *profoundly* deaf (maximal amplification does not introduce perception of sound at this level).

Types of hearing loss refer to the location within the ear (outer, middle, inner, or within the central auditory nervous system) where hearing loss occurs. The terms *conductive*, *sensorineural*, *mixed*, or *central* refer to these locations. Specifically, conductive hearing losses are related to structural differences in the outer or middle ear, which result in mild to moderate hearing loss. Sensorineural hearing loss is related to damage or differences in the inner ear and pathways to the auditory cortex. Mixed hearing loss is related to a combination of both conductive and sensorineural hearing loss. Central hearing loss is related to damage or differences within the auditory neural network that includes the brain stem and cerebral cortex (Marschark, 1993; Schild, 2007). It is important to note that all hearing losses can be either unilateral or bilateral, which means it can be located in either one or both ears.

Age of onset of hearing loss typically relates to whether the individual had access to or developed spoken language. Prelingual deafness, as its name implies, suggests that a person was either born deaf or became deaf before the acquisition of spoken language. Postlingual deafness, as its name also implies, means the person became deaf after the

acquisition and development of spoken language. The etiology of hearing loss is considered to be influenced by a combination of genetics and environment, as well as a combination of both factors. Considering the role of genetics, it is important to recognize that the expression of some genetic syndromes result in deafness, such as Usher's Syndrome (Schild, 2007). Environmental causes of deafness maternal rubella, low weight at birth or other pregnancy-related factors, meningitis, high fevers, or physical trauma to the ear. Research has suggested that up to 40% of deaf children also face additional disabilities, including blindness (often in the case of those impacted by Usher's Syndrome), developmental delays, Autism, specific learning disabilities, emotional or behavioral challenges, orthopedic impairments, and other health impairments (Gallaudet Research Institute, 2011).

Mental health care for DHH groups: Historical backdrop and current landscape

The history of mental health care for DHH individuals is replete with over-pathology, specifically the over-pathologizing of deafness itself. Most early clinics and mental health institutions endorsed a 'medical model,' which describes weaknesses or deficiencies associated with deafness, particularly as compared to hearing people. As a result of medical model endorsement, many mental health providers took a paternalistic view toward their clients (Peters, 2007; Schwenke, 2011). Before the 1960's, many DHH individuals were incorrectly diagnosed with a variety of mental illnesses and inappropriately placed into asylums or institutions (Glickman, 2007; Gulati, 2003; Marschark, 2006; McEntee, 1993; Vernon & Leigh, 2007). Early psychiatric reports

often described DHH patients as “neurotic, paranoid, psychotic, hedonistic, clannish, disobedient, and unintelligent” (Lane, 1992, p. 36). Gestural behaviors or sounds made by patients were commonly mistaken for symptoms of schizophrenia or other psychotic disorders (Altshuler & Abdullah, 1981; Marschark, 2006). In many cases, DHH individuals were mistakenly diagnosed on the basis of impoverished language skills resulting from severe language deprivation and not from psychoses; these individuals were then treated with powerful psychotropic medications (Glickman, 2007). The gross misunderstanding and mistreatment of DHH individuals in mental health settings rendered such groups completely underserved and further traumatized. In reference to early mental health care of DHH individuals, Glickman (2003) wrote, *“If you are hearing and if you are awake, if you seriously attend to what deaf people say, then you know that the mental health problems that some deaf people develop can not be separated from the abusive ways they have been treated by hearing people. (p. 2)”*

Currently the National Association of the Deaf (NAD) describes mental health care (DMHC) of Deaf individuals as the identification, evaluation, diagnosis, and treatment of DHH individuals who have cognitive, emotional, behavioral or psychosocial needs by counselors, psychologists, psychiatrists, social workers, and other mental health care professionals (2003). Clinically, advances via the American legal system have helped to increase the quality of mental health services provided DHH individuals. NAD gained influence in the early 1980’s and was becoming more attuned to the mental health needs of deaf Americans, which led to successful advocacy efforts for its stakeholders. In 1986, NAD successfully filed and won *Nancy Doe v. Wilzack* lawsuit, the holding of

which recognized that DHH patients deserve more appropriate treatment than psychotropic medication during hospitalizations (Pollard, 1996). Today, a variety of professional groups exist to advance the field of mental health as it pertains to DHH individuals, namely Division 22, the Special Interest Section of the American Psychological Association, the Special Interest Group for Psychologists Serving the Deaf and Hard of Hearing of the National Association for School Psychologists, and the Registry of Interpreters for the Deaf.

Despite some advances in mental health service provision for DHH groups, a comprehensive understanding of the scope of mental health needs of DHH populations is still forming including the specific impact and nature of trauma. Culturally-competent, sign-fluent clinicians (particularly Deaf clinicians) are few and far between. Two of the leading experts in the field of DMH, Neil Glickman and Robert Pollard, report that research on DMH is at least forty years behind that of hearing mental health research. As a cultural-linguistic minority population, DHH individuals are consistently underserved, particularly when it comes to appropriate and effective mental health care. Pollard (1996) reports that less than 2% of deaf individuals in need of mental health treatments receive them. It is speculated that even fewer deaf individuals from ethnic minority groups receive services. A 2008 national survey found that 10.7% of practicing school psychologists were fluent in a language other than English, and less than 1% of practicing school psychologists reported ASL fluency in American school systems (Charvat, 2008).

Hearing societies, which make up the overwhelming majority group in the United States, continue to be unfamiliar with Deafness and with American Sign Language

(ASL); in fact, many parents of deaf children never met a DHH person before the birth of their child (Hindley, 2005). Due to this general unfamiliarity with deafness, DHH groups are rendered consistently vulnerable in terms of increased likelihood for potentially traumatic experiences interfacing with inaccessible behavioral and mental health settings (Gallaudet Research Institute, 2001; Gulati, 2003; Sullivan, Vernon, & Scanlan, 1987). Hearing people still apply deficit models to DHH people; many hearing people use labels like ‘hearing loss’, ‘impaired,’ ‘handicapped,’ and/or ‘disabled’ to describe DHH individuals. Numbers of DHH practitioners or those currently specializing in DMHC are also low, and certainly significantly below the current need to effectively meet the need for psychological services (Leigh & Pollard, 2011; Luckner & Bowen, 2006) since the empirical basis for effective mental health treatment within the Deaf community is still forming. This ultimately means that there is an inadequate number of professionally trained providers with a knowledge of Deafness who can support their deaf clients through the processing of traumatic experiences in therapy and there is increased potential for deaf individuals to face trauma and re-traumatization in interactions with hearing behavioral and mental health providers

Risk factors for traumatic experience among DHH groups

There remains plenty of room for improvement in the current landscape of mental health care for DHH individuals. It has been established that nothing inherent to being DHH results directly in compromised affective, behavioral, cognitive, or psychological health. After years of research, Fellingner, Holzinger, and Pollard (2012) cannot identify

the existence of any psychopathology specific to deafness and assert that the mental health concerns seen in DHH populations are mental disorders faced by all populations. This suggests that other causes, more contextual in nature, have significant impact on the overall well-being and mental health of deaf groups. DHH individuals are subjected to a significantly greater number of contextual risk factors than hearing counterparts, such as: an increased risk for an early and/or pervasive lack of communication access in general as well as with family members and attachment figures, a lack of appropriate early educational services, and a lack of access to necessary and appropriate physical and mental health treatment services (National Association of the Deaf, 2003).

Most of these identified risk factors occur early in the lives DHH people. As evidence of this, several studies have shown marked differences in the rates of social-emotional and behavior problems experienced by DHH children as compared to hearing peers, with rates as high as two to three times that of hearing peers (Dammeyer, 2010; Hintermair, 2007; Fellingner, Holzinger, & Pollard, 2012). Tate (2009) reports slightly higher numbers and suggests that deaf children are three to five times more likely to have a serious emotional disturbance than their hearing peers, while Mueller (2006) suggests that childhood behavior problems are three to six times more prevalent for DHH children than hearing children. It could be easy to interpret these findings as suggestive of social skill or emotion regulation deficits on the part of deaf youth, but given the assertion by Fellingner, Holzinger, and Pollard (2012) these statistics reveal the need to examine various contexts into which DHH children are born and raised.

As a primary experience shared by as many as 95% of DHH children born to hearing families, it is not uncommon for DHH individuals to be the ‘only Deaf person’ in a family, school or community settings (Calderon & Greenberg, 2011; Leigh & Pollard, 2011). For most of the DHH children born into hearing families, the assumption in deaf education literature has been that children with increased access to oral communication, such as those with mild as opposed to severe hearing losses, will have less compromised social-emotional functioning. However, research findings are largely inconsistent. Some studies, such as Polat (2003) have found a negative correlation between degree of hearing loss and social-emotional adjustment while others such as Meadow-Orlans (1980) found that moderate hearing losses (40 dB or greater) had little impact on social emotional functioning. Meadow-Orlans’s work also suggested that the impact of hearing loss was potentially mitigated by the influence of Deaf cultural affiliation.

In mainstreamed school settings, the influence of Deaf cultural affiliation may not be available to serve as a protective factor for DHH students. In their study of 451 DHH students in 15 public high schools, Stinson & Kluwin (1996) found that adolescents who preferred oral communication methods reported more frequent interaction with hearing peers, than those adolescents who preferred to sign. Overall, studies on the school-based experiences of mainstreamed DHH students have reported that feelings of loneliness and few close friendships are prevalent (Foster, 1988; Leigh & Stinson, 1991; Stinson & Lang, 1994; Stinson, Whitmire, and Kluwin, 1996).

When considering the quality of interactions between DHH students and their teachers, the vast majority of secondary school professionals, have little exposure to deaf

culture and no background in sign language, limiting the potential for these professionals to serve as important figures and role models (McCay, 2007; Vernon & Leigh, 2007). In general, mainstream educational settings vary widely in their provision of mental health services for DHH due to variable and inconsistent levels of expertise in deafness (Vernon & Leigh, 2007). School psychologists are often unfamiliar with the evaluation methods for students with hearing loss and may be generally unable to assess for the high incidence of co-occurring disabilities, including learning disabilities among DHH populations. Most studies suggest that 30-40% of DHH children have additional disabilities that play an important role in a deaf child's well-being (Gallaudet Research Institute, 2001; Hindley, 2005; Sebald, 2008). Previous research has suggested that the presence of additional psychological or psychiatric disorders, including Attention-Deficit Hyperactivity Disorder, increase an individual's vulnerability towards a range of negative outcomes, including poly-victimization and trauma-related symptoms (Adler, Kunz, Chua, Rotrosen, & Resnick, 2004; Ozer, Best, Lipsey, and Weiss, 2003)

The risk factors discussed above, an increased risk for an early and/or pervasive lack of communication access in general as well as with family members and peers, a lack of appropriate early educational services, and a lack of access to necessary and appropriate physical and mental health treatment services all result in significant communication and social isolation, reduced likelihood for social-emotional adjustment, significant deficits in health and safety knowledge, and increases in risk to traumatic exposure. The role of trauma, including interpersonal traumas as well as communicative isolation traumas, is an often under-identified but particularly salient factor in the lives of

DHH individuals (Gallaudet Research Institute, 2001; Gulati, 2003; Schild & Dalenberg, 2012; Sullivan, Vernon, & Scanlan, 1987). The experience of both interpersonal and information deprivation trauma, a recent conceptual development in deaf mental health literature, will now be discussed.

Traumas experienced by DHH groups

For many DHH individuals, the experience of severe interpersonal traumas and chronic communicative traumas often centered around isolation and deprivation can render the experience of being DHH in a hearing social world a devastating one.

Interpersonal Trauma. All available empirical research suggests that DHH children and adolescents are exposed to a greater number of interpersonally traumatic experiences than hearing counterparts, and are more vulnerable to neglect, emotional, physical, and sexual abuse (National Child Traumatic Network, 2004; Sullivan, Brookhouser, & Scanlan, 2000). In terms of childhood physical abuse, it is suggested that parents who lack a means of communicating with their DHH child often rely upon authoritarian limit setting and use of physical force for discipline. If taken to extremes, this parental force often leans towards physical abuse (Glickman & Harvey, 2008; Sullivan & Knutson, 2000). Sullivan, Vernon, & Scanlon (1987) provided some of the earliest statistics on rates of abuse among DHH children. Their findings suggested that over 50% of both DHH boys and girls had experienced sexual abuse, as compared to 10-25% of hearing youth. Some research suggests increased rates of sexual abuse in residential schools for deaf (Brookhouser, 1987; Mertens, 1996; Sullivan & Knutson,

1998; Weiner, Day, & Galvan, 2013). In such schools, it has been reported that sexual molestation of children most often occurs in speech training settings, bathrooms, residence halls, school buses, and bedrooms (Elder, 1993; Sullivan, Vernon, & Scanlon, 1987). Weiner and Miller (2006), describe how bullying occurs not only in mainstream settings but also in schools for the Deaf; they highlight the significant role that power differentials and intimidation from others play in DHH children's lives. They also highlight that there is no available research documenting the bullying behaviors of DHH children themselves. Intimate partner violence (IPV) is another understudied but significant trauma in the lives of many DHH women. An important review by Anderson, Leigh, & Samar (2010) suggested that increased efforts to network and share information among researchers would help expand the knowledge base of violence against Deaf women.

The occurrence of childhood physical, sexual, and emotional abuse and neglect, and incidence of victimization, traumatic events, and PTSD symptomatology was investigated within a sample of deaf ($n = 86$), hard of hearing ($n = 61$), and hearing ($n = 317$) college students recruited from undergraduate psychology classes at the Rochester Institute of Technology. Using The Childhood Trauma Questionnaire (CTQ), The Traumatic Life Events Questionnaire (TLEQ), and The PTSD Checklist (PCL), chi-square analyses revealed significant group differences between DHH and hearing participants. Primarily, as consistent with previous literature, DHH groups reported significantly higher rates of maltreatment on all domains of abuse on the CTQ: 48% of DHH individuals reported emotional abuse as compared to 29% of hearing, 39% of DHH

individuals reported physical abuse as compared to 18% of hearing, 32% of individuals reported sexual abuse as compared to 13% of hearing, 45% of DHH individuals reported emotional neglect as compared to 31% of hearing, and 47% of DHH individuals reported physical neglect, as compared to 19% of hearing. Also, DHH participants reported experiencing significantly more instances of traumatic events than hearing participants; on average DHH individuals reported 3.4 traumatic events while hearing individuals reported 1.9 traumatic events, contributing to a higher 'dose' effect of trauma for deaf participants (Schenkel, Rothman-Marshall, Schlehofer, Towne, Burnash, & Priddy, 2014).

Information Deprivation Trauma. First theorized in the literature by Schild & Dalenberg (2012), Information Deprivation Trauma (IDT) is a traumatic experience that is specific to DHH populations. Resulting from significant communication isolation from family, peers, and society at large, IDT occurs when a Deaf person has received little to no information about an impending event. The result of this lack of information is a traumatic experience more sudden, unpredictable, and uncontrollable than for hearing people (Schild & Dalenberg, 2011; Schwenke, 2011). Examples of IDT include finding out that a relative had passed several weeks late, or being unaware of an impending natural disaster, such as a hurricane or tornado. IDT also renders DHH children particularly vulnerable and less likely to disclose abuse, especially if they do not have the vocabulary to express their experience or even know that the abuse was wrong. (Hindley, 2005; Schild & Dalenberg, 2012). Furthermore, the experience of traumatic abuse without a language to make sense of it contributes to profound trauma reactions and re-traumatization processes (DeVinney, 2003; Harvey, 1996; Sullivan, Brookhouser, &

Scanlan, 2000). The experience of IDT may contribute to a higher prevalence of trauma within the Deaf population than is noted in the hearing population (Anderson, 2010; Schild & Dalenberg, 2012).

Trauma symptom presentation in DHH groups

Although a wealth of empirical evidence suggests increased rates of trauma experiences exist within DHH populations, including a unique form of trauma (IDT), there is a lack of knowledge regarding both the presenting characteristics or symptomology as well as the long-term consequences of trauma within the Deaf community (Sebald, 2008; Schild & Dalenberg, 2012). Black and Glickman (2006) were the first to examine specific PTSD responses among 64 deaf residents in a psychiatric setting. Their review of the hospital records of finding a higher rate of PTSD in the deaf as opposed to the hearing community (29.7% vs. 6.6%). Little data exists on symptom manifestation, and/or unique characteristics of the response of deaf adults and children to traumatic events. Gulati (2003), however, warns that symptoms such as dissociation in DHH populations may present as particularly unusual or bizarre to the untrained, unfamiliar eye, and may also partially explain some of the gross, historical diagnostic errors made with DHH groups, often labeled schizophrenic.

This lack of information renders many clinicians largely unaware of exactly what trauma responses ‘look like’ in the lives of DHH people. Little information exists regarding the specific symptom manifestation of trauma in DHH children. Within the literature currently available, several studies have begun to suggest that some of the

classic signs and symptoms of trauma present differently in hearing populations than they do in DHH populations (Pollard, 1998; Vernon & Andrews, 1990). It is thought that current diagnostic criteria for PTSD in a hearing population does not fully capture the range of symptom responses seen in DHH individuals (Schild & Dalenberg, 2012). For example, traditional PTSD scales, which have been normed on hearing populations, may underestimate the kinds of traumatic symptoms experienced in DHH groups, and do not even account for the types of trauma, like IDT, DHH individuals may experience.

To more closely examine differences in the presentation of PTSD symptoms between DHH and hearing groups, Schild and Dalenberg (2012) looked at a sample of 79 DHH participants consisting of 45 women and 34 men. The mean age for the entire sample was 40.8 years (SD=16). The majority of the participants were Caucasian (58.2%) and heterosexual (82.3%). Non-Caucasian participants included Hispanics (19%), African Americans (11.4%), and other races (11.4%). Over 30% of the sample also reported additional disabilities, with ADHD/ADD and learning disability being most common. Translating the Trauma Symptom Inventory Scale (TSI), a 100-item self-report measure into ASL and signing items to participants, acute and chronic trauma symptoms in deaf adults were assessed. The TSI consists of 10 clinical and three validity scales. The clinical scales are Anxious Arousal (AA), Depression (D), Anger/Irritability (AI), Intrusive Experiences (IE), Defensive Avoidance (DA), Dissociation (DIS), Sexual Concerns (SC), Dysfunctional Sexual Behaviors (DSB), Impaired Self-Reference (ISR), and Tension Reduction Behavior (TRB) scales. The three validity scales assess denial of symptoms (Response Level; RL), unusual or bizarre symptoms (Atypical Response; AR)

and inconsistent or random response patterns (Inconsistent Response; INC) (Briere, 1995).

Using the Life Events Checklist (LEC), an overall checklist of the occurrence of traumatic events, the researchers divided participants into those who experienced Low- and High-Trauma (determined by the presence of only one or two traumatic experiences versus multi-traumas). Interestingly, findings revealed an increased presence of dissociative symptoms on the DIS scales of the TSI among DHH individuals, when compared to scores of the standardization sample of hearing people on the DIS scale. Additionally, a non-significant correlation between the low and high trauma group was found between the amount of trauma experienced and dissociation symptoms. This means that regardless of trauma exposure and level of traumatization, DHH individuals were more likely to dissociate than hearing people.

Issues with the use of trauma measures for DHH groups

Culturally affirmative and linguistically appropriate measures that account for the impact of a diverse range of influences on DHH individuals' functioning, and specifically their traumatic responses are quite simply lacking. The TSI, as discussed earlier and used in Schild and Dalenberg's (2012) study is a self-report measure, which requires a certain degree of reading comprehension by the individual. This may present challenges to deaf individuals whose levels of English literacy are variable. Although the TSI was translated into ASL for Schild and Dalenberg's research purposes this does not mean it is available widely to others for use. Furthermore, this study did not include children. The

Meadow-Kendall Social-Emotional Assessment Inventory for Deaf Students (SEAI) represents one of the only measures that was actually designed for use with deaf children, and includes norms based on data collected from over 2,400 students enrolled in ten different programs for the deaf (Meadow-Kendall, 1980). Although impressive, it is a relatively old measure and new norms must continually be established to keep up with the rapidly changing demographic features of the Deaf community in the United States (e.g., increasing numbers of Spanish-speaking families). Furthermore, the SEAI only contains three subscales: Social Adjustment, Self-Image, and Emotional Adjustment, which require a rater to complete items about a deaf child's observable behavior. While it might be possible to infer traumatic response from these scales, the items do not explicitly ask about a child's prior trauma experiences.

It is clear that issues of cultural diversity, competency, and responsiveness impact all areas of assessment, including measurement and test construction, test administration and interpretation of findings (Whitcomb & Merrill, 2013). Often, Western/Anglo cultural standards dominate norms for behavior, socialization, self-expression, family and community experiences, and are over represented in the construction of many standardized instruments (Barblett & Maloney, 2010). Such standards are often the backdrop against which minority youths' functioning is compared. Even when standardized measures of functioning (such as the Bayley Scale of Infant and Toddler Development, Third Edition) are based on representative normative samples meant to approximate the general population in the United States, caution must still be taken when

making inferences about findings for individuals from diverse racial, ethnic, and cultural minority groups.

According to Morere, Dean, and Mompremier (2009), interpretation of any measure, test, or assessment procedure used with DHH individuals should consider several important communication, cultural, and deafness-related factors. Important deafness-related factors include etiology of deafness and whether this contributes to the presence of additional conditions, age of onset of hearing loss or age of diagnosis, degree of hearing loss and whether this has been stable, fluctuating, or declining across the individual's life, and use of hearing technologies including duration, consistency and perceived benefit of use,

Important communication and cultural factors include parental hearing status or presence of other deaf family members, educational experiences and whether these included residential, day or mainstream programs, the use of interpreters, transliterators, or other forms of communication access in the educational setting/s, types of educational services provided, including speech/language therapy, and special education supports. Furthermore, the deaf individual's preferred mode of communication, additional skills in various other modes of communication, the age at which each modality was learned, and communication modes used at home, school, and in other settings should all be taken into account and should be reported.

Finally, prior to the administration of any measurement tool, an evaluator should consider and report on several important aspects of the assessment process itself, including all communication modes used during the assessment, by both the examiner

and the client, whether communication during the assessment included a third party such as an interpreter, certified deaf interpreter (CDI), or oral interpreter, all modifications or accommodations made during the use of the tool, and importantly, a rationale for why the test, tool, or measure was used, and whether this use limited or controlled for the impact of English proficiency or speech skills.

When such factors are not considered during an assessment, untrained clinicians may inadvertently over-pathologize a DHH individual's behaviors while simultaneously missing important indicators of trauma and related communication deprivation.

According to Vernon (2005) any tests administered by individuals who are not experienced in working with deaf populations are subjected to increased error over those administered by trained examiners. Clearly, use of trauma assessments and/or screening tools have tremendous impact on the clinician's capacity to understand the nature and severity of the child's trauma history. It is only through appropriate assessment that effective treatments can be devised.

Trauma treatment for DHH children and adolescents

No experimental evidence, such as a randomized control trial, currently exists to support any specific trauma treatment with deaf children or youth. In fact, one of the only descriptions of an adapted evidence-based treatment for deaf adults comes from Neil Glickman and his landmark text, *Deaf Mental Health Care* (2013). Glickman adapted Cognitive-Behavioral Therapy (CBT) through the use of visually represented, active skills-based approaches, to better meet the needs of language and learning-challenged

DHH individuals in residential treatment settings. Researchers at the Deaf Wellness Center in Rochester, NY have adapted Dialectic Behavior Therapy (DBT) materials and created more culturally appropriate videos for use with deaf adults, (which are found here: <https://www.urmc.rochester.edu/deaf-wellness-center.aspx>). One common assumption of mental health systems and providers untrained to work with DHH individuals is that techniques that work for hearing clients will be equally effective for DHH clients and that the addition of interpreting services is a sufficient modification to the typical therapist-client dyad (Critchfield, 2002). Certainly this is not always the case. For DHH children, specifically, an active, hands-on approach, often including role playing, active skill practice, modeling, and dialogue construction, is therapeutically indicated (Bishop, 2013).

An important description related to the treatment of traumatized DHH children comes from Karen Bishop (2013) in her chapter *Culturally Affirmative Adaptions to Trauma Treatment with Deaf Children in a Residential Setting*. Bishop (2013) emphasizes that all mental health treatment, and especially trauma treatment for DHH children, must first be adapted to fit the individual 1.) Language, and 2.) Learning needs of each child. In fact, she asserts that adapting treatment to meet the individual communication and language needs. This approach represents the most fundamental difference between trauma treatment with hearing children and with DHH children. Addressing these needs often occurs during a ‘pre-treatment’ phase when working with deaf individuals (Bishop, 2013; Glickman, 2009). Primarily, the pre-treatment phase includes providing important information regarding what treatment is, emotion

vocabulary development, and motivational enhancement so the client can engage meaningfully in treatment (Anderson, Glickman, Mistler, & Gonzalez, 2016). Ultimately, Bishop (2013) identifies the following as important goals when working with traumatized deaf children: relationship building, identification of individual strengths, development of general as well as affective vocabulary, and laying the foundation for coping strategies to empower each child to make sense of himself or herself, and of traumatic experiences.

Addressing language in treatment. Treatment programs must adapt to and account for possibly limited English literacy skills, and limited language skills, even in ASL, among DHH client populations, and especially with children. It is critical that trauma treatment providers first assess for and support the child's basic language skills, including increasing the child's emotional and psychological vocabulary. In fact, language development represents the key difference between treatment modalities for hearing and DHH children. Oftentimes, DHH children will have an impoverished vocabulary, particularly in terms of emotional language (Child Sexual Abuse Task Force and Research & Practice Core, National Child Traumatic Stress Network, 2004). Glickman (2009) suggests that there must first exist an established shared vocabulary of important therapeutic concepts, which are not widely known or may not have specific sign language equivalents (e.g., "treatment," "relapse," "trigger," "risk factors," "warning sign," "cycles,"). Further, expansion, or breaking down complex concepts into sub-concepts is another important aspect of treatment. For example, when signing the concept of a "coping skill," a child might need to first understand several sub-concepts, even though signs for "cope" exist. The concept of a coping skill may need to be broken down

into two sub-segments: 1.) The identification that they are upset, and 2.) A strategy to use or something to do to feel better. Throughout this teaching process, the counselor would repeatedly sign, “cope” to re-iterate the relationship between the two sub-concepts.

Addressing learning in treatment. Often the need to break down concepts into smaller parts is a result of *fund of information (FOI) deficits*, known as critical world or social knowledge gaps and may result in difficulties in social understanding (Glickman, 2013). FOI deficits contribute directly to IDT expression, but may also contribute misattributions in the cause and effect of the behaviors of others and must be accounted for during early treatment phases (Child Sexual Abuse Task Force and Research & Practice Core, National Child Traumatic Stress Network, 2004; Pollard, Dean, O’Hearn, & Haynes, 2009). Thus, taking time to explain comprehensively why children/adolescents have arrived at a treatment center, what therapy is, and what happens during the therapeutic process is essential.

It is also essential that treatment empower each child through a skills-building and strengths-based approach, with a continual emphasis on the strengths and interests of each child. This strengths-based approach ultimately addresses the child’s deep need for mastery of skills and competencies. Bishop (2013) emphasizes that many DHH children do not feel comfortable identifying problems before adequate attention has been paid to their strengths, skills, and positive qualities. Because so many of the children experienced previous failures (in school settings, previous placements), they may feel that they have no strengths (Bishop, 2013). Glickman (2009) refers to this experience as a “problem saturated life” (p. 362). For younger clients or clients with greater language dysfluency

who fall in sensorimotor stages of development, the use of visual and sensory-based activities to teach problem-solving, coping and self-regulation is critical. RED-YELLOW-GREEN stop light images help to teach decision-making skills. Situation cards with images depicting challenges or problems serve as important visually-based practice aids when they include iconic images to represent both skills and concepts. All written material, including worksheets for children must be made language accessible through imagery or simple word use (O’Hearn, Pollard, & Hayes, 2010).

Purpose of the Study

Traumatic experiences in the lives of children and adolescents are pervasive and represent an important public health concern. What is known in regards to the nature, impact, presentation, and treatment of trauma symptoms for cultural-linguistic minority groups such as DHH children and adolescents is limited, given that research in these areas has focused largely on DHH adults. This study explores and analyzes the perspectives of 19 different sign-fluent mental health providers with experience in trauma treatment of DHH children, adolescents, and their families. The intent of this study is to explore the clinicians’ definitions of trauma as applied to DHH groups, its clinical presentation, the impact of trauma, and their approach to identification and treatment of trauma. Furthermore, this study also analyzed similarities and differences among the responses of the deaf and hearing clinicians, to determine how these groups of clinicians might function similarly or differently when addressing their clients’ traumatic experiences, especially with children. An empirical base that directly assesses outcomes

of trauma and impact of trauma treatment with DHH children is still developing; thus, mental health providers themselves represent an important source of clinical information and constitute the sample in this study. As an impetus for the development of culturally-responsive identification tools and treatment approaches, deaf clinicians themselves are a critical source of information. Their perspectives are also understudied and underrepresented in the literature. In this study, their perspectives are not only explored but serve as a basis of comparison from which to highlight culturally responsive approaches and methods to trauma treatment with DHH children and adolescents.

The following six research questions guided this work:

1. How do professionals working with DHH children and adolescents conceptualize and define trauma/traumatic experience for their DHH clients?
 - a. Does this vary by training, treatment setting, and/or provider/DHH client characteristics?
2. What factors, situations, or experiences contribute to exposure to trauma for DHH children and adolescents?
 - a. Does this vary by training, treatment setting, and/or provider/DHH client characteristics?
3. What tool or measures do professionals use to identify trauma with DHH children and adolescents?
 - a. Does this vary by training, DHH client/provider characteristics, or treatment setting?

4. What modifications to the tools or measures are made to match to characteristics and trauma experiences of DHH clients?

a. Does this vary by training, treatment setting, and/or provider/DHH client characteristics?

5. What treatment approaches do professionals use to treat trauma with DHH children and adolescents?

a. Does this vary by training, DHH client/provider characteristics, or treatment setting?

6. What modifications in treatment are made to match to characteristics and trauma experiences of DHH clients?

a. Does this vary by training, DHH client/provider characteristics, or treatment setting?

Chapter 3 Methods

Instrument Development

This study involved the creation of two main instruments: a 29-item *demographic survey* developed through Qualtrics and a set of 17 *semi-structured interview questions*. Please see Appendix B, which lists all the demographic survey items and response choices. Please see Appendix C for all interview questions.

Demographic Survey. Demographic information regarding age, gender, race and professional information regarding professional degree, training, years of experience was collected from participants. Background information regarding current professional setting as well as current client characteristics was also collected. Additionally, information regarding the participants' use of specific trauma identification tools or measures and trauma treatment approaches. During the development of the clinical survey items, response options were informed by The National Child Traumatic Stress Network (NCTSN)'s *Empirically Supported Treatments and Promising Practices* and their *Standardized Measures to Assess Complex Trauma* resources. For feasibility purposes, not every single one of the 47 measures or 43 treatments reviewed by the NCTSN was included in the survey; rather, 32 of the most well recognized approaches to identification and treatment were selected. Participants were also given the option of providing the name of an unlisted measure, tool, and treatment. If participants indicated the use of an unlisted measure, tool, or treatment, they were then asked to briefly describe the measure, tool, or treatment. Regarding the use of tools or measures to identify trauma

with DHH clients, participants were allowed to select one or more from the following options:

- 1.) Behavior Assessment System for Children-2 (BASC),
- 2.) Behavior Rating Inventory of Executive Function (BRIEF),
- 3.) Brief Symptom Inventory (BSI),
- 4.) Child and Adolescent Needs and Strengths-Trauma Comprehensive (CANS),
- 5.) Clinical Interview,
- 6.) Life Events Checklist (LEC),
- 7.) Parenting Stress Index-Short Form (PSI, SF),
- 8.) Strengths and Difficulties Questionnaire (SDQ),
- 9.) Structured Interview for Disorders of Extreme Stress (SIDES),
- 10.) Trauma Symptom Checklist for Children (TSCC),
- 11.) Trauma Symptom Checklist for Young Children (TSCYC),
- 12.) UCLA PTSD Reaction Index, and
- 13.) Other [please describe].

Regarding the use of trauma treatments with their DHH clients, participants were allowed to select one or more from the following options:

- 1.) Trauma-Focused Cognitive Behavioral Therapy,

- 2.) Cognitive Behavioral Therapy,
- 3.) Cognitive Behavioral Intervention for Trauma in Schools,
- 4.) Dialectical Behavior Therapy,
- 5.) Trauma Narrative,
- 6.) Individual Psychotherapy,
- 7.) Family Therapy,
- 8.) Child-Parent Psychotherapy,
- 9.) Parent-Child Interaction Therapy,
- 10.) Group Therapy,
- 11.) Specific Trauma Program (e.g. The Safe Harbor Program),
- 12.) Other [please specify].

Interview Questions. Seventeen semi-structured interview questions were drafted and revised after being tested during pilot interviews with two currently practicing hearing clinicians in the field of Deaf mental health. Findings from the pilot interview revealed the need to incorporate exploratory questions related specifically to trauma conceptualization and identification, in addition to trauma treatment. Participants first responded to questions regarding definitions and conceptualizations of trauma, and then responded to practical questions regarding approaches to identification and treatment.

The specific order of topics posed as interview questions was as follows: deaf-specific traumas, indicators or presentations of trauma, the impact of trauma on clients' lives, general factors/situations/ experiences that contribute to trauma (including the unique contribution of language/communication, family relations, information deficits, school-based experiences, and peer/social influences), use of specific measures or tools to identify trauma, deaf-specific modifications to the measure or tool, any changes in use of the tool over time, use of specific approach to treat trauma, deaf-specific modifications to the treatment, and any changes to the treatment over time.

Participants

Recruitment. Participants were recruited via email invitation and were located through several professional organizations including the American Deafness and Rehabilitation Association, The National Child Traumatic Stress Networks' Adapted Trauma and Treatment Standards Workgroup on Children Disabilities (Subgroup on Deaf and Hard of Hearing), the National Association of School Psychologists (Special Interest Group on Deaf and Hard of Hearing) and the Postsecondary Educational Programs Network 2. Several participants were approached via email based on recommendations of others, which represented a snowball sampling technique. Please see Appendix D to review the invitation email. In the initial invitation, Participants were informed of the parameters of the study, which included complete anonymity in both the Qualtrics demographic survey and in the collection of their subsequent interview data. Once participants confirmed their willingness to participate and provided informed consent for

the study via email communication, copies of IRB permission as well as copies of the interview questions were provided prior to the time of the interview.

Sample. A total of 19 participants were included in this study, all of which held current licenses as credentialed mental health providers. A total of eight participants were deaf and 11 were hearing. The overwhelming majority of participants (18 of 19; 94.7%) was of Caucasian descent and was female (17 of 19; 89.5%). Participants were located throughout 11 different states within the continental U.S., and all were credentialed with at least one professional degree. Six participants (31.6%) had degrees in clinical social work, four participants (21.1%) in clinical psychology, two participants (10.5%) in school psychology, two in professional counseling, one participant (5.2%) in psychiatry, one in mental health counseling, one in certified alcohol and drug abuse counseling, and one in marital family therapy. Four participants (21.1%) reported ‘Other’ credentialing, which was in school counseling, and school social work.

Eight participants (7 hearing 1 deaf; 42.1%) reported over 20 years of professional experience in the field of Deaf Mental Health. Equal numbers of deaf and hearing participants (3 hearing, 3 deaf; 31.6%) reported between 10 and 19 years of professional experience. The remaining five participants (4 deaf, 1 hearing; 26.3%) reported between 5 and 10 years of professional experience. The vast majority (16 of 18) of participants described holding previous or current professional positions in a variety of related fields, such as university assistant and/or adjunct professors, directors of counseling and psychological services, prevention education specialists, clinical directors of mental or behavioral health agencies, certified professional counselor supervisors,

child case managers, behavioral health task force members, and coordinators or administrators of state divisions for Deaf behavioral or mental health. Collectively, the participants in this study were significantly connected, personally and/or professionally to Deaf populations and were well versed in school-based, community, and policy issues related to the Deaf Mental Health field. Table 1 provides a summary of key demographic and professional features of the 19 participants included in this study.

Table 1

Participant Demographics

Category	Number of Participants
Age	
30-40	7
40-50	2
50-60	9
60-70	1
Gender	
Female	17
Male	2
Race	
Caucasian	18
African American	0
Hispanic/Latino	0
Native American	0
Pacific Islander	0
Asian	0
Multi-racial	1
Hearing Status`	
Culturally Deaf	8
Deaf	0
Deaf-Blind	0

Table 1 (continued)

Table 1 (continued)

Hard of Hearing	0
Hearing	10
Late Deafened	1

Professional Degrees Held by Participants

Psychiatrist	1
Clinical Psychologist	4
School Psychologist	2
Clinical Social Worker	6
School Social Worker	1
Licensed Professional Counselor	2
Mental Health Counselor	1
Certified Alcohol and Drug Abuse Counselor	1
School Counselor	1
Marital Family Therapist	1

Number of Professional Degrees Held by Participants

1	8
2	11
3	4

Current Professional Setting(s)

Secondary Educational Setting	5
College or University	5
Hospital	1
Residential Setting	1
Outpatient Setting	8
Private Practice	4

Number of Clients Currently Served

1-9	3
10-19	4
20-29	4
30-39	1
40+	6
Missing Data	1

Table 1(continued)

Table 1 (continued)

Ages of Clients Served in Last 12 Months

0-5	6
6-10	10
11-15	13
16-20	14
21-25	15
26-30	13
30-40	15
40-50	12
50+	10

Languages Used with Clients in Last 12 Months

American Sign Language	19
Pidgin Sign Language	12
Signed Exact English	4
Cued Speech	0
English (oral)	16
English (written)	10
Spanish (oral)	0
Spanish (written)	0
French (oral)	1
French (written)	0

Interview procedure

Collection of demographic information. After participants provided their informed consent for the study via email communication, they were supplied a link to the online, confidential, Qualtrics survey. Only participants' responses to survey items regarding their use of measures or tools and treatment approaches were incorporated into the interview, such that interviewers were prepared to refer back to specific measures or treatments throughout the course of the interview. Such information was used to ask participants why they used that approach, how modifications to the approach were made, and how their use of the approach changed over the course of their career.

Semi-structured interviews. Participants were interviewed in person or with the use of various-based video technology mediums, including Omnijoin, FaceTime, Skype, and Sorenson Video Relay Services. Prior to the interview, all participants were asked to indicate their preferred communication modality (e.g., American Sign Language, spoken English, etc.) and a trained research assistant was assigned who could match the modality of the participant. A total of three research assistants (two Deaf, native ASL users, and one hearing, native English user) were trained to administer the semi-structured interview question protocols. All research assistants underwent a 2-hour training which included the following during interviews: how to introduce themselves and the scope of the project, how to provide an overview of confidentiality practices, how to administer all of the questions while also allowing participants to expand as they so chose, how to probe for examples of the participants' professional experiences, and how to explain the intended outcomes of the project.

Data preparation

All interview data, in the form of recorded audio and video footage, was stored in an encrypted online storage system, sanctioned for use through IRB approval. As soon as interviews were completed, the same research assistants began the process of transcription. For interviews conducted in ASL, the primary interviewer also served as the ASL to written English translator. The second research assistant then reviewed the interview and served as a check on the written English translation and provided feedback until an agreement was reached as to the interviewee's intended meaning. For interviews

conducted in spoken English, a trained research assistant transcribed the audio content verbatim into a written form. Across all transcripts, any identifying information, including the names of States, cities, areas, specific organizations, or people, was removed. All transcripts were then sent back to participants, who were encouraged to provide edits and/or feedback; this was particularly encouraged of the deaf participants, to ensure that we captured their intended meaning during the ASL to English translation process. In some cases, participants responded with requests to eliminate portions of a response that upon reflection, s/he believed to be too identifying. In other cases, participants requested changes to a particular phrase or term in their transcript. Once all feedback was received from participants regarding their transcripts, edits were incorporated and a finalized version of each interview was ready for analysis.

Data organization. The semi-structured interview protocol included 17 interview questions, all of which were designed to elicit responses that would answer the six study research questions. For systemization purposes, each of the 17 interview questions were aligned under a particular research question and served as the associated data for that question. Table 2 provides a visual representation of this systemization process.

Table 2

Research Questions and Associated Interview Questions

Research Questions	Associated Interview Questions
1. How do professionals who work with DHH adolescents and young adults conceptualize and define trauma? 1a. Does this vary by training,	1. What types of trauma do you think are unique to DHH clients? 2. How can you identify when trauma has occurred in the lives of your DHH clients? 3. How does trauma impact different aspects of your

Table 2 (continued)

treatment setting, and/or provider/DHH client characteristics?

clients' lives?

2. What factors, situations, or experiences contribute to exposure to trauma?

4. What factors, situations, or experiences do you think contribute to exposure to trauma for DHH individuals?

2 a. Does this vary by training, treatment setting, and/or provider/DHH client characteristics?

5. How do you think language and communication in early years contributes?

6. How do you think family relations contribute?

7. How do you think information deficits contribute?

8. How do you think school-based experiences contribute?

9. How do you think social or peer relations contribute?

3. What approaches to trauma identification do DMH professionals use for DHH individuals

10. Why do you use this measure/tool when identifying trauma?

3a. Does this vary by training, treatment setting, and/or provider/DHH client characteristics?

11. Do any specific examples or cases come to mind when you think of illustrative trauma identification for DHH clients?

4. What modifications to identification are made to match to characteristics and trauma experiences of DHH clients?

12. Do you make any DHH-specific modifications and adaptations to the measures you use?

4a. Does this vary by training, treatment setting, and/or provider/DHH client characteristics?

13. How has your approach to trauma treatment changed over the course of your career?

5. What approaches to trauma treatment do DMH professionals use for DHH individuals?

14. Why do you use this approach when treating trauma with your clients? Please be specific.

5a. Does this vary by training, treatment setting, and/or provider/DHH client characteristics?

15. Do any specific examples or cases come to mind when you think of illustrative trauma treatment for DHH clients?

Table 2 (continued)

6. What modifications in treatment are made to match to characteristics and trauma experiences of DHH clients?
6a. Does this vary by training, treatment setting, and/or provider/DHH client characteristics?

16. Do you make any DHH-specific modifications and adaptations to the treatment you use?
17. How has your approach to trauma treatment changed over the course of your career?

Each participant's response to the 17 interview questions considered a single unit of analysis, also known as a meaning unit (MU). In some Grounded Theory approaches, data is analyzed in a 'line by line' approach, where each line of the transcript represents a unit of analysis (Strauss & Corbin, 1994). However, to achieve consistency and organizational clarity throughout the coding process, it was determined that participants' entire responses to one interview question would serve as the unit of analysis. Each of the 19 participants responded to a possible 17 interview questions. Thus, it was theoretically possible to achieve a total count of 323 MU's for analysis (19 participants multiplied by 17 questions). However, some degree of missing data existed, and for various reasons, questions may have been overlooked or forgotten during the 1-hour interview. Factoring in missing data, this study included a total of 273 MU's, that is, our study includes 273 responses to the 17 interview questions posed to all 19 participants. A comprehensive Excel spreadsheet was created to house systematically the 273 responses for analysis and served as frame for open exploratory coding. This data was organized in two main ways: 1.) deaf and hearing data was separated and 2.) six separate tabs were created to organize

data by research question. Please see Appendix E for a sample of this organizational framework.

Data Analysis

To review, the following six research questions guided this work:

1. How do professionals working with DHH children and adolescents conceptualize and define trauma/traumatic experience for their DHH clients?
 - a. Does this vary by training, treatment setting, and/or provider/DHH client characteristics?
2. What factors, situations, or experiences contribute to exposure to trauma for DHH children and adolescents?
 - a. Does this vary by training, treatment setting, and/or provider/DHH client characteristics?
3. What tool or measures do professionals use to identify trauma with DHH children and adolescents?
 - a. Does this vary by training, DHH client/provider characteristics, or treatment setting?
4. What modifications to the tools or measures are made to match to characteristics and trauma experiences of DHH clients?
 - a. Does this vary by training, treatment setting, and/or provider/DHH client characteristics?

5. What treatment approaches do professionals use to treat trauma with DHH children and adolescents?

a. Does this vary by training, DHH client/provider characteristics, or treatment setting?

6. What modifications in treatment are made to match to characteristics and trauma experiences of DHH clients?

a. Does this vary by training, DHH client/provider characteristics, or treatment setting?

Grounded Theory Approach.

To answer the research questions of interest, this study utilized a qualitative method of analysis known as Grounded Theory Approach, or the constant comparison method, since it allows for a continuous and evolutionary understanding of the data (Strauss & Corbin, 1994). Grounded theory is a general methodology and analytic approach, a way of thinking about and conceptualizing data. In grounded theory, data is systematically gathered and analyzed and there is a methodical, fixed plan as to how the data will be organized and analyzed. Comparisons and contrasts within the data can be made as soon as multiple sources of data are gathered thus the ‘constant comparison’ process enhances the researchers understanding of the data early on in the process of data collection. Grounded Theory methodology is designed to guide researchers in producing theory that is “conceptually dense,” or in other words, inclusive of many conceptual

relationships. These relationships are embedded in a thick context of descriptive and conceptual writing (Glasner & Strauss, 1967, pp. 31-32).

Thus, the ultimate aim of grounded theory methodology is to understand and establish plausible relationships among patterns between various types of social units with the secondary goal of validating pre-existing or establishing new theory. Based off of Corbin & Strauss's 2008 guidelines (*Basics of Qualitative Research, Third Edition*), data analysis and coding in this study occurred in two phases: Exploratory and Confirmatory. In Exploratory phases, this researcher began with no fixed framework for organizing the information and worked constantly to achieve "crystallization," the point in the study at which the many pieces of information from a study took on new meaning and were seen in relationship to the broader study. Crystallization of the data led to the Confirmatory phases, in which the existence of defined codes were validated through inter-rater reliability establishment (Fetterman, 1989, p. 101). Within the Exploratory phase of analysis, two rounds of coding were utilized: 1.) Open coding and 2.) Axial coding. Within the Confirmatory phase of analysis a single round of coding was utilized: 1.) Selective coding. These coding processes are described in further detail, below

Exploratory Phase: Open coding. After MU's were organized systematically into an Excel spreadsheet, each MU was analyzed using an exploratory approach. Within each MU, this researcher labeled important concepts, or 'coded' the data, and utilized the participants' own words as frequently as possible (known as an 'in-vivo' coding). Please see Appendix F for a demonstration of the open coding processes. For Research Question 1, a total of 110 open codes were derived, across both deaf and hearing interviews. For

Research Question 2, a total of 130 open codes were derived, across both deaf and hearing interviews. For Research Question 3, a total of 26 open codes were derived, across both hearing and deaf interviews. For Research Question 4, a total of 15 open codes were derived, across both hearing and deaf interviews. For Research Question 5, a total of 36 open codes were derived, across both hearing and deaf interviews. For Research Question 6, a total of 25 open codes were derived, across both hearing and deaf interviews. In total, nearly 350 open codes were derived during the Open Coding phase.

Exploratory Phase: Axial coding. After open coding was complete, the 350 codes were reviewed. Codes that shared conceptual similarities were grouped together and higher order themes “emerged” from the data (Strauss & Corbin, 1994). These themes were considered conceptually dense, given that over 300 unique codes were organized in support of their development. Such themes also represented broad overarching, thematic findings to our research questions of interest. In total, 14 broad themes emerged from the axial coding process. However, given that part of the goal of this study was to analyze similarities and differences in the responses of deaf and hearing clinicians, specific variations within these 14 broad themes were considered highly significant. Thus, a key set of 65 selected codes was preserved for Confirmatory phase purposes.

Confirmatory Phase: Selective coding. To ensure scientific rigor in qualitative work, Lincoln & Guba (1985) suggest the following criteria: credibility, dependability, confirmability, and transferability. To enhance the credibility and dependability of this study, inter-rater reliability agreement of our selective codes was assessed. Within

qualitative work, reliability is a concept that requires extensive consideration, due to the subjective and interpretive nature and focus of such research. Brent & Slusarz (2003) emphasize the importance of making interpretations explicated clearly enough so reproducibility of codes is possible. Confirming the presence of the 65 selected codes required multiple steps, including:

- 1.) The creation of a Code Book to define the conditions surrounding each code (please see Appendix G to review the Code Book).
- 2.) The training an advanced graduate-level psychology student to code the data according to the Code Book parameters,
- 3.) Two practice round of selected coding including the trained coder and researcher involving lengthy discussion and resolution of coding discrepancies,
- 4.) The assignment of a randomly selected 30% of data for inter-rater reliability purposes,
- 5.) The determination of percentage agreement between the trained coder and this researcher, and
- 6.) The re-coding of all 273 MU's for existence of a final 68 selected codes (three codes were added during the resolution of coding discrepancies). Each of these steps will now be described in further detail.

The creation of a Code Book involved two primary steps: 1.) Definition of the parameters and conditions of the code, specifying where the explicit use of the code was required versus where the existence of the code could be inferred and 2.) Supplying examples of the code, taken from the Open coding process. For example, in the Code

Book, Physical Abuse was defined as: *Any intentional causing of injury or trauma to another by way of bodily or physical contact. Participants often explicitly use the term physical abuse, but may also refer to physical assault or physical violence. Please note that Physical Abuse is considered a distinct code from Domestic Violence (see below) since Physical Abuse can occur outside of the home context.* Examples of the code were taken directly from the data itself, which had already been processed once during Open Coding: *“We have a high rate of physical and sexual abuse that's been documented before”*

An advanced graduate level psychology student, with previous qualitative coding experience and familiarity with trauma literature, concepts, measures, and treatment was selected for training. Training occurred during a 1-hour session in which the researcher reviewed each code in the Code Book and confirmed trainee comprehension. Then, the researcher assigned the task of coding two full transcripts (one deaf and one hearing) to both the trainee and herself as a first round of coding practice. The trainee and researcher met one week later to compare results and discuss discrepancies. As a result of this first round of coding, it was decided that two redundant Traumatic Experience codes could be collapsed under appropriately similar codes for efficiency, and two Traumatic Layers codes and one Enviro-Linguistic Agency code should be added to address specific contributing factors not distinguished by the present Code Book.

The Code Book was then updated and a second round of coding practice was assigned to the trained coder and researcher, this time with two new transcripts (one deaf and one hearing). As a result of second round coding, it was decided that within the

Familial Trauma theme, the code Receptive language neglect and Expressive language blocked would be modified to Receptive *communication* neglect and Expressive *communication* blocked, as it was unclear whether this code was more linguistic or socially-rooted in nature. Ultimately, this project explores the unique communication, not linguistic, experiences of DHH groups in relation to trauma exposure.

Thus, the final version of the Code Book contained 68 selected codes. Codes 1-51 were associated with definitions/conceptualizations of trauma and contributing factor themes, codes 52-58 were associated with trauma identification tools/measures and modification themes, and codes 59-68 were associated with trauma treatment and modification themes. See Appendix H, which outlines the 14 themes and associated 68 codes.

Confirmatory Phase: Inter-rater reliability agreement. In order to determine inter-rater reliability agreement, a randomly selected portion of the data was selected and coded by the trained coder and this researcher. The selection process occurred as follows: each of the 273 MU's was assigned a unique identification number (1 through 273). Determining that 30% of the 273 MU's would serve as test data, 82 MU's were selected from a random number generator. Both the trained coder and this researcher then coded these MU's independently. Parameters were set around which codes could be associated with the various MU's. For example, codes 1 through 51 were only relevant when considering Research Questions 1 and 2 (interview questions 1-9). Codes 52 through 68 were only relevant considering Research Questions 3 through 6 (interview questions 10-

17). Thus, it was theoretically possible to assign up to 51 codes in the first section of the data regarding and possible to assign up to 17 codes in the second section of the data.

Of the 82 MU's coded by both the trained coder and this researcher, complete and partial agreement of all code assignments occurred 79.3% of the time (65 of 82 MU's). Complete disagreement occurred 20.7% of the time (17 of 82 MU's). Partial agreement occurred when some overlap existed between the trained coder and researcher's assignment of codes within a single MU. All partially agreed upon codes were then reviewed by the primary researcher to determine final acceptability. Considering the overall impact of the inter-rater agreement on the rest of the interpretation of the data, it should be noted that the ultimate analysis accounted the presence or absence of a code within each interview in its entirety. This means that the presence of a code (even if it occurred just once) within an interview was counted and served as data for later comparisons and contrasts. The specific number of times a code was assigned within a single meaning unit was not the ultimate point of analysis. Thus, our inter-rater agreements served as helpful checks to clarify specific nuances in coding, but the overall analysis acknowledged presence or absence of codes across all interviews.

Confirmatory Phase: Comparisons and contrasts. Once inter-rater reliability agreements were established and all 273 MU's were re-coded for the presence or absence of 68 selected codes, broad comparisons could be made across all interview data. To make comparisons and contrasts between deaf and hearing data, the overall presence of selected codes were tallied. For example, if seven of eight deaf participants indicated the presence of the selected code Sexual Abuse at any point within their interview data, this

frequency was converted into a percentage (7 divided by 8 equals 87.5%). Percentages were then calculated within the hearing sub-sample. In this fictional example, 87.5% of deaf participants indicated the presence of Sexual Abuse, while 72.7% of hearing participants indicated the presence of this same code. The Results section provides an overview of findings while the Discussion section considers important demographic and professional features of the participants and discusses results in the context of these features, considering the influence of such features on the results.

Chapter 4 Results

Recall that this study utilized two main instruments: a 29-item *demographic survey* developed through Qualtrics and a set of 17 *semi-structured interview questions*. The results of these instruments will now be provided in the order that they address the research questions of interest. Overall frequency data will be provided for Research Questions 1, 2, 3, 4, 5, and 6. Disaggregated data, in the form of comparisons and contrasts, will be provided for Research Questions 1a, 2a, 3a, 4a, 5a, and 6a. It should be noted that despite researcher efforts to analyze data by setting and professional training, limitations to sample size prohibited this. Simply, our sample was not robust enough and did not sufficiently include equal representation of various treatment settings and professional backgrounds. Subsequently, analysis of these sample features was not meaningful. Please see Appendix I for a visual overview of how the results were obtained and Appendix J for a complete representation of the interview data. Discussion of all results will occur in Chapter 5.

Research Question 1

How do professionals working with DHH children and adolescents conceptualize and define trauma/traumatic experience for their DHH clients? Six broad themes resulted from the data:

- 1.) Experiential/events-based definitions of trauma,
- 2.) Cognitive indicators of trauma,
- 3.) Behavioral-physical indicators of trauma,

- 4.) Affective indicators of trauma,
- 5.) Interpersonal indicators of trauma, and
- 6.) Intrapersonal indicators of trauma.

Each of these is discussed, in turn, below.

Theme 1: Experiential/events-based definitions of trauma. An overall theme related to experiential or events-based description and conceptualization emerged. Both deaf and hearing clinicians identified a range of experiences which result in traumatic response but by far, most salient traumatic event mentioned by participants related to isolation: sixteen participants mentioned communication isolation, especially in the family context (16 of 19 participants; 84.2%). Twelve participants mentioned sexual abuse (12 of 19; 63.2%). Ten participants identified domestic violence and bullying respectively (10 of 19; 52.6%). Nine participants identified social isolation (9 of 19; 47.4%). Six participants identified physical abuse (6 of 19; 31.6%). Five participants mentioned adverse experiences in foster care and adverse medical experiences, respectively (5 of 19; 26.3%). Five participants explicitly mentioned that a lack of communication exacerbated trauma (5 of 19; 26.3%). Four participants mentioned the loss of a family member (4 of 19; 21%). Three participants mentioned emergency situations and emotional abuse, respectively (3 of 19; 15.8%). Two participants mentioned verbal abuse, financial abuse and community violence, respectively (2 of 19; 10.5%).

Theme 2: Cognitive indicators of trauma. A theme regarding how participants conceptualized and recognized the cognitive presentation and impact of trauma on their

clients' lives emerged. Five participants indicated their clients experienced a delayed labeling and subsequent understanding of their traumatic experience (5 of 19; 26.3%). Four participants indicated their clients possessed mistaken beliefs or distorted cognitions about their traumatic experience (4 of 19; 21%). Four participants indicated their clients possessed a world-self schema of "I'm not important," (4 of 19; 21%). Three participants indicated their clients experienced compromised executive functioning and/or decision-making abilities of (3 of 19; 15.8%). Two participants indicated their clients experienced a block to learning (2 of 19; 10.5%).

Theme 3: Behavioral-physical indicators of trauma. A theme regarding how participants conceptualized and recognized the behavioral-physical presentation and impact of trauma on their clients' lives emerged. Over half of the participants indicated their clients displayed extreme behavioral reactions to their trauma triggers (10 of 19; 52.6%). Seven participants identified compromised functional independence as an indicator of trauma (7 of 19; 36.8%). Five participants indicated they could observe trauma on the bodies of their clients who carried it on their person (5 of 19; 26.3%).

Theme 4: Affective indicators of trauma. A theme regarding how participants conceptualized and recognized the affective presentation and impact of trauma on their clients' lives emerged. Considering primary clinical presentations of their clients impacted by trauma, nine participants identified anger explicitly (9 of 19; 47.4%). Six participants identified anxiety explicitly (6 of 19; 31.6%). Five participants identified depression explicitly (5 of 19; 26.3%). In order to be coded, all participants must have

mentioned these terms explicitly, meaning the participants utilized these terms to describe the affects of their clients.

Theme 5: Interpersonal indicators of trauma. A theme regarding how participants conceptualized the interpersonal presentation and impact of trauma on their clients' lives emerged. Participants conceptualized interpersonal struggles in two main ways. Thirteen participants indicated that their clients struggled in relationships and cited a specific relational issue, such as difficulty trusting others, over-involvement with others, or avoidance of others (13 of 19; 68.4%). Nine participants cited that the client had struggles with others and mentioned with whom the struggle involved (e.g. friends, romantic relationships, teachers, parents, siblings, etc.) (9 of 19; 47.4%).

Theme 6: Intrapersonal indicators of trauma. A theme regarding how participants conceptualized the intrapersonal presentation and impact of trauma on their clients' lives emerged. This theme was less identified overall as an indicator of trauma, and only a few participants indicated these codes. Four participants indicated clients' compromised ability to cope (4 of 19; 21%). Three participants indicated trauma remains built up within the client over time (3 of 19; 15.8%). Two participants indicated clients possessed of fear of blame (2 of 19; 10.5%).

Research Question 1a

Does this vary by training, treatment setting, and/or provider/DHH client characteristics? Within the six themes, differences were observed between deaf and hearing participants. Results are reported below, disaggregated by deaf/hearing status, per

theme. Results are also reported in order of most frequently identified traumatic experience.

Theme 1: Experiential/events-based definitions of trauma. Six deaf participants identified communication isolation, particularly within the family context as traumatizing (6 of 8; 75%). Five deaf participants identified domestic violence, and bullying as trauma experiences for their clients, respectively (5 of 11; 62.5%). Three deaf participants mentioned sexual abuse, physical abuse, and social isolation respectively (3 of 11; 37.5%). Two deaf participants mentioned financial abuse and community violence respectively (2 of 11; 25%). One deaf participant mentioned verbal abuse, adverse experiences in foster care, adverse medical experiences, the loss of a family member, and the explicit mention of a lack of communication exacerbating trauma respectively (1 of 11; 12.5%). Emergencies and emotional abuse were not mentioned by any deaf participants, but were mentioned by hearing participants.

Ten hearing participants identified communication isolation in the family context as traumatizing (10 of 11; 90.1%). Nine hearing participants mentioned sexual abuse as a traumatic experience (9 of 11; 81.8%). Six hearing participants mentioned social isolation (6 of 11; 54.5%). Five hearing participants mentioned domestic violence and bullying, respectively (5 of 11; 45.5%). Four hearing participants mentioned adverse experiences in foster care, adverse medical experiences, and an explicit mention that a lack of communication exacerbates trauma, respectively (4 of 11; 36.4%). Three hearing participants mentioned physical abuse, loss of a family member, emergencies/disasters, and emotional abuse, respectively (3 of 11; 27.3%). One hearing participant identified

verbal abuse (1 of 11; 9%). Financial abuse and community violence were not mentioned by any hearing participants, but was mentioned by deaf participants.

Theme 2: Cognitive indicators of trauma. Three deaf participants indicated their clients possessed mistaken beliefs or distorted cognitions about their traumatic experience (3 of 8; 37.5%). Two deaf participants indicated clients' delayed labeling/understanding of their traumatic experience, world-self schema of "I'm not important," compromised executive functioning and decision making, and blocked learning, respectively (2 of 8; 25%).

Three hearing participants indicated their clients experienced a delayed labeling or understanding of their traumatic experience (3 of 11; 27.2%). Two hearing participants indicated their clients had a world-self schema of "I'm not important" (2 of 11; 18.2%). One hearing participant indicated their clients held mistaken beliefs/distorted cognitions about their traumatic experience and indicated their clients possessed compromised executive functioning or decision-making abilities (1 of 11; 9%). No hearing participant indicated blocked learning, which was mentioned by deaf participants.

Theme 3: Behavioral- Physical indicators of trauma. Seven deaf participants indicated their clients' compromised functional independence as a primary indicator of trauma (7 of 8; 87.5%). Exactly half of the deaf participants indicated their clients' extreme behavioral reactions to trauma triggers and indicated that they observed trauma carried on the bodies of their clients (4 of 8; 50%).

Six hearing participants indicated their clients' extreme behavioral reactions to trauma triggers (6 of 11; 54.5%). Only one hearing participant indicated observing

trauma carried on the bodies of clients (1 of 11; 9%). No hearing clinicians identified compromised functional independence as an indicator of trauma.

Theme 4: Affective indicators of trauma. Half of deaf participants indicated anger as a primary affective presentation of their clients (4 of 8; 50%). Three deaf participants indicated depression (3 of 8; 37.5%). Two deaf participants indicated anxiety (2 of 8; 25%).

Five hearing participants indicated anger (5 of 11; 45.5%). Four hearing participants indicated anxiety (4 of 11; 36.4%). Two hearing participants indicated depression (2 of 11; 18.2%).

Theme 5: Interpersonal indicators of trauma. Seven deaf participants indicated a specific problem in the interpersonal struggles on their deaf clients (7 of 8; 87.5%). Three deaf participants indicated that the interpersonal struggle involved a variety of parties (3 of 8; 37.5%).

Six hearing participants indicated a specific problem in the interpersonal struggles of their clients, and also indicated that the struggle involved a variety of parties (6 of 11; 54.5%).

Theme 6: Intrapersonal identifiers of trauma. Among deaf participants, two indicated that trauma remains built up (2 of 8; 25%), and only one deaf participant indicated their clients' compromised ability to cope and fear of blame as markers of trauma, respectively (1 of 8; 12.5%).

Three hearing participants indicated compromised coping abilities (3 of 11; 27.2%). Only one hearing participant indicated trauma remaining built up and fear of blame as markers of trauma (1 of 11; 9%).

Research Question 2

What factors, situations, or experiences contribute to exposure to trauma for DHH children and adolescents? Four broad themes resulted from the data:

- 1.) Traumatic layers in the lives of DHH youth,
- 2.) Significance of enviro-linguistic agency,
- 3.) The role of familial traumas, and
- 4.) Fund of trauma knowledge.

Theme 1: Traumatic layers in the lives of DHH youth. Five participants mentioned the role of generational trauma, poverty, rural isolation, and community/family substance involvement, respectively (5 of 19; 26.3%). Three participants mentioned gang involvement (3 of 19; 15.8%).

Theme 2: Significance of enviro-linguistic agency. Twelve participants mentioned power differentials (12 of 19; 63.2%). Seven participants indicated that a lack of communication created opportunities for abuse (of 19; 36.8%). Three participants indicated that high versus low functioning among youth, as well as the societal assumption the Deaf person is not smart both contribute to trauma exposure, respectively (3 of 19; 15.8%)

Theme 3: The role of familial trauma. Just under half of participants indicated that receptive communication neglect, or families not signing to their DHH child, was a contributing factor (9 of 19; 47.4%). Seven participants indicated that clients' blocked expressive communication contributed to traumatic exposure (7 of 19; 36.8%). Five participants indicated FOI gaps within the family contributed to trauma exposure (5 of 19; 26.3%). Three participants indicated a lack of adaptive modeling as a contributing factor (3 of 19; 15.8%).

Theme 4: Fund of trauma knowledge. Nine of the participants identified their clients' lack of knowledge regarding right vs. wrong as a contributing factor (9 of 19; 47.4%). Eight participants identified their clients' lack of knowledge regarding trauma and abuse as contributing factors (8 of 19; 42.1%). Seven participants identified their clients' lack of knowledge regarding help-seeking behaviors as a contributing factor (7 of 19; 36.8%). Five participants identified their clients' lack of knowledge regarding their own medical history as a contributing factor (5 of 19; 26.3%).

Research Question 2a

Does this vary by training, treatment setting, and/or provider/DHH client characteristics? Within the four themes, some key differences were observed by deaf and hearing status. Differences will be discussed, per theme.

Theme 1: Traumatic layers in the lives of DHH youth. Three deaf participants identified generational trauma (3 of 8; 37.5%). Two deaf participants identified rural

isolation and community/family substance involvement, respectively (2 of 8; 25%). One deaf participant identified poverty and gang involvement (1 of 8; 12.5%).

Four hearing participants identified poverty (4 of 11; 36.4%). Three hearing participants identified both rural isolation and community/family substance involvement, respectively (3 of 11; 27.7%). Two hearing participants identified generational trauma and gang involvement, respectively (2 of 11; 27.7%).

Theme 2: Significance of enviro-linguistic agency. Three deaf participants mentioned power differential as a contributing factor (3 of 8; 37.5%). Two deaf participants mentioned lack of communication as an opportunity for abuse, high versus low functioning of DHH youth, and the societal assumption that the Deaf person is not smart as factors, respectively (2 of 8; 25%). One deaf participant mentioned having a single provider of information as a factor (1 of 8; 12.5%).

Nine hearing participants mentioned power differentials (9 of 19; 81.8%). Five hearing participants identified that a lack of communication is an opportunity for abuse (5 of 11; 45.5%). Three hearing participants mentioned a single provider of information as a factor (3 of 11; 27.2%). One hearing participant identified high versus low functioning DHH youth and the societal assumption that the deaf person is not smart as contributing factors, respectively (1 of 11; 9%).

Theme 3: The role of familial trauma. Six deaf participants identified receptive communication neglect/families not signing as a contributing factor (6 of 8; 75%). Five deaf participants also identified expressive communication blocks as a factor (5 of 8;

62.5%). Only one deaf identified gaps in family FOI (6 of 8; 12.5%). No deaf participants identified a lack of adaptive modeling as contributing to trauma exposures.

Five hearing participants (5 of 11; 45.5%) identified that limited family FOI contributed (5 of 11; 45.5%). Three hearing participants identified receptive communication neglect/families do not sign and a lack of adaptive modeling as contributing factors, respectively (3 of 11; 27.2%). Two hearing participants identified their clients' blocks to expressive communication as a factor (2 of 11; 18.2%).

Theme 4: Fund of trauma knowledge. Over half of deaf participants mentioned FOI's related to what constitutes trauma and abuse (5 of 8; 62.5%). Three deaf participants identified FOI gaps in what is right/wrong and in help-seeking behaviors, respectively (3 of 8; 37.5%). Two deaf participants mentioned FOI gaps regarding personal medical history (2 of 8; 25%).

Over half of hearing participants identified client FOI gaps regarding what is right/wrong (6 of 11; 54.5%). Four hearing participants mentioned FOI gaps regarding help-seeking behaviors (4 of 11; 36.4%). Three hearing participants identified FOI gaps regarding what trauma and abuse is, as well as FOI gaps regarding personal medical history, respectively (3 of 11; 27.2%).

Research Question 3

What tool or measures do professionals use to identify trauma with DHH children and adolescents? Results of the demographic survey and one significant theme that emerged will be presented. The results of the demographic survey indicated that

seventeen participants used the clinical interview (17 of 19; 89.5%). Only one participant indicated the use of tools or measures other than a clinical interview while one participant did not respond to this question. Of the participants who used the clinical interview, twelve participants used the clinical interview exclusively. Five of these participants indicated their additional use of other tools or measures.

Beyond the clinical interview, participants' use of other specific measures or tools varied widely. A total of six participants indicated use of the Behavior Assessment System for Children-2 (BASC-2) (6 of 19; 31.6%). The single participant who did not indicate use of the clinical interview did indicate use of the BASC-2. Three participants indicated use of the BSI (3 of 19; 15.8%). Two participants indicated use of the CANS, the LEC, the PSI, the SDQ, and the TSCYC, respectively (2 of 19; 10.5%). A single participant indicated use of the TSCC (1 of 19; 5.2%). No participants indicated use of the SIDES, the UCLS PTSD Reaction Index, or any other measure described by the participant.

Theme 1: Widespread preference for the clinical interview. Participants' preference for the clinical interview as a trauma identification tool was clear. Six participants indicated that there was no other measure available or good for use with DHH groups (6 of 19; 31.6%). Five participants explicitly described the narrative strength of the clinical interview (5 of 19; 26.3%). Four participants indicated that clinical interviews were a feature of their professional setting's intake process (4 of 19; 21.1%). Three participants described using clients' reactions during the process of conducting the interview as a source of data (3 of 19; 15.8%).

Research Question 3a

Does this vary by training, treatment setting, and/or provider/DHH client characteristics? Results of Table 3 present these results, including professional training and hearing status.

Table 3

Participants' Use of Trauma Measures and/or Tools

Participant's Training	Hearing Status	Measure and/or Tool
1. School Counseling	Deaf	BASC-2; BSI; CANS; Clinical Interview; LEC; PSI; SDQ; TSCY
2. School Psychology; Certified Alcohol/Drug Counselor	Deaf	Clinical Interview
3. School Psychology; Professional Counseling	Deaf	Clinical Interview
4. Mental Health Counseling	Deaf	Clinical Interview
5. School Social Work	Deaf	BASC-2; BRIEF
6. Clinical Social Work	Deaf	Clinical Interview
7. Clinical Psychology	Deaf	Clinical Interview
8. Clinical Social Work	Deaf	Clinical Interview
9. Mental Health Counseling	Hearing	BASC-2; BSI; Clinical Interview; SDQ
10. Clinical Psychology	Hearing	BASC-2; BRIEF; Clinical Interview; PSI
11. Clinical Social Work	Hearing	Clinical Interview

Table 3 (continued)

12. Clinical Social Work	Hearing	Clinical Interview
13. Clinical Psychology	Hearing	Clinical Interview
14. Psychiatry	Hearing	BASC-2; BSI; CANS; Clinical Interview; LEC
15. Clinical Social Work	Hearing	NR
16. Professional Counseling	Hearing	BASC-2; Clinical Interview; TSCC; TSCYC
17. Clinical Social Work	Hearing	Clinical Interview
18.) Marriage Family Therapy	Hearing	Clinical Interview
19.) Clinical Psychology	Hearing	Clinical Interview

Slight differences were observed by deaf and hearing status. Two deaf participants mentioned that no other tools were available or good for use (2 of 8; 25%). four hearing participants indicated that no other tools were available or good for use (4 of 11; 36.4%). Two deaf participants explicitly mentioned the narrative strength of the clinical interview (2 of 8; 25%). Three hearing participants discussed its narrative nature (3 of 11; 27.2%). One deaf participant indicated the fact that the clinical interview was part of the agency intake process (1 of 8; 12.5%). Three hearing participants indicated that it was part of an agency intake process in their professional settings (3 of 11; 27.3%). One deaf participant mentioned the significant of observing client's reactions to clinical

interview questions (1 of 8; 12.5%). Two hearing participants discussed the benefits of observing clients' reactions during the interview itself (of 11; 18.2%).

Research Question 4

What modifications to the tools or measures are made to match to characteristics and trauma experiences of DHH clients? One key theme emerged: *Deaf-specific modifications to the clinical interview*. Primarily, seven participants discussed the addition of questions to the interview, which hold meaning in the lives of DHH clients, such as “what was communication like growing up,” “did you have peers at school you could talk to?” (7 of 19; 36.8%). Three participants discussed increased attention to the historical timeline of the individual's experiences (3 of 19; 15.8%). Finally three participants indicated that their only modification was signing but otherwise no modifications were made (3 of 19; 15.8%).

Research Question 4a

Does this vary by training, treatment setting, and/or provider/DHH client characteristics? Some differences between deaf and hearing groups were observed. In terms of adding deaf specific questions to the interview, three deaf participants mentioned this (3 of 8; 37.5%) while and four hearing indicated this need (4 of 11; 36.6%). All individuals who discussed increased attention to the historical timeline were deaf (3 of 8; 37.5%). Two hearing individual described no modifications other than signing (2 of 11; 18.2%). One deaf participant mentioned making no modifications other than signing (1 of 8; 12.5%).

Research Question 5

What treatment approaches do professionals use to treat trauma with DHH children and adolescents? Results of the demographic survey and one theme will be presented. Recall that on the survey, participants were allowed to select up to 11 approaches, and could also indicate if they used some ‘other’ approach. Individual psychotherapy was the most frequently cited approach to treatment (14 of 19 participants; 73.7%) Twelve participants used cognitive-behavioral therapy (12 of 19; 63.2%). Seven participants indicated use of family therapy and a trauma narrative, respectively (7 of 19; 36.8%). Four participants indicated use of group therapy and dialectical behavior therapy, respectively (4 of 19; 21.1%). Three participants indicated use of trauma-focused cognitive behavioral therapy and parent-child interaction therapy, respectively (3 of 19; 15.8%). Two participants used child-parent psychotherapy (2 of 19; 10.5%). Finally only one participant used cognitive behavioral intervention for trauma in schools or a specific trauma program (such as The Safe Harbor Program) (1 of 19; 5.3%). No other specific approaches were provided.

One theme emerged from the interviews: *Therapeutic emphases*. Within this theme, all participants discussed important principles for trauma treatment, including follow client’s pace (13 of 19; 68.4%), providing support therapy (11 of 19; 57.9%) emphasis on trust building (9 of 19; 47.4%) and explaining confidentiality thoroughly (4 of 19; 21.1%). Participants also discussed how they created opportunities for choice with

clients in therapy (9 of 19; 47.4%), provided trauma-related psychoeducation (4 of 19; 21.1%) and continually re-enforced their clients' positive behaviors (4 of 19; 21.1%).

Research Question 5a

Does this vary by training, treatment setting, and/or provider/DHH client characteristics? Table 4 provides an overview of the results of the demographic survey considering professional training and hearing status. No clear trends emerged regarding the use of a specific therapeutic approach based on professional training or upon hearing status.

Table 4

Participants' Use of Therapeutic Approaches

Participant's Training	Hearing Status	Therapeutic Approach
1. School Counseling	Deaf	CBT; Family; Group
2. School Psychology; Certified Alcohol/Drug Counselor	Deaf	CBT; DBT; Trauma Narrative; Individual; Group
3. School Psychology; Professional Counseling	Deaf	Trauma Narrative; Individual
4. Mental Health Counseling	Deaf	Individual; Family; Group
5. School Social Work	Deaf	Individual
6. Clinical Social Work	Deaf	Trauma Narrative
7. Clinical Psychology	Deaf	TFCBT; CBT; DBT; Trauma Narrative; Individual
8. Clinical Social Work	Deaf	CBT; Trauma Narrative, Individual, Family
9. Mental Health Counseling	Hearing	CBT; Trauma Narrative, Individual, Child-Parent; Group

Table 4 (continued)

10. Clinical Psychology	Hearing	TFCBT; CBT; Family; PCIT
11. Clinical Social Work	Hearing	CBT; Individual
12. Clinical Social Work	Hearing	Individual; Child-Parent; PCIT
13. Clinical Psychology	Hearing	Individual
14. Psychiatry	Hearing	CBT; Individual
15. Clinical Social Work	Hearing	Not reported
16. Professional Counseling	Hearing	TFCB; CBT; CBT-S; DBT; Trauma Narrative; Individual, Family, PCIT; Specific Program
17. Clinical Social Work	Hearing	CBT; DBT
18. Marriage Family Therapy	Hearing	CBT; Individual; Family
19. Clinical Psychology	Hearing	CBT; Individual; Family

In the theme that emerged: *Therapeutic Emphases*, some differences between deaf and hearing participants were observed. Six deaf participants indicated the importance of following the client's pace (6 of 8; 75%). Six deaf participants also specifically mentioned the need to provide supportive therapy (6 of 8; 75%). Another six deaf participants explicitly described therapeutic interventions designed to promote decision-making skills (6 of 8; 75%). Five deaf participants emphasized the need to build solid trust with clients (5 of 8; 62.5%). Four deaf participants mentioned the importance of

confidentiality, trauma-related psychoeducation, education on help-seeking, and emphasis on positive behaviors, respectively (4 of 8; 50%).

Seven hearing participants indicated the importance of following the client's pace (7 of 11; 63.6%). Five hearing participants specifically mentioned the need to provide supportive therapy (5 of 11; 45.5%). Four hearing participants discussed their emphasis on trust building practices with their clients, and the importance of trauma-related psychoeducation, respectively (4 of 11; 36.6%). On two hearing participants, however described interventions designed to promote decision-making skills (2 of 11; 18.1%). Only one hearing participant emphasized confidentiality (1 of 11; 9%) while no deaf clinicians described a need to emphasize positive behaviors.

Research Question 6

What modifications in treatment are made to match to characteristics and trauma experiences of DHH clients? A theme the importance of deaf-centric care emerged. Specifically, ten participants mentioned the importance of individualization of the treatment of every client (10 of 19; 52.6%). Six participants regarded their recognition of trauma pervasiveness as important modification (6 of 19; 31.6%). A total of six participants mentioned the incorporation of additional professional supports (such as interpreters or a CDI) as a modification (6 of 19; 31.6%).

Research Question 6a

Does this vary by training, treatment setting, and/or provider/DHH client characteristics? Within this theme of deaf-centric modifications, one major difference were observed between deaf and hearing participants. Specifically, five hearing participants explicitly mentioned their recognition of trauma pervasiveness (5 of 11; 45.5%). Only one deaf participant mentioned this pervasiveness (1 of 8; 12.5%).

Chapter 5 Discussion

Research suggests that traumatic experiences are a particularly salient but understudied event in the lives of many DHH individuals and for especially children and adolescents. What exactly defines a traumatic experience in the lives of DHH youth? Do DHH and hearing children and adolescents share some or all types of traumatic experiences? Although Schild & Dalenberg (2012) conceptualized the term information-deprivation trauma (IDT) to capture a deaf-specific trauma, could there be others? Through use of the Trauma Symptom Inventory (TSI) research by Schild (2007) has suggested that trauma symptoms emerge differently among groups of DHH adults than hearing, but no such evidence exists regarding trauma presentation in children. Given this, what measures or tools do current DMHC providers use to identify trauma with their child clients? Furthermore, how do they treat trauma, once they have identified it?

The purpose of this study was to explore all of the above questions as well as to pose one additional point of exploration: how might deaf practitioners function differently than hearing counterparts during the definition/conceptualization, identification, and treatment of trauma with DHH clients, especially children and adolescents? In posing this final question, cultural differences in the clinical approaches

of deaf and hearing professionals, can be explored. The results of this study will now be discussed, first from an aggregated perspective, in which overall findings are considered. Then in later sections of the discussion, key differences between the deaf and hearing participants will be highlighted and considered in the context of other important demographic and professional features.

Discussion of aggregated results

Participants' definitions and conceptualizations of trauma

Participants easily identified various kinds of interpersonal trauma and abuse (e.g. sexual, physical, emotional, verbal) as well as discussed bullying, domestic and community violence in the lives of their DHH clients. In some instances, participants suggested that traumatic experiences are no different for deaf or hearing children, except for the fact that DHH children and youth must navigate intense communication barriers in home and community life in order express, understand, and process what had happened. For example, a hearing participant from a university setting offered, *“I'm not sure the specific types of trauma are unique unless it's connected to being isolated or lack of access to communication that somehow provides the environment where the person's more vulnerable. If they're more isolated and there isn't a communication in family, there isn't good access to communication and education, those factors make the person more vulnerable, but the types of trauma I think it's the same range as other people.”*

Ultimately though, it was revealing that the participants regarded such communication barriers as directly traumatizing, and not consider a lack of

communication at home or with family an exacerbating factor. A deaf participant in a secondary educational setting offered this as evidence, “*A lot of what we notice is isolation. Meaning no family communication. Countless times where parents do not use sign language with their children and when they get older, you start to see manifestation of anger, frustration, not being able to communicate effectively, and depression. Those kind of issues are what I notice. Seems to come from home and having lack of communication there.*” Thus, a theme surrounding the experiential, events-based definition of trauma emerged, with a primary emphasis on the experience or event of being isolated in the family with no communication. This theme will now be expanded upon and five additional themes will be discussed.

Theme 1: Experiential/events-based definitions of trauma. Overall, both deaf and hearing participants most frequently identified communication isolation as a salient traumatic experience for their DHH clients. As a code, communication isolation co-occurred frequently with familial isolation, meaning that participants often discussed these traumas simultaneously. Participants suggested that a lack of communication access within a family context is not only the most significant pre-traumatic factor or precursor to traumatic experience, but it is itself, a trauma. While communication isolation and lack of communication access within the family context thus represent a deaf-specific trauma, it should not need to be considered a deaf-centered trauma. Rather it is a *communication-centered* trauma, in which the deaf individual cannot be implicated as the cause of his or her own trauma. Communication, as meaningful exchange or contact between at least two people, is not only imperative for overall wellbeing, it is imperative for survival.

Considering what the literature suggests about a ‘dose effect’ of trauma (the frequency, and duration of a trauma) it was clear that all participants conceptualized the impact of prolonged communication isolation. As participants provided case examples, they often explicitly described the length of time a client went without meaningful communication or the level of a client’s signing skills. For example, one hearing participant working in a outpatient/community setting said, *“I worked with a 16 year old that came from a mainstream environment that had minimal language skills but when they gave him a nonverbal test of intelligence, it was above average. That was just- I started working with him four years ago, and talk about angry. He really struggled more because he was used to that... he was used to the aids that helped him complete his work so he had a lot of anger outbursts and knowing that he didn't know and he couldn't communicate. Minimal signs, 3, 4 signs.”*

Another deaf participant working in a secondary educational setting commented on the length time a child experienced of communication deprivation at home. This participant stated, *“The other thing is that a lot of times kids are raised with no language at home, so their ability to process and understand language is delayed. Missed approximately three years of communication when it is most valuable from birth to 3 years old. That has a huge impact on kids everyday and I’ve seen it. It is truly unfortunate.”* A deaf participant working in an outpatient community setting also commented on the length of time a child experienced prolonged communication isolation: *“Other experiences I’ve had with my clients are young children, they are not*

taught any language until they reach the age of 6 or 7. Or 8. So that's traumatic for them, they've missed the first five years, and it's really important"

In addition to communication isolation and familial isolation, Sexual abuse, domestic violence, bullying, and social isolation represented the next most frequently cited examples of traumatic experiences. Physical abuse, foster care involvement, and medical experiences were additionally identified, but at less frequent rates than other experiences. The loss of a family member, disasters, emotional abuse, verbal abuse, financial abuse, and community violence were also identified but rates of identification were infrequent. A deaf participant working in an outpatient community setting offered, *"...the deaf and hard of hearing have a higher percentage of any kind of abuse, including financial abuse, verbal abuse, physical, DV, very high. I've seen that in my community service. Physical abuse, plus, abuse socially where deaf person feels rejected/ostracized from the deaf group. Bullying from the deaf group."*

Somewhat inconsistent with available literature, which has established high rates of interpersonal abuse (sexual, physical, intimate partner violence) among DHH youth and young adults, a somewhat unique trauma was identified: financial abuse, as offered by the participant above. To this researcher's knowledge, financial abuse represents a significantly under discussed and under researched area, for DHH groups specifically. Participants discussed financial abuse as directly disempowering to their clients. For example, a different deaf participant working in an outpatient setting described the following, *"I see a lot of families wanting to keep the child home for their SSI checks. So the poorer the family, the more that financial abuse goes up."*

Considering the impact of trauma on the lives of their clients, participants offered rich illustration and provided many de-identified examples of client functioning. Through powerful case examples, the participants depicted compromised client functioning along a variety of domains including cognitive, behavioral, affective, interpersonal, and intrapersonal. What emerged from the participant's content was a highly consistent conceptual framework with earlier empirical description of trauma's impact on various domains of childhood functioning. Participants not only discussed trauma's impact on such domains but also elaborated upon the unique features of the DHH experience, which will now be presented.

Theme 2: Cognitive indicators of trauma. Participants cited significant delays in their clients' ability to understand and label trauma as a primary indicator. Participants often discussed these delays as a consequence of limited opportunities for communication and as a consequence of fund of information gaps. For example, a deaf participant from a secondary educational setting mentioned, "*DHH individuals without language or delayed language learning tend to be okay with not understanding things. They are used to it. We have to turn their 'WTF' meters on and it is incredibly challenging. I believe it contributes to higher incidence of trauma, them constantly not understanding what is going on. Then they finally get the education to understand and look back with disgust that some things should have not happened the way they did.*" For all young children, questioning and making sense of the world through the labeling of people, places, and things is a necessary developmental task. This participant's sentiments illustrate the

overwhelming impact that trauma can have on a DHH child's motivation to explore, label, and understand the world around them.

Participants then described a negative consequence of a delayed understanding and labeling of trauma: the development of core beliefs such as "I'm not important" and world-self schemas related to "I must accept abuse." These beliefs emerged as significant cognitive expressions of trauma, which in many cases could also be conceptualized as a depressed state, in which hopelessness and despair are primary client presentations. One hearing participant from community setting described her clients' core belief: *"That's definitely unique for the deaf kids that I see, just that lack of effective communication and that sense of, "Am I not important enough for you to learn to communicate with me?" That impact it has on their sense of self."* A different hearing participant in an outpatient community setting described how she struggles to confront client's world-self schemas of worthlessness, *"They accept more and more of what's going on. It's their natural way of living and having to explain this isn't the way you have to live."* A deaf participant working at a university setting described, *"The deaf person thinks, "I'm not getting help, and you continue to molest me, I have to accept it."*

Since previous research has suggested that a primary contributing factor to the development of PTSD may be the endorsement of a cognitive attributional style that is internal and marked by hopelessness (Gray, Pumphrey, & Lombardo, 2002) it may be the case DHH children and youth, particularly those who develop such world-schemas would be at increased risk for PTSD or related symptoms.

Research has also shown the impact of post-traumatic arousal on executive functioning, attention, and educational underachievement (Glaser, 2000). Compromised decision making and blocks to learning represented other, less frequently mentioned cognitive identifiers, but significant concerns, nonetheless. A deaf participant from a university setting stated that she sees, *“Severe, significant impact on learning, there’s a mind or mental block, can’t move on, mental blocks.”*

Theme 3: Behavioral-physical indicators of trauma. The presence of extreme, intense or “out of proportion” behavioral reactions to trauma triggers was indicated by 10 of 19 participants. A deaf participant in a secondary setting described such behaviors: *“I actually had one student who severely regressed; the student is actually 10 years old but had regressed behavior to the age of 3 to 4 years old...managing that behavior in the classroom when the student’s peers are 10 to 9 to 8, that was challenging. Other behavioral symptoms include rebellious behaviors, bad relationship skills, and things like that.”*

While some degree of ‘regression’ or ‘tantruming’ can be expected from children and even adolescents when under duress, extreme behavioral responses, including acting out, self-injurious, or even sexualized behaviors are more typically seen among for children who have experienced severe abuse or trauma and are responding to a trigger (Cohen, Mannarino, & Deblinger, 2006). A deaf participant from an outpatient setting described, *“I have one girl who is ten. She grew up in [foreign country], I am not sure of the sign for the country but anyway she is completely and profoundly deaf. She has no language and experienced sexual abuse in [foreign country] and she was adopted when*

she was eight years old. So she's been here for almost two years now. Her mom and dad are sweet but mom signs pretty good and the father signs okay but her mother is better at it. The girl shows trauma when she's eating. She eats fast and doesn't really pause between each bite. She gets food all over herself because she's afraid that her food will be taken away. If she's alone with her father, she blows up because I think he's a male."

Certainly a hallmark trauma response is behavioral avoidance of trauma triggers; in the case of this 10-year old, she could not avoid being around an adoptive father, whose status as a male triggered previous sexual abuse trauma. When avoidance cannot be effectively employed, severe behavioral reactions or acting out may be the only way for DHH children to communicate that they are becoming triggered. A deaf participant working in a secondary educational setting explained that, "...[a co-worker] shared one story about a boy who got in a fight and other boy saw that happening. Then the boy who was the witness threw a fit. The staff immediately assumed that he was trying to get attention. Many times we assume that children who do that kind of stuff are just trying to get attention but after the staff worked with the witness, they found out that he grew up seeing his parents in a domestic violent relationship. He saw his father beat his mother all the time so whenever he sees a physical fight, he blows up because he doesn't know how to manage that trauma."

Participants also described another primary indicator of trauma: comprised functional independence. This was defined as an overall inability to function effectively in daily life, maintain a job or schedule, complete activities of daily living, and achieve general life satisfaction. In some cases, participants discussed adult clients they had

worked with such as one deaf participant from a university setting who said, *“Those who experience violence, they go to prison, can’t find a job.”* Another deaf participant from a regional community center mentioned, *“They don’t have success in their work lives. They get fired, they quit, they’re not satisfied with work. They have problems one after another. Relationships are the same... they can’t see things through. Maybe they can’t stay with the same person, but maybe they do but they’re not happy.”* In reference to the daily living skills of children and adolescents, a deaf participant from an outpatient setting commented that, *“I’ve noticed kids in foster care or removed from their homes then they go back, people have the assumption that it the home environment is probably safe now, etc. They just assume that since they are in a safe place now, they know what to do from there. That is not true, they don’t know what to do. So I’m really providing a lot of support and encouragement. Before the boy would never brush his teeth, nobody would make him do it. Now when he brushes his teeth, I applaud him for brushing his teeth daily, at least once a day.”*

Additionally, a significant portion of participants keyed into their clients’ physical wellbeing by observing trauma’s presence on the body. Participants made remarks about the way their clients carried, covered, or presented themselves, physically. A deaf participant in an inpatient setting described how he identified physical signs of trauma: *“...they usually have a hard time expressing, eyes moving around, or they sit in the back, or cover up their head with the hood of their sweater. Does not want to talk or express themselves that is when I identify that something has impacted their lives.”* Another deaf participant in a secondary educational setting mentioned, *“Sometimes it could be their*

body language, at first it may manifest as irritability so once I work with them and get to the bottom of that, it becomes clear and understand why the individual has been so irritable.” One hearing clinician working in a variety of settings described what she observes with her traumatized clients: “it’s the basic ability to be present with and tolerate the affect in the session and regulate their own emotions and that kind of fear and anxiety that you actually often see right away if you know someone’s been traumatized.”

Theme 4: Affective indicators of trauma. Nine out of 19 participants explicitly mentioned “anger” as an affective presentation of their clients who had experienced trauma. We know that many traumatized children continue to feel hyper-arousal, sensitivity, fear, depression, and anger long after a traumatic event has passed (Cohen, Mannarino, & Deblinger, 2006). For current and future clinicians working with DHH children and adolescent, attuning to this specific emotion and effectively harnessing its impact on the client’s life may be a key competency for trauma treatment. Nearly equal numbers of participants also mentioned anxiety and/or depression and key indicators of trauma, in addition to anger. When describing her clients’ affective presentations, one hearing participant in a community setting stated, *“I would say most of my middle schoolers, angry at social workers, CPS kind of feeling like, ‘hey, I keep reporting this’ and there’s a lack of follow through. Definitely a lot of anger and irritability and distrust of authority figures especially non-signers.”* A hearing participant in a secondary educational setting mentioned, *“You have the anger, the impulsivity, depression, also acting out, or withdrawals so you have that kind of behavior that goes on.”* Another

hearing participant in a private practice offered this case example, *“I had one client who described being left at a school for the deaf, a residential school for the deaf. The confusion and the not understanding what was going on and feeling very abandoned by the family. But then again they liked being at the residential school because they found community in the school but when they would go home to their families they were just very separated, very not involved and were upset about that. I think it’s the anger. A lot of times there’s a lot of anger, a lot of frustration and anger. It’s shown on their face.”*

One deaf participant from a regional community center stated, *“They have a look on their faces, they’re angry too. I mean, I guess, with my years of experience, I can easily see it and know it.”*

Theme 5: Interpersonal indicators of trauma. A significant number of participants (13 of 19) explicitly mentioned specific interpersonal struggles faced by traumatized clients including difficulty trusting, avoidance of others, or conversely, over-involving themselves with others. It seemed as though many participants were discussing the root of the interpersonal problem. A deaf participant at a university setting stated, *“It [trauma] impacts everything. Relationships, ability to form intimate relationships with people, that’s a big barrier and, ability to actually enjoy life, because of flashbacks, or need to work a lot on suppressing the trauma through drinking, drugs.”* A different deaf participant in a university setting mentioned the following: *“With sexually abused people, victims, they’re very avoidant of people in the community, don’t want friends, they avoid, or they become too involved, very immersed with different people in the community.”*

Avoidance of intimacy or of engaging with relationships in the community was a specific

interpersonal struggle identified by several participants. A deaf participant in an outpatient setting also discussed the impact of bullying: *“...deaf people who are bullied or experience trauma in deaf school, or with a deaf group somewhere, they avoid deaf people. They tend to trust one person, or a limited number of people. They typically do not want to go with a deaf group. They become more isolated.”*

In addition to describing the kind of interpersonal struggle faced by clients, some also identified as pervasiveness to clients’ interpersonal struggle; they described problems across a multitude of relationships such as romantic partners, siblings, teachers, parents, friends, etc. For example, a deaf participant working in an outpatient setting said, *“There’s a barrier with developing relationships with school staff, parents, or seeing the same person at the grocery store when you go every time.”* A hearing participant in a community mental health setting added, *“I think the biggest issue I see is how it affects trust of people who are hearing, with people who are deaf across all aspects of their life whether it's in trusting people who could be helpers or healers or whether it's trusting future partners or employers.”* A hearing participant at a university setting mentioned, *“It’s really a lot of things connected to interpersonal functioning, decisions around choices with friends or particularly serious romantic relationships choices but also friends.”*

Theme 6: Intrapersonal indicators of trauma. Clients’ intrapersonal functioning (or well-being ‘within’ the self) was discussed terms of an overall fear of not being believed about a trauma, shame, and compromised ability to cope. For example, a deaf participant in a community outpatient setting described the following: *“I see a lot of*

reluctance and fear in being independent because they are afraid of messing up or they don't know what to do. They just have that fear, and some things are just basic like telling the teacher something or let mom and dad know about something.” One hearing participant in a secondary educational setting noticed that, *“the coping skills are minimal, self hatred is really big...hating the fact that they're hearing impaired or they're deaf.”* A hearing participant in a university setting mentioned, *“So if you're dealing with a death, an accident, or whatever traumatic event that might come up, if you don't have those early coping skills and the trauma continues to exacerbate because you don't have those coping mechanisms.”*

The participants discussed a further consequence of prolonged shame and fear, in addition to reduced capacity to cope: trauma effectively remained ‘built up’ and does not get processed. We know that children’s responses to trauma appear to be highly dependent on their parents’ or caretakers’ reaction, such that if parents respond in resilient ways and demonstrate coping and effective emotion regulation, the child is less likely to develop trauma-symptoms (Foa, Keane, Friedman, & Cohen 2008).

Communication barriers in the home and with family would undoubtedly compromise a DHH child’s ability to share traumatic experiences and observe appropriate coping skills, particularly when the communication barrier is itself a trauma. Thus the process of re-traumatization is continual and the job of a DMHC provider never ends.

Factors, situations, experiences that contribute to trauma exposure

Participants described clients' functioning (cognitive, behavioral, affective, interpersonal, and intrapersonal) not only in direct relationship to traumatic experiences but also in relationship to broader contexts and environments. For DHH children and youth, specifically, the influences of broader environments on wellbeing cannot be understated. How a DHH child makes sense of his or her experiences is highly dependent upon visual and proprioceptive sources of information; for the vast majority of hearing societies, reliance on auditory information and spoken language is not just commonplace, it is dominantly prioritized over other means. When asked to describe various factors that contributed to the traumatic experience of their clients, participants readily described invalidating environments, blocks to client agency, and limitations to linguistic access, full participation, and necessary health services. Uri Bronfenbrenner's Ecological System Theory (1979) provides a helpful framework in which to organize layers of an environment and participants' responses will now be discussed in the context of this framework. The purpose behind this organizational framework is to consider how a variety of systemic factors contribute to traumatic exposure, particularly for DHH children and adolescents. Four emergent themes will be discussed.

Theme 1: Traumatic layers in the lives of DHH youth. Participants identified various contextual or systemic factors, such as generational trauma, poverty, rural isolation, community/family substance involvement, and gang involvement at nearly equal rates, suggesting their conceptualization of these factors as all equally influential to trauma exposure. Participants described what could be considered exo- and macro-system level (within Bronfenbrenner's 1979 framework) variables that contributed

to traumatic exposure. Considering again what the literature has suggested regarding a dose effect of pre-traumatic factors, the presence of at least one of these factors renders an individual vulnerable. The presence of additional contextual vulnerabilities likely doubles or triples risk for trauma exposure, as well as increases the likelihood for detrimental peri-traumatic conditions. For example, if an impoverished family living in a rural area does not have the financial resources to seek medical care, the trauma of an emergency situation is often more complex and potentially longer lasting given the noted limitations. One hearing participant working in a variety of settings described a family she worked with, *“So in that case I think their vulnerability was around being isolated in a rural community and family not knowing what to do and maybe extended family not communicating and sort of being at a loss and there not being good resources, community mental health or mental health access readily available, transportation issues, the level of poverty, limited education.”*

Theme 2: Significance of enviro-linguistic agency. Participants described the role of direct influences in the environments surrounding DHH clients such, oppressive attitudes, and language inaccessibility. Such factors could be thought of as located within the Mesosystem of Bronfenbrenner’s (1979) model. These factors directly impacted the DHH individual’s capacity to serve as an agent in their own environment. Namely, participants identified environmental power differentials (differing power status, sometimes hearing vs. deaf power differentials) as highly influential in contributing to traumatic exposure. For example a deaf participant working in an outpatient setting said, *“I think the common theme involves the assumption that [the clients] are without power.*

Second class citizens, or minorities. So whatever, a hearing or deaf, views another as lower or lesser, they experience oppression in the following ways, which includes opportunities to be abused.” One deaf participant, working in a secondary educational setting discussed environmental oppression in the context of the school setting. She mentioned, *“It could also apply to kids in IEP meetings that I’ve seen. The adults tend to completely ignore them and leave them out instead of asking them about their thoughts to include them. There is no empowerment. They just go along in the meeting, sitting there. What does that do to their self-esteem? That is a factor, it might not be directly related but it may influence their self-concept and [they may] respond negatively to the situation. It makes sense, the kid will see that “oh, my parents don’t talk to me and now the other adults at the school don’t either,” and etc. This is a factor.”*

Participants mentioned that a lack of communication access and/or language skills rendered clients easy targets for abuse, and mentioned how others would exploit the clients lack of communication access and/or language skills, often due to the assumption that the deaf individual is not intelligent or capable or would not “tell” others about abuse experiences. Another key example of environmental limits to communication access emerged as participants mentioned having only one provider of information, such as a sole interpreter or a single parent who provides their child all information, which contributed to traumatic exposure. A hearing participant, working in a clinic at a medical campus suggested, *“...where there's one sole conveyer of information or communication, like the interpreter, and I think that whenever I- I always get like this red flag of like, ‘This child is doing great,’ and they’ve had the same interpreter since 1st grade. I was*

like ‘Uhh really?’ I mean, that can be great if it’s like- good communicator and everything else but that also really limits the opportunity for somebody else to say, ‘Hey, this isn’t right’ or ‘Something is going on here that’s not right’ or can put that person who is in position of power to be like The Only One.”

Another hearing participant, working in a variety of settings, described the following, *“I have a couple of people with various syndromes whose parents are interpreters for them and their parents probably skew their health experience in attempt to try to protect them but the kids don't have a clue and some of them have had near death experiences and things like that and they really didn't know.”*

Theme 3: The role of familial trauma. Considering the role of the family, participants specifically identified how choices some families make (to not providing visual communication access through sign language) serve as a major source of trauma within the family and for rest of the individual child or adolescents life. For example, a deaf participant working in an inpatient setting remarked, *“it’s mainly the parents who do not want to sign. That plays a huge factor because—I always argue that parents learn sign versus children learn how to speak using speech. Is it easier for parents to burden the child with the work to fit in or for the parents to learn sign language to fit their kid? I always encourage visual language; speaking or using speech is fine as long as the visual language is utilized first. But again, selling a new concept to someone who has already been raised in a certain way is very difficult and it is a struggle. That is what I have been trying to figure out how to convince them and sell the concept that if the parents put in*

the effort of learning sign language, it will make a huge difference in their child's life in terms of development."

As a result of children not having access to a visual mode of communication within their families, participants discussed how this renders clients unable to express needs, wants, and preferences or to communicate what has happened to them. A deaf participant working in a secondary educational setting reported the following, *"I noticed that many deaf kids don't really understand what is going on or know how to express their feelings or emotions. If we had exposed them at an early age, teaching them how to deal and the meaning of feelings and emotions, then they would be able to make connections from situations to their emotions and know exactly what they are feeling then express it appropriately instead of taking it all in passively and not being able to understand how it may be affecting their behavior."* A hearing participant at a university setting added, *"...the lack of communication itself is just traumatic. To not be able to express your needs and get those needs met whether it's a safety issue or a danger issue, or just a general 'this is how I feel and this is what I want.'"*

Theme 4: Fund of trauma knowledge. Considering the specific role of information deficits, nearly 40-50% of participants identified a lack of understanding of what constitutes trauma, abuse, and safety. Remarked one deaf participant working in a outpatient community setting, *"Lack of knowledge of what is abuse. Exactly, what? Being physically grabbed? Shaken? What? What exactly is abuse? That is fairly common, but often with the deaf, it's a little confusing. What else- lack of knowledge? What to do if being abused? Who to call for support? What else? Not able to explain the history."*

As this same participant identified, appropriate help seeking behaviors are also compromised by gap in FOIs. One deaf participant from a regional community center stated, “[they] Don’t have information they don’t have the tools to understand and look for help. They don’t know what to do.” Several participants also indicated that gaps in knowledge related to personal medical history or navigating complex systems. For example, this hearing participant in a university setting stated, “I think a lot of our students come and they don't know the first thing about dealing with if there is a car accident. They don't know how to deal with insurance. They don't know how to deal with their medical history. There's a lot of work in the system that they don't know how to deal with.”

Tool or measures used to identify trauma with DHH children and adolescents

The second portion of the interview regarded the participants’ clinical practice. Participants were invited to discuss their approaches to trauma identification and treatment. In some cases, participants expressed trepidation prior to responding. It was as if they feared evaluation of their approach or believed the ultimate point of the research was to assert a “best practice” for identification and treatment of trauma. After explaining that the goal of the study was to explore their professional experiences and approaches, but not evaluate them, some participants seemed more willing to elaborate.

Theme 1: Widespread preference for the clinical interview. Preference for the clinical interview was indicated by 89.5% of the participants. Several professional level factors likely impact this preference; specifically, professional training would dictate

which professional groups are able to conduct psychological assessments for diagnostic purposes (e.g. clinical psychology and psychiatry degrees). Given that this sample included licensed clinical social workers, it would make sense that preference for a clinical interview would be increased. For example one deaf participant from a secondary educational setting described that, *“A lot of times, trauma occurs at home and then behavior shows up at school. I tend to collaborate with their outside therapist and learn about what they are working on so I align my approach with them. This way we can improve students’ coping skills, emotion management skills, relaxation skills, and anger management. I also work with teachers and staff on how to appropriately interact with the kid instead of making it worse if a situation comes up especially so that the kid can continue to learn in school. So, I do not use specific trauma therapeutic assessments/measures/tools.”*

In terms of their rationale for use, 31.6% of participants mentioned that no better tools currently exist. One deaf participant from a secondary educational setting expressed clear frustration and stated, *“...what deaf-friendly assessments are there? At my old job, I couldn’t find any trauma assessments for deaf people. Deaf people have different experiences and before you even assess them, you have to work with them to understand their trauma. You have to have those basic questions so I think that is where clinical interviewing comes in. To me, it is the best way to gather information, and figure out whether if they understand their own trauma.”*

The participant above made a distinct point. Traditional PTSD scales, which have been normed on hearing populations, do not account for the experiences or identified

types of trauma, like IDT, DHH individuals often experience. Thus, the strengths of the clinical interview related to its narrative nature, which allows clients to describe their experiences and ‘tell their story.’ A hearing participant from a private practice stated, “*I think it [clinical interview] provides a narrative structure. I think it provides a lot of background information. I like to get into the story and really have an understanding because there are layers of trauma and other life events that you need to understand before you can do an intervention. You don't want to do the wrong intervention.*”

Modifications made to the tools or measures

The pervasive use of the clinical interview signifies several important things. Of course we know that measures specifically designed to match the experiences (including traumatic experiences) of DHH individual are severely lacking; this is nothing new. For years clinicians and researchers alike have cited the significant lack of appropriate measures and tools normed on, and valid for use with DHH populations. Secondly, the pervasive use of the clinical interview signifies that it is an important tool upon which improvements could likely be made for use with DHH populations. Rarely are clinicians left with an alternative approach for what to do in the meantime while such measures are created and validated. The participants in this study offered their perspectives on how to modify the clinical interview for use with DHH groups.

Theme 1: Deaf-specific modifications to the clinical interview. Overall, participants indicated that signing the contents of a clinical interview was of course a primary modification. This study asserts that for all DHH individuals for whom sign

language is a preferred communication modality, the use of sign language in a clinical setting should be a standard of care and not a modification. However, it is well established that as a cultural-linguistic minority population, DHH individuals are continuously underserved in mental health care settings. Unfortunately, estimates suggest that less than 2% of deaf individuals in need of mental health treatments received them (Pollard, 2006). Thus, in some clinical settings, the possibility of a signed clinical interview or intake does not exist.

Beyond the implementation of a signed interview, participants discussed the importance of adding questions and terminology to the interview, which are relevant to and reflective of the DHH individual's experience. A deaf participant from a community setting referred to the questions in the interview, stating, "*We have to ask those specific questions and then add our own questions. Whether they used spoken language or sign language when they grew up. Did they have support? Maybe their parents were great, really good with them. So I add that myself. How did you become deaf? Late deafness or ever since you were born?*" The addition of deafness related questions during the clinical interview was mentioned nearly ubiquitously. The following emerged as necessary categories of questions for the clinical interview with DHH children and adolescents:

Etiology of deafness: what were the circumstances surrounding the child's deafness? Was it sudden, gradual, from birth, an/or medically related? What was the family's response to the deafness?

Acquisition of language: how soon after discovery of deafness did the child acquire any language? How soon did they acquire signed language? What are the family

attitudes surrounding use of signed language? Was the child required to utilize speech therapies or oral communication? What was the experience of speech therapy like for the child?

Early attachments: Whom did the child attach to or bond with early in life? Were there any adverse disruptions or separations from salient attachment figure? How does the child understand extended separations from attachment figures, particularly if the child attended a state school for the deaf or another school far from home? Has the child ever witnessed anything adverse happen to key attachment figures? Does the child understand what happened to key attachment figures, if adversity occurred?

Exclusion in the home: Whom does the child live with primarily and what exclusion scenarios currently exist (i.e. being left out of conversations, not having signed communication)? How often is the child alone, when in the home context? Do others, including parents and siblings, in the home utilize signed language? Who does the child socialize with when at home (i.e. neighbors, pets, siblings)?

Educational transitions: How are transitions to and from school? Does the child understand why he/she might attend a residential/state school for the deaf? Does the child understand why he/she might attend a mainstream school?

Adverse medical experiences: Has the child ever required emergency medical care or hospitalizations? Does the child understand why he/she required emergent care? What was the experience like for the child? Was communication accessible for the child in the context of a medical emergency? Does the child understand why he/she is taking current medications?

Regarding specific clinical terminology found within an interview, participants discussed the need for important modifications. A hearing participant from a hospital setting expressed, *“I’ve never heard of a deaf person go through a symptom checklist saying anything remotely near the same words that are listed in the DSM. Even when you talk about depression, you get feedback like, ‘blow up. Can’t sleep or toss turn.’ They perseverate on things. Or ‘cranky.’ You never get the word ‘depressed.’ You never get the word.”* A deaf participant in secondary school setting elaborated, *“It is challenging though because of how the questions are laid out. It is hard to think how to convey the exact same thing in sign language. There are specific kinds of information the assessment is asking for and how to convey that in sign language and sometimes we have to figure out the right way to sign that conceptually because the words in English may not match, especially if you try to sign it word for word.”*

Participants also discussed constant comprehension checking. Taking time to clarify what questions a client may have is essential. For example, a deaf participant working in a university setting stated that, *“a lot of questions that are stated on the clinical interviewing documents/protocol are not accommodated to the DHH individual I am working with so often I have to make the modifications to ensure that the DHH client understands what the question is asking.”* Participants also discussed constant comprehension checking. Taking time to clarify what questions a client may have is essential. One specific point of clarification regarded the historical timeline of a child or adolescent’s experience. This was emphasized by a deaf participant who stated, *“A lot of kids I work with, their concept of time is not good. Sometimes they will be talking about*

abuse and I find out that it happened five years ago. Their teacher thought it happened last week and I'm like no that happened a long time ago. Sometimes there's nothing we can do any more but we can set up a timeline. It's hard some times figuring out what really happened."

In conclusion, the clinical interview is a tool with clear narrative strengths, used by many DMHC clinicians, often in lieu of other standardized measures, which may not accurately assess for traumatic experiences relevant to the DHH population. Important modifications to the clinical interview include additional questions that capture salient DHH experiences, changes to terminology as needed in cases where a direct ASL to English translation does not exist, vigilant checks on comprehension to ensure that questions in the clinical interview are clear, and an emphasis on establishing a clear historical timeline (to the extent that it is possible) with a young client.

Treatment approaches used to treat trauma with DHH children and adolescents

There was not one clearly preferred method for treatment, as noted in the results of the Demographic Survey. This was unlike the results for the approach to identification, in which it was obvious that few other appropriate, valid measures are available.

Preference for specific treatment approaches (e.g. CBT, DBT, TF-CBT, etc.) varied by the individual, seemingly based on training and areas of personal strengths but likely also on what resources were available. One hearing participant from an outpatient medical setting articulated that, *"I think it depends on both the age and communication and access to things so really I would say it gets down to what can I get this individual or this family*

hooked into that will be accessible and is available to them or either in some cases accepts their insurance.” Certain core values and therapeutic emphases did, however, emerge. It was clear that the participants placed particular weight on trust and confidentiality within the therapeutic relationship, support for the client, a skills-based approach emphasizing choice, and trauma education. Important emphases will now be discussed.

Theme 1: Therapeutic emphases. Thirteen of 19 participants emphasized the need to follow the client’s “pace” in therapy. This emphasis aligns well with established literature on the significance of ‘pre-treatment’ (Glickman, 2008; Glickman, 2009) for DHH individuals, particularly those with language or learning challenges. A deaf participant from a community setting explained, *“It’s about following their pace, then I let them know when you’re ready, I’m here, you’re safe.”* A hearing participant from a university setting mentioned that sometimes a ‘push’ in therapy is appropriate but the power remains in a client’s control. She mentioned, *“I think recognizing that process too of just following their pace but ready to push a little too. Somebody may not be able to open up just yet to what that is about or work through it just yet but just allowing it to be and not pushing too hard where they’re not ready.”*

The participants specifically mentioned the term “support” as a critical therapeutic emphasis. In the approach, the clinician’s role is to listen to the stories and experiences of a client and provide a space for them to feel comfortable and supported. A deaf participant at a university setting described her approach as *“Supportive. I kind of give them some kind of holding environment so that they feel safe enough to actually process*

some of the things. A hearing participant from a secondary educational setting described her overall role as one of containment: *“I think it's trying to identify what's their life situation and what they deal with on a day-to-day basis and to help them build some internal strength within themselves to take care of themselves because they don't have the support out there. Stuff that's not reportable neglect, it's just circumstance that these kids are taking care of themselves so much and trying to build the internal strength and the self esteem issues and how to deal with the extreme emotions and anger management stuff. I try to take the extremes and make them containable.”* In fact, one hearing participant from a medical setting explicitly termed her approach ‘supportive therapy.’ She mentioned that *“sometimes just supportive therapy too... but just listening to the person's story has value too and questioning that whole aspect of taking control.”*

A significant number of participants also recognized that despite their efforts to provide support, containment, and space, clients, especially children, would not make progress without trust. Trust allows clients to open up authentically, express themselves, and receive feedback. A hearing clinician in a university setting shared a story: *“There was severe abuse in the whole family and this person was the youngest and was abused very early physically, emotionally, sexually by the a male family member. Starting young and continuing for a long time and the vulnerable person in that family, one of the youngest, deaf. [...] So it was many years of horrific abuse. It was a number of years of treatment to really- in that particular case I worked with that person for [several] years. It was years of treatment to just even trust again and to believe it was okay to tell the story.”*

A major key to the development of trust was an explanation of the terms of confidentiality. Due to the low-incidence nature of the DHH population, people are involved in a variety of complex, interwoven relationships, which may limit privacy and anonymity. Participants described the need to explain confidentiality more often in the context of working with young adults, rather than children, but it is still an integral part of any therapy and especially with DHH clients. For example, a deaf participant from a regional community setting explained, *“I remind them. It’s confidential. It stays here. It’s trust. They must trust me especially because I’m deaf, and they wonder if I will go out and tell others about the meeting? So I re-emphasize that everything stays here I don’t share. Some people definitely. They’ve had a bad experience within the deaf community, part of their trauma, there’s always gossiping and backstabbing going on. ‘I’m deaf too, will I do the same thing?’ So some people have to really earn their trust, and that takes a long time.”*

Once trust was established, participants described the effectiveness of skills-based techniques with children and adolescents, which included opportunities for choice making. For example, a deaf participant working in an inpatient setting mentioned, *“I will work with the individual and promote understanding in the individual that they have a choice to cope and live their lives without constantly blaming others (like hearing people) and being stuck on the trauma.”* This same participant then expanded on his point and described his specific approach: *“you have kids who struggle with following rules. So I have to sit with them and talk and have them think about possible choices. So every time I catch them talking about something, I would take the opportunity to ask them to give me*

examples of possible consequences. Then I would ask them if they would prefer to have that consequence happen or follow the rules? If they prefer to get caught and deal with the consequences, we would review the consequences, and I would tell them to suit themselves. The goal is to have them think about choice A and B and to pick one or the other.” This participant was not the only one to mention the importance of selecting from either one choice or another (choice A or B). When describing an Emotion Thermometer, a deaf participant from an outpatient center observed the following, *“Some people, hearing therapists, I’ve noticed, use more of a continuum of emotions. I use more of emotions that are distinctly separate from each other, options and then next, what not do. That is different compared to using a continuum. I prefer different colors, more uniform, options 1, 2, and 3. So they know what to pick. They have the opportunity to pick a good response or how to try something next time.”*

In addition to a specific emphasis on making choices, participants often reinforced their clients’ positive behaviors and positive decision-making. They informed their clients that they were observed making positive choices and engaging in positive skills. A deaf participant in a secondary school setting provided an illustrative case example: *“[A] child arrived without knowledge of sign language, but he could speak and could hear some. The student also had a cochlear implant but there was a lot of frustration, anger, and aggressiveness coming from the student. The student would throw books, kick and throw chairs. Destructive behaviors, but he never really directed them towards a person but more with objects. One point he was mad and he left the classroom. So we sat down and talked about that situation, I asked him what happened and he said he got mad and*

upset, and that he threw his paper off his desk and left. He also explained that he went to sit in the library to calm down. I said “Oh? You did not kick a chair, didn’t punch a wall, did not slam the door, didn’t hurt anyone, you were able to leave the classroom to calm down and to keep yourself safe, other kids here safe, wow! I am really proud of you!” So it is to recognize what he did right even though that situation was disruptive.”

Education about trauma was emphasized as another specific approach taken by participants. Due to a variety of factors, including FOI gaps in knowledge related to trauma, abuse, safety, and healthy boundaries, education emerged as important feature of the therapeutic process. Equal numbers of deaf and hearing participants (four each) highlighted this feature of their approach. One deaf participant in a community setting described her work to provide education to a client, *“Education. Teach them how to calm down, breathe, how to build their coping skills, their healing skills. Why? When they start talking about trauma, they need to do that to reduce their PTSD. It’s called desensitization. To teach them to... while talking about trauma... to keep their numbers low... their anxiety level low. So, to teach them how to use a scale: ‘how anxious are you now? 1, none? 10, awful?’ To teach them how to keep their numbers low like 1, 2, 3. So if their number is more than 3, we pause. We help them go back to 1, 2, 3.”* A deaf participant in an inpatient setting described another approach to education, *“I usually try to explain to the students that deaf people tend to have addiction to gambling, drinking, smoking, and interaction. They do not know how to socialize without them.”*

Another hearing participant in a community setting worked to provide education to the family about trauma triggers. She described, *“So we had a kid who was extremely*

assertive and intelligent that could use the materials. Yeah and constantly being re-traumatized and retriggered. So it took a long time to stabilize her. She was always so aroused and so angry, justifiably so. The family was pretty resistant to medication but I think with some education and they noticed it just kind of took the edge off. It helped her calm a little bit. So, therapy could work and she could sleep.” In the case of a hearing participant from a community, education on trauma included statewide training: “we’ve been doing trauma informed care trainings across the state and doing those both for clinicians at all levels of service. Our state had a grant to do that and we made sure that people who are deaf and hard of hearing were involved in that process and that clinicians who serve folks that are deaf and hard of hearing were involved.”

Modifications made in treatment

Considering the wide variation in use of treatment approaches, specific modifications were challenging to identify and depending on the particular participants approach. There were however, several important adaptations seemed to carry across therapeutic modality. Those adaptations will be expanded upon now.

Theme 1: Deaf-specific modifications to trauma treatment. Equal numbers of deaf and hearing participants (five each) explicitly mentioned the need to individualize treatment, no matter the modality. The sentiment “it depends on the client/child/person” rings essentially true for DHH groups. Given the widespread heterogeneity within the population across race, ethnicity, country of origin, religion, family background, gender

and sexual orientation, individualization of treatment would be a necessary adaptation (Schild, 2007).

Individualization of treatment planning for each child, adolescent, or family was a constant modification. A deaf participant in a community center offered the following: *“Honestly, when I first started in the field, I was young, and awkward. Now I’m more confident, more comfortable. I go with the flow really. It’s an individual approach depending on the person. I think I’ve learned to follow the person, instead of following the book ‘do this, do that.’ I interact with the person, the individual.”* A deaf participant in a secondary educational setting said, *“Sometimes, when necessary, I will admit that I’m not perfect, the neither best person, nor do I have a relationship with that client. Maybe that client should be referred to a teacher to talk to them instead of me, you don’t need a formal title of a ‘counselor,’ it could be anyone, an adult that the student trusts.”* This participant displayed a powerful recognition of an individual clients needs, and admitted that in some cases, those with a more established relationship to that client could meet the therapeutic need rather than a formalized approach.

Six of 19 participants commented on their increased recognition of trauma pervasiveness. Essentially, to be an effective provider in the field of DMHC, one should be trauma-informed. To be an effective provider outside the field of DMHC, one should *really* be trauma-informed. A hearing participant in a community center described, *“It became clearer the more time that I was working in the field directly that- pretty much had to treat anybody who walked through the door as potentially having a trauma history and that it would manifest itself in different ways but that whether it was the parent who*

had trauma or the child who had trauma, you had to come in with a very gentle approach.” A hearing participant in a private practice mentioned, “just how common it [trauma] is. A lot of times I just assume it is there. And if it doesn’t come up, like if someone comes in with depression, probably 75% of the time there’s trauma.”

To effectively address trauma, a variety of professional supports are used. Deaf and hearing participants alike discussed the involvement with third parties, including interpreters, certified deaf interpreters (CDI), teachers, and parents in their treatment approach. A deaf participant from a secondary educational setting shared this story, *“Well, I worked with one boy and that was back when I was in [city]. His mother came up to me and started to tell me that she busted him doing something one time before but because he did it again, she had to report. Her son molested two of his younger siblings. His mother was devastated and she was a victim too, her brother did the same thing to her when she was younger. Now her son was doing the same thing, and because of how the system works, a therapist who specializes in sexual abuse was placed to work with them. He is hearing and has some experience with working with our population but they had to bring in an interpreter and a CDI.”*

A hearing participant also described the significant role one CDI played in a case: *“we had the psychiatrist in the room, the ASL interpreter, and the CDI, and then her family, her provider, and herself. I was not in the room at the time, but through the CDI they started asking her questions and probing and by the end of the session everybody was in tears because it was the first time she was able to express what had happened to her and that somebody could understand what she was saying. Again, it was a clinical*

interview, it was a psychiatrist who was attuned to the deaf culture and willing to work with the ASL interpreter, the CDI, and take that extra time.”

Discussion of disaggregated data: comparisons and contrasts

“In my perspective, I think trauma is very complex. It is not easy to identify or interpret, or easy to understand. I think it is complicated, even for myself. I do have my own trauma but I didn’t realize it until later, until after I talked about it then I was like, “OH!” It all made sense, my anxiety was a result of what happened to me before and made connections from there. I can’t imagine people who have no understanding of what trauma is and what it means.”

-Deaf Participant

A deaf participant from a community setting shared the above quote. It represents her journey as a therapist: she realized that an earlier trauma existed and further recognized the impact it was having on her life. The source of her trauma, whether it is communication or family isolation, an interpersonal abuse experience, or some other adverse event, is unclear. However, she does know what it means to have delayed, but eventual, comprehension of a personally distressing experience. This is the most

therapeutic part of her story, not only for herself, but it can be therapeutic for other deaf individuals, since many of her child, adolescent, and adult clients will likely know a similar story. This participant has modeled that it is possible to make sense of something terrible, not allow the event to overpower or determine life's direction, and has even circled back, as a therapist, to support other DHH individuals on their own journeys of trauma recovery.

The following paragraphs offer discussion of the most salient differences observed between the trauma conceptualization, identification, and treatment practices of deaf and hearing participants. Areas in which no significant differences emerged will not be reviewed in depth, but will be mentioned, as earlier aggregated findings sufficiently cover such aspects of the results. For a specific numeric breakdown of the findings please refer back to the Results section or see Appendix I for a visual overview of the results.

Participants' definitions and conceptualizations of trauma

No significant differences regarding the specific kinds of traumatic experiences mentioned by participants. Both considered a lack of communication at home with family and in general directly traumatizing situations. It was observed however, that hearing clinicians were more prone towards the conceptualization that an overall lack of communication "exacerbated" trauma experiences and symptoms. Hearing practitioners seemingly conceptualized the compounded effect of trauma, but more or less described a lack of communication access as if it were an embedded feature of the environment rather

than a system of injustice designed against a DHH individual. The following quotes all came from hearing participants

“I’m not sure the specific types of trauma are unique unless it’s connected to being isolated or lack of access to communication that somehow provides the environment where the person’s more vulnerable.”

“The lack of effective communication between children and caregivers that furthers their sense of vulnerability and isolation and leads itself to some of those mental health problems, exacerbates it.”

“I think there's a lot of situations like that where there's an emergency happening and the fact that they don't have the communication about what's actually happening, it exacerbates the trauma.”

“In rural settings, where the child might be the only deaf child all around and no one knows how to communicate with him, except maybe for his interpreter in school, that child would be very vulnerable, I would think.”

In contrast, deaf participants more directly stated that a lack of communication is a trauma in and of itself. A lack of communication was identified as a source of trauma, often described as a choice not to sign unwittingly made by families, parents, caretakers, or others in the DHH child’s immediate surroundings. This choice not only renders the child unsupported but blocks their ability to function as an agent in his or her own life. The following quotes come from deaf participants:

“Growing up deaf in a hearing family, where there’s little or no communication. Sometimes they see situations where the father doesn’t care, or is not involved in their

daughter or son's lives, so they grow up feeling, 'My father didn't care about me.' Really, communication, they did not make the effort. Meaning, the Deaf person is not important."

"...selling a new concept to someone who has already been raised in a certain way is very difficult and it is a struggle. That is what I have been trying to figure out how to convince them [parents] and sell the concept that if the parents put in the effort of learning sign language, it will make a huge difference in their child's life in terms of development."

"Deaf kids struggle anyway because most of their parents don't sign so that's the thing, they go to the grocery store, there's minimal communication, fingerspelling, and they don't really know what's going on."

"There is a huge difference in the development of children whose parents neglect them and parents who value them so there is definitely trauma through that."

Regarding indicators of trauma, no significant differences were observed between deaf and hearing participants in cognitive, affective, and intrapersonal domains. That is, both groups acknowledged similar rates and similar types of indicators. A stark difference emerged however, regarding behavioral and physical indicators of trauma. Specifically, deaf providers attuned trauma presented in the body language and on the physical beings of their clients. Deaf providers described seeing anger, fear, frustration on the faces of their clients. They described the visible anxiety and shame on the bodies of their clients, who often covered themselves with sweatshirts or hoods, hunched forward, or avoided eye contact. Deaf clinicians observed the irritability and impulsivity in the behaviors of the kids who were not ready to disclose or discuss a trauma; rather,

their actions spoke for them as a main mode of communication. Although hearing providers described similar features of anger, anxiety, frustration, and aggression among their clients, they were less apt to describe physical indicators. This may represent an important feature of deaf-centric practices; that is, the deaf-centric emphasis on visual information, particularly in the context of psychological trauma.

Furthermore, it should be noted that each participant who discussed trauma's impact on functional independence (including activities of daily living, life satisfaction, finding employment), was deaf. No hearing participant indicated this as a primary symptom of trauma. For deaf participants, trauma (often defined directly as communication isolation with family) seemed to serve as a block to individual agency and the client's ability to learn how to manage life for him or herself. Several key quotes from deaf participants include:

" [The client] attempts to take control, to try do things in their lives, but they keep breaking down...holding their feelings of hurt and anger inside."

"Trauma can impact their everyday functioning like their health in terms of feeling weighed down, heavy, tired, stressed out, just not feeling like they are in the mood to deal with it on a daily basis and give up, they start to think, "what is the purpose anymore?" They become depressed and have a hard time taking care of themselves."

"They don't have success in their work lives. They get fired, they quit, they're not satisfied with work. They have problems one after another."

These quotes suggest that deaf participants are conceptualizing blocked self-agency as a major impact of trauma. Thus, working with children and adolescents in

therapy to developing healthy decision-making behaviors, and make positive choices is an imperative approach and highly indicated. Healthy decision-making and important self-regulation skills allow children to feel in control of themselves and their environment, feel like active agents who are capable of management skills, and promotes coping. Deaf participants seemed particularly attuned to these therapy goals with traumatized clients, which will be expanded upon in subsequent paragraphs. Additionally, higher rates of deaf participants described their observation of trauma on the bodies of their clients. For example, deaf participants mentioned the following:

“...even when they do not have language, they use their behavior to communicate.”

“Their physical appearance, showing anxiety, reluctant to being open to talking about it, those things.”

“We tend to look for specific behaviors like, one client recently, her triggers are typically with men in general. So if she is alone with a male, an adult male, it will trigger her and she’ll throw a temper tantrum or run off, but the man is actually fine, its just that he is a male.”

Interestingly, one hearing participant validated this finding by sharing that, *“It is always more physiologic with bodily reactions [with the deaf] more than the brain reactions like hearing people talk about the brain reaction whereas deaf people talk about more about, “can't settle down.” “Keyed up.” Like they don't use the word “keyed up” but they'll use like an OCD “brain stuck.”*

All participants identified interpersonal indicators of trauma, however a unique emphasis on the specific type of struggle, versus whom the problem was with, emerged

from the deaf participants' responses. Hearing participants described nearly equal rates of interpersonal problems but also identified that the problem occurred across multiple relationships. For example, hearing participants noted the following:

“He hated people, especially authority figures, so he would get in trouble by challenging them all the time. During the course of them finally being able to work throughout the trauma, the anger would actually dissipate.”

“I mean it impacts relationship issues, definitely impacts relationship issues, impacts how they trust others, how they work with others. Marriages and relationships in general, relationships with friends, so it can impact a lot of things.”

“The whole trust thing is a big deal. It messes people- anybody who has been victimized, messes up your marital relationship too and your faith in the goodwill of people.”

While deaf participants also identified that interpersonal problems occurred across a range of client's relationships, they provided more concrete examples of the nature of the problem. For example a deaf participant mentioned his client's struggle “to develop...reliance on other people to do things for them.” Other examples include:

“Relationships are the same... they can't see things through. Maybe they can't stay with the same person, but maybe they do but they're not happy.”

“They tend to trust one person, or a limited number of people. They typically do not want to go with a deaf group. They become more isolated.”

“Well lets see there’s a lot of fear in being independent yeah, I saw that, I see a lot of reluctance and fear in being independent because they are afraid of messing up or they don’t know what to do.”

“Skill is another thing that they lack; this applies to a lot of kids I work with. social boundaries, like recognizing this person from the grocery store and just say hi, or getting to know an individual to develop trust or deciding whether they need to know this person more before the trust happens. What to share, what not to share. Just a total lack in this area, so I try to teach them the meaning of healthy friendships, and what that looks like.”

These two ways of identifying interpersonal impact of trauma (the type of interpersonal problem as well as the degree of impacted relationships) are important since they both serve as indicators of trauma. However, these differences in conceptualization could have an impact on the kinds of interventions and approaches to treatment the participants take. For example, a participant who focused on the type of interpersonal problem, (e.g. getting to know an individual and deciding whether they need more information before trusting a person) might practice or model with a child how to engage in important social exchanges, including how to communicate with an adult. A participant who focused on the degree of interpersonal problem (e.g. with peers, or authority figures, or with romantic relationships) might focus on skills that would carry across all relationships (e.g. self-regulation, assertiveness skills) to try and increase generalization.

Factors, situations, or experiences that contribute to exposure to trauma

No significant differences emerged in the participants' consideration of contextual layers of trauma (e.g. generational trauma, poverty, rural isolation, community/family drug involvement, gang involvement) or of their emphasis on FOI gaps regarding trauma, abuse, help seeking, and medical history. What emerged were some differences in how the participants considered features of enviro-linguistic agency (a theme which captured important elements, attitudes, and conditions at a Mesosphere level). Specifically, hearing participants cited two features of the enviro-linguistic agency more frequently and emphasized their role in contributing to trauma.

The first feature was a significant power differential in the environment, meaning there was a person who held increased power over the DHH individual, rendering them vulnerable or unable to access services. For example hearing participants mentioned the following:

“I do a lot of education with parents too in the beginning to let them know that their child is more vulnerable and they have no idea. And just being aware of basic stats because a lot of times we know it's not the ‘stranger danger’ that everyone's been told. It's close family trusted, a friend, and not to freak parents out but present it in a very matter of fact way that education is power, knowledge is power.”

“When you think about everything we know about, even abuse in hearing kids or trauma- traumatic events, like those coaching situations where youngsters have been taken advantage of. It's usually where there was like one person who is in this position of power and there was nobody else around.”

“Just trying to get services even in the schools as a contractor, you have to go through the assessment process. The school has to believe that they're having school-education issues. So if a kids is getting A's and B's and is severely depressed, the school might say, 'They're doing fine.'”

“Some people that have faced abuse by their dorm counselors or with another family and she says that a lot of that comes from people thinking that a deaf person won't tell anyone, won't be able to communicate and tell anyone that this happened to them and them not understanding the threats and abuser and they can tell because they're threatened or abused not to tell.”

In all of these examples, the participants cited a particular person (e.g. a dorm counselor, coach, family friend) or specific agency (e.g., a school), which contributed to power differentials in the DHH child's immediate environment. Hearing participants seemed to conceptualize specific types of power imbalances as contributing to trauma. This stood in contrast to deaf participants who more directly cited oppression coming from the home and communication isolation therein as contributing to trauma. The second feature in the linguistic environment was a solve provider or conveyor of information. Hearing participants indicated this as a major red flag for increased chances of abuse or trauma. For example, they cited:

“I have a couple of people with various syndromes whose parents are interpreters for them and their parents probably skew their health experience in attempt to try to protect them but the kids don't have a clue and some of them have had near death experiences and things like that and they really didn't know. Even when a person

has intellectual disabilities usually nowadays there's a little bit more attempt to tell people a little of what's going on even in a downplayed way but nonetheless, patient communication helps a lot of trauma in healthcare settings. There's still probably not as much attention to that when a kid is a kid because they think that the parent is being the interpreter.”

“Sometimes the siblings are their interpreters. More often than not, there's a Spanish, ASL, English, there's three levels before they get to communicate with their parents, if at all. I do think it contributes a lot to the trauma of a child. It's not always intentional. It's reality.”

Considering trauma within the context of the family unit (above and beyond that which directly involves communication isolation) hearing participants identified one contributing feature more often than deaf participants. Slightly less than half of the hearing participants (five) mentioned gaps in families’ knowledge related to trauma or mental health services, due to low educational background or resources, or general lack of familiarity with ASL and deafness. Deaf participants often cited hearing people’s capacity for incidental learning and thus it may have been difficult to conceptualize why or how a hearing family would not gain access to such critical information. Hearing participants, however described the ways in which families of DHH children experienced their own FOI gaps and limitations to resources. For example, they said:

“I do think that families are often overwhelmed. They don't have the resources even for families that really want to learn. There's no structured way for them if they don't go to the school for the deaf and then move to [city] then it's going to be incredibly

difficult for them to develop ASL skills. There's so much that these parents are trying to learn and there's very little support out there for them to do it on top of everything else that they're dealing with."

"I immediately think of this one kid, who's autistic. He is deaf and his parents are also deaf. He would beat on them and they really didn't know about services for people with autism. They didn't know how to advocate. They went to the school for the deaf and they came in to the school for the deaf and didn't really realize that kids could get autism related services too. The whole thing about getting out of the situation, knowing how to advocate, what to advocate for. It's not all about communication it's about you getting the services that matches the need of your child."

"I think no parent is comfortable to think about your kid ever being at risk of anything and so I think it probably tends not to, you know, from all well-intentioned parents it tends not to cross their mind, they're like, 'Oh, no. I am vigilant. My kid would tell me.' [...] I think about just increasing the amount of opportunity for who's got an eye on your kid."

"When I'm trying to explain things [clients] say, 'why didn't anybody else tell me this?' So yeah there's a lot of information gaps. Again, I think it goes back to the parents not knowing how to communicate, even those parents that think they know how to communicate, they really don't."

Approaches and modifications to trauma identification

As discussed earlier, distinct preference for the clinical interview was shared among the participants. In general, one deaf participant in a community setting summarized this finding by stating, *“I’m not excited about using Hearing tools. But I look at those and see if it’s worth signing. It eats up a lot of my time. So I have to pick tools that are worth the time.”* Difference did emerge, however in terms of modifications made to the clinical interview. Specifically, deaf participants placed enhanced emphasis on establishing a solid historical timeline with a client, especially for those facing language or learning challenges. Regarding what earlier findings suggested about delays in labeling and understanding or processing trauma, the deaf clinicians seemed particularly aware of the need to establish exactly when a traumatic experience occurred. Knowing whether a trauma occurred once, five year ago, or is chronic and ongoing stressor in the child’s life has a tremendous impact on the clinician’s intervention plan.

Approaches and modifications to trauma treatment.

General therapeutic values and principles were shared amongst the participants, as discussed in the aggregated results section. Additionally, preferences for individual psychotherapy and cognitive behavioral therapy approaches were indicated. The deaf clinicians, however, emphasized comprehensive explanation of confidentiality, creating opportunities for choice with clients, and re-enforcement of positive behaviors as particularly salient. Some of the fundamental clinical challenges faced by traumatized children include forming healthy attachments, learning to self-regulate and cope, developing beliefs that they are in control of their own fate, developing effective problem

solving skills, and developing a positive sense of self. The deaf clinicians understood the importance of building trust through confidentiality and developing important decision-making and behavioral skills.

The primary modification made by hearing participants was an increased recognition of trauma pervasiveness, or in other terms, they became more trauma-informed. This meant that they regarded all clients as possibly impacted by trauma and until progress in treatment suggested otherwise, they proceeded with caution and sensitivity. One deaf participant validated the need for this by sharing, *“I remember learning in graduate school that the percentage [of sexual abuse] rate was higher in DHH community. I thought, “Really?” that bad?” The rate of abuse is 54% for Deaf boys! 54%! For deaf girls it’s like, I forgot exactly. 50%. That’s a lot in what the research shows. But, when I started working in the community, it was true. Yes. True, so many of my clients have been abused.”*

Clinical Implications

The participants in this study represent an important body of clinical knowledge. Combined, they possess well over 250 total years of professional experience and have served nearly 450 clients within the last year. Their perspectives, summarized in this study, contain a variety of important implications for clinical practice, which will now be discussed.

Conceptualizing and Defining Trauma

This study found that experiences of communication and familial isolation, defined as interactions with family or at home that include no form of visual or signed language, are directly traumatizing for DHH children and youth. Furthermore, communication and familial isolation also exacerbate the experiences of other traumas. Thus, the role of communication and familial isolation should be considered directly and indirectly in the development of DHH youth's trauma responses. It is often the case that families make important early intervention decisions regarding auditory access to sound (through use of amplification technologies, cochlear implantation, or other devices) and approaches to language acquisition (e.g. speech training) before the DHH child is developmentally able to advocate for him or herself. Long-standing debates regarding 'oral' versus 'signed' approaches to language acquisition continue to exist but it is important for DMHC

providers to recognize that their professional role will likely include advocacy efforts on behalf of visual or signed communication modalities within the home in addition to whatever other modalities a family chooses for their DHH child.

The overall impact of communication isolation is significant: DHH children cannot identify (label), or process (understand) their own traumatic histories if they are not provided communication with which to do so. Participants identified significant delays in their clients' awareness of and recovery from trauma due to delays in language and communication. Furthermore, DHH children's' limited knowledge of trauma contributes significantly to trauma exposure. The provider must educate the client that what happened to them was something terrible but not their fault. Addressing an individual's FOI gaps regarding trauma, abuse, help-seeking, and medical history is clinically indicated by this study. This finding suggests that, in addition to building up foundational language skills with clients, a primary role of DMHC providers is to inform clients (in developmentally appropriate ways) about trauma experiences and/or abuse.

High rates of interpersonal abuse (sexual, physical, emotional, verbal or signed) are salient experiences in the lives of DHH children and youth. Adverse experiences in foster care, with medical systems and providers also represent significant traumatic experiences in the lives of DHH youth. Financial abuse, often under identified in the literature, was also identified by participants. This finding suggests that DMHC providers should be aware of the wide range of possible traumatic experiences and be prepared to explore important financial issues, such as federal benefit programs or disability funding, with families in an effort to prevent such abuse.

Deaf participants generally attuned to the physical display of trauma on their clients' bodies. They attuned to how their clients presented physically and the overall impact trauma had on their functional living. Clients' activities of daily living, life satisfaction, and functional independence were severely compromised by trauma. Hearing participants generally attuned to impact of trauma on a variety of interpersonal relationships while deaf participants generally attuned to the nature of the interpersonal struggle. Both hearing and deaf participants described trauma's overall impact on the development of secure, trusting relationships. Anger was a key affective presentation of traumatized clients, in addition to anxiety and depression. Overall functioning, including functioning in cognitive, behavioral-physical, affective, interpersonal, and intrapersonal domains should all be thoroughly considered when conceptualizing the needs of a traumatized client. However, the clinical implication of this finding is the identification of specific cultural differences between the deaf and hearing participants. Deaf DMHC providers may attune specifically to certain trauma indicators that hearing providers would not; the reverse can be said for hearing DMHC providers.

Conceptualization of trauma should also include the contributing role of powerful contextual influences (e.g. generational trauma, rural isolation, community/family substance abuse) and should consider a likely 'dose' effect or compounding of these factors in the DHH child's life. Considering more direct influences in the environment, hearing participants attuned to specific power differentials between the DHH child and others. Specifically, interpersonal or systemic power imbalances, including the role of The Only One (a sole provider of information) were identified. Deaf participants attuned

more globally to oppression from hearing populations. This finding represents another specific cultural difference between the practices of deaf and hearing providers.

In general, the findings of this study suggest that deaf participants conceptualized traumatic experience as a barrier to development of individual agency and ability to manage or make choices in one's life. In general hearing participants conceptualized traumatic experiences as a barrier as accessing or engaging with others, services, supports, etc. The clinical implications of these findings are significant; specifically, this finding suggests that deaf DMHC providers may take a clinical approach towards traumatized clients that supports the development of individual agency, self-management, positive behaviors, and functional choice making in the face of incredible environmental communication barriers. Deaf DMHC providers may directly model for their clients how to navigate hierarchical and oppressive social systems. Hearing DMHC providers may take clinical approaches to treatment that emphasize opportunities for social engagement, communication, or participation skills. Hearing providers may also seek to eliminate potential power differentials, such as limited providers of information, from the immediate environment.

Identifying trauma through the use of the clinical interview

This study indicates that the clinical interview is an important and frequently used tool for identifying trauma. Participants readily offered that no other measures are appropriate, or widely available in ASL. Participants discussed the clinical strengths of the interview, which include its narrative nature and its ability to assess both content and

process of a client's responses. In particular, allowing clients to narrate or share stories during the clinical interview is a practice compatible with Deaf cultural values. As an implication, increased attention should be placed on developing questions within the clinical interview that are relevant to the DHH experience and will successfully elicit specific experiences, which the DHH individual may not know qualified as adverse or traumatic.

Approaches and modifications to treating trauma

Trauma pervasiveness among DHH youth may inadvertently dictate treatment goals and thus providers must remain aware of and flexible to this reality. Participants used no single method of treatment; however, individual psychotherapy and cognitive behavioral therapy were the most widely used approaches. Regardless of specific treatment approach, this study implicates several therapeutic features as key for DHH clients: following their pace by allowing clients to establish when they are ready for increased intervention and providing enhanced levels of supportive therapy. Additionally, deaf participants emphasized the significance of reviewing confidentiality thoroughly. They also discussed the significance of interventions that targeted the development of choice-making skills, and an overall emphasis on promoting positive and self-regulated behavior with DHH children. The implication of this finding is that no single standardized, or established 'evidence-based' treatment is a guaranteed success with a DHH child. Individualization of treatment for every DHH child or adolescent is paramount. Oftentimes, the inclusion of other professional supports, such as a CDI, sign language interpreter or other spoken

language interpreters is clinically indicated. Thus, highly operationalized or inflexible approaches to treatment will likely be unsuccessful.

Limitations

Limitations to the current study will now be discussed. Two main concerns, issues of sampling and issues of inter-rater reliability during coding will be reviewed. With regard to sampling, a primary limitation to this study is the inclusion of unequal numbers of deaf and hearing participants in the sample. The primary goal of the study was to capture the perspectives of the greatest possible number of eligible participants. The secondary goal, however, was the capture the perspective of equal numbers of deaf and hearing professionals. This endeavor proved challenging during recruitment stages, a period that lasted for four months during the 2016 year. DMHC providers as a population are ‘low-incidence,’ and deaf DMHC providers, as a population, are certainly even ‘lower-incidence.’ This limitation primarily impacts interpretation of results; equal numbers of deaf and hearing participants would have allowed for enhanced credibility when making comparisons.

It is important to consider one other factor related to comparison making across the sub-samples: the noted variability in professional backgrounds of the participants. For example, a greater number of participants were trained as clinical social workers than any other profession. Undoubtedly, the training of licensed clinical social workers involves curricula and experiences that vary from that of a licensed psychologist. Due to unequal and varied representation of professional backgrounds, meaningful examination of differences across background training could not occur. However, background training

likely had a tremendous impact on the kinds of responses provided by professionals (deaf and hearing alike) with a background in social work, for example. This study could not effectively capture that impact and thus remains a limitation to the overall work.

Although participants represented 14 different states, it was the case that some geographical locations were over-represented. Geographical overrepresentation may have been unpreventable, to some degree. Deaf communities with the United States tend to cluster, primarily for social, historical, and geo-political reasons. The result is a gathering of various pockets of deaf populations in specific regions of the country. This study did not exclude participants based on their geographic location, however it does serve as a limitation that certain regions of the country are under-represented in the sample. Furthermore, participants in this sample identified overwhelmingly as women of Caucasian descent between the ages of 30 to 65. This fact, while an absolute limitation to the study, could be considered an overall statement about the current landscape of DMHC: it is overwhelmingly homogenous. A wide range of diversity (along lines of gender, race, ethnicity, sexual orientation, socioeconomic background, etc.) exists within the DHH population overall; the providers who serve population should ideally reflect this in order to better serve the needs of population.

Issues related to coding will now be discussed. In an attempt to enhance the overall credibility and dependability of this study, inter-rater reliability agreement of our selective codes was assessed. Some degree of disagreement between the coder and researcher likely happened for several reasons, which will be reviewed now.

Conceptually, codes 13, 14, 15, 39, and 44 were defined distinctly in the Code Book, but

may have been too specific or finite for agreement purposes. For example, it was often the case that participants described isolation at home in terms of a lack of communication with family *at the same time*. Participants generally did not make finite distinctions between isolation with family versus communication isolation with family, and thus the design of the Code Book was likely over specific, forcing coding decisions that rendered agreement more challenging than need be. That there exists, among codes 13, 14, 15, 39, and 44 a shared salient feature of prolonged, severe isolation is evidence for the over-specificity of these codes. Code 39 presented the challenge of capturing whether the participant explicitly meant or inferred that the lack of communication led directly to abuse, thus was additionally complex and over-specific. Codes 18 and 19 both fell within the theme of Cognitive indicators of trauma and refer to a client's mistaken belief about the trauma versus a delayed understanding that the trauma was wrong or was trauma in the first place. Again, these codes, while conceptually distinct, may have been over specific. Ultimately, codes 18 and 19 share a salient feature: the client was misinformed about or misunderstood their trauma experience, which prevented therapeutic processing.

Conclusions and future directions

This study explored and analyzed the perspectives of 19 different sign-fluent mental health providers with experience in trauma treatment of DHH children, adolescents, and their families. The intent of this study was to explore the clinicians' definitions of trauma as applied to DHH groups, clinical presentations of trauma, the overall impact of trauma, and approaches to identification and treatment of trauma. Furthermore, this study also analyzed similarities and differences among the responses of the deaf and hearing clinicians, to determine how these groups of clinicians might function similarly or differently when addressing their clients' traumatic experiences.

Although exploratory in nature, this qualitative study makes several important contributions to the literature on trauma identification and treatment in DHH populations. First, it captures the viewpoints of experienced DMHC providers and represents their perspectives, ultimately creating academic space for a valuable source of clinical knowledge. This study gathered important professional perspectives on the traumatic experiences and clinical presentations of trauma within DHH child and adolescent populations, an understudied group.

Second, based on findings from interviews with 19 DMHC providers, this study asserts that early experiences of communication and familial isolation (in the form of a family not using any signed language) are directly traumatizing to DHH children. The voices of the participants in the study are loud and clear: dire consequences result from a lack of communication at home and with family, including a delayed labeling,

understanding, and processing of trauma. These are not the only consequences. According to the participants in this study, trauma impacts DHH children cognitively, behaviorally, affectively, interpersonally, and intrapersonally. Trauma presents itself in unique ways across all the domains of functioning and specific differences in attunement to trauma indicators were noted, based on deaf or hearing status. Findings of this study support the use of a framework, which considers cognitive, behavioral, affective-interpersonal, and intrapersonal indicators. While this study did not aim to capture a “profile” of trauma symptoms among DHH children or adolescents, it did summarize the various indicators to which trained DMHC are attuned.

Third, this study also explored the role of various environmental factors, all of which contribute to a ‘dose’ effect of trauma for DHH children and adolescents; the presence of additional contributing factors led to increases in the degree and severity of traumatic exposure. This study demonstrated how DMHC providers consider the presence of contextual ‘layers’ to their clients’ lives. This study thus validated the conceptual applicability of an Ecological Systems Theory model (Bronfenbrenner, 1979).

Fourth, in addition to theoretical validation of a system model conceptualization, this study also makes clinical contributions to DMHC practice. Specifically, it describes the clear preferences for the clinical interview as a trauma identification tool. Several key modifications to this tool are also described. Participants in this study utilized a variety of approaches to trauma treatment with their DHH clients, but this study captures important underlying principles that guided all treatments. This study contributes to the literature by further describing important features of trauma treatment with DHH youth.

Fifth, regarding one of the main points of this study, several distinctions were made between deaf and hearing participants. Specifically, deaf participants emphasized physiological and functional (e.g. activities of daily life) indicators of trauma and placed therapeutic emphasis on the design of interventions that promoted choice-making skills and emphasized functional but positive self-regulatory behaviors. Hearing participants emphasized interpersonal indicators of trauma (across a range of relationships) and keyed into features in the environment (having one provider of information) that contribute to trauma. Both groups identified anger as a primary affective indicator of trauma and both emphasized the importance of providing needed individual and family support and trauma education throughout therapy.

This reach of this exploratory study was undoubtedly wide; thus, a number of future directions are possible, all of which call for increased depth of investigation. Future research should further explore and identify key features of and variations within the DHH individual's experience of communication isolation within families. For example, in the same way that research has explored outcomes of childhood sexual abuse, there is a clear need to concretely tie communication isolation to clinical expressions of trauma among DHH children. Strengthening this tie with increased empirical would further implicate communication and familial isolation as a specific trauma in the lives of DHH youth. Families, medical and behavioral health providers, and educators alike should gain increased awareness of the significant impact of communication isolation and familial isolation in the lives of DHH children and adolescents. Increased awareness of the devastating effects of communication isolation could inspire policy change regarding

statewide definitions of abuse or neglect; certainly communication isolation and familial isolation could be considered a form of neglect.

We must further understand the developmental, social, and linguistic trajectories of such trauma if we are to prevent it from occurring. Although this study established broad trends regarding cognitive, behavioral, affective, interpersonal, and intrapersonal indicators of trauma with DHH children, further details of trauma symptom presentation, within such domains of functioning should be studied. Certainly, it would also be useful to discern whether PTSD symptoms in DHH children are similar to the findings of Schild's (2007) study, which examined PTSD symptoms in adults. However, given the wide range of possible traumatic experiences identified by participants in this study, coupled with underlying or ongoing communication isolation with family and at home, it is likely that an even wider range of trauma responses exist, particularly for heterogeneous DHH youth populations.

Regarding the bleak landscape of trauma measurement available for use DHH children, it is hopeful that one tool stands out as particularly useful: the clinical interview. This approach to identification allows for a combination of needed flexibility, structure, and narrative individualization that seems to fit well within the Deaf cultural paradigm. Future work in this area should explore two key areas: first, a systematic collection of interview questions designed specifically to capture relevant DHH experiences should be gathered. As a resource, this would certainly be of particular benefit to those clinicians and settings untrained in DMH to prepare for the arrival of a DHH client. Ideally, DMHC providers could then explore how the design and implementation of Deaf-centric items

during the clinical interview can aid with trauma diagnoses. A second area of future direction would explore how diagnostic language and psychological content in the DSM-5 (such as terms for ‘flashback’, ‘intrusive thoughts’, or ‘depersonalization’) could be translated accurately and meaningfully into ASL and thus implemented into a clinical interview with clients.

Considering the important of establishing appropriate and meaningful therapeutic interventions with DHH children and adolescents, possible endeavors to assess the efficacy of interventions designed to promote positive decision-making skills with traumatized DHH children and adolescents could be undertaken. Behavioral or skills based interventions should not be designed with the goal of compliance, rather such interventions should aim to build a child’s mastery over the skills they already possess and should allow a child to build a repertoire of agentic, self-regulated, mastery-based skills

Finally, future research should continue to highlight key cultural competencies when working with DHH clients. This study describes several cultural differences in the clinical practice of DMHC providers. Although this study was largely exploratory and is not an outcome study, it would be feasible to assume that differences in provider characteristics (such as hearing status) do have a direct impact on client outcomes. This, of course, represents another future direction for research. Ultimately, this study asserts that DHH individuals must be considered primary informants of culturally competent clinical practices. Until sufficient numbers of DHH providers are included at all levels within the field of DMHC field (including leadership and administrative positions) we must continue to train and prepare hearing providers on issues of cultural competency.

Appendices

Appendix A: Diagnostic Criteria: DSM-5

Post Traumatic Stress Disorder

Note: The following criteria apply to adults, adolescents, and children older than 6 years. For children 6 years and younger, see corresponding criteria below.

- A. Exposure to actual or threatened death, serious injury, or sexual violence in one (or more) of the following ways:
 - 1. Directly experiencing the traumatic event(s).
 - 2. Witnessing, in person, the event(s) as it occurred to others
 - 3. Learning that the traumatic event(s) occurred to a close family member or close friend. In cases of actual or threatened death of a family member or friend, the event(s) must have been violent or accidental.
 - 4. Experiencing repeated or extreme exposure to aversive details of the traumatic event(s) (e.g. first responders collecting human remains; police officers repeatedly exposed to details of child abuse).
Note: Criterion A4 does not apply to exposure through electronic media, television, movies, or picture, unless this exposure is work related.
- B. Presence of one (or more) of the following intrusion symptoms associated with traumatic event(s), beginning after the traumatic event(s) occurred:
 - 1. Recurrent, involuntary, and intrusive distressing memories of the traumatic event
Note: In children older than 6 years, repetitive play may occur in which themes or aspects of the traumatic event(s) are expressed.
 - 2. Recurrent distressing dreams in which the content and/or affect of the dream are related to the traumatic event(s).
Note: In children, there may be frightening dreams without recognizable content.
 - 3. Dissociative reactions (e.g. flashbacks) in which the individual feels or acts as if the traumatic event(s) were recurring. (Such reactions may occur on a continuum, with the most extreme expression being a complete loss of awareness of present surroundings.
Note: In children, trauma-specific reenactment may occur in play.
 - 4. Intense or prolonged psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event(s).
 - 5. Marked physiological reactions to internal or external cues that symbolize or resemble an aspect of the traumatic event(s).
- C. Persistent avoidance of stimuli associated with the traumatic event(s), beginning after the traumatic event(s) occurred, as evidenced by one or both of the following:

1. Avoidance of or efforts to avoid distressing memories, thoughts, or feelings about or closely associated with the traumatic event(s).
 2. Avoidance of or efforts to avoid external reminders (people, places, conversations, activities, objects, and situations) that arouse distressing memories, thoughts, or feelings about or closely associated with the traumatic event(s).
- D. Negative alterations in cognitions and mood associated with the traumatic event(s) beginning or worsening after the traumatic event(s) occurred, as evidenced by two or more of the following:
1. Inability to remember an important aspect of the traumatic event(s) (typically due to associative amnesia and not to other factors such as head injury, alcohol, or drugs).
 2. Persistent or exaggerated negative beliefs or expectations about oneself, others, or the world (e.g. “I am bad,” “No one can be trusted,” “The world is completely dangerous,” “My whole nervous system is permanently ruined”).
 3. Persistent, distorted cognitions about the cause or consequences of the traumatic event(s) that lead the individual to blame himself/herself to others.
 4. Persistent negative emotional state (e.g. fear, horror, anger, guilt, or shame).
 5. Markedly diminished interest or participation in significant activities.
 6. Feelings of detachment or estrangement from others.
 7. Persistent inability to experience positive emotions (e.g. inability to experience happiness, satisfaction, or loving feelings).
- E. Marked alterations in arousal and reactivity associated with the traumatic event(s), beginning or worsening after the traumatic event(s) occurred, as evidence by two or more of the following:
1. Irritable behavior and angry outbursts (with little or no provocation) typically expressed as verbal or physical aggression toward people or objects.
 2. Reckless or self-destructive behavior
 3. Hypervigilance
 4. Exaggerated startle responses
 5. Problems with concentration
 6. Sleep disturbance (e.g. difficulty falling or staying asleep or restless sleep)
- F. Duration of the disturbance (Criteria B, C, D, and E) is more than 1 month
- G. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas or functioning.
- H. The disturbance is not attributable to the physiological effects of a substance (e.g. medication, alcohol) or another medical condition.

Specify whether:

With dissociative symptoms: The individual’s symptoms meet the criteria for post-traumatic stress disorder, and in addition, in response to the stressor, the individual experiences persistent or recurrent symptoms of either of the following:

1. **Depersonalization:** Persistent or recurrent experiences of feeling detached from, as if one were an outside observer of, one’s mental processes or body (e.g.,

- feeling as though one were in a dream; feeling a sense of unreality or self or body or of time moving slowly).
2. **Derealization:** Persistent or recurrent experiences of unreality of surroundings (e.g. the world around the individual is experienced as unreal, dreamlike, distant, or distorted).
- Note:** To use this subtype, the dissociated symptoms must not be attributable to the physiological effects of a substance (e.g. blackouts, behavior during alcohol intoxication) or another medical condition (e.g., complex partial seizure).

Specify if:

With delayed expression: If the full diagnostic criteria are not met until at least 6 months after the event (although the onset and expression of some symptoms may be immediate).

Posttraumatic Stress Disorder for Children 6 Years and Younger

- A. In children 6 years and younger, exposure to actual or threatened death, serious injury or sexual violence in one (or more) of the following ways:
 1. Directly experiencing the traumatic event(s).
 2. Witnessing, in person, the event(s) as it occurred to others, especially primary caregivers

Note: Witnesses does not include events that are witnessed only in electronic media, television, movies, or pictures.

 3. Learning that the traumatic event(s) occurred to a parent or a caregiving figure.
- B. Presence of one (or more) of the following intrusion symptoms associated with the traumatic event(s), beginning after the traumatic event(s) occurred:
 1. Recurrent, involuntary, and intrusive distressing memories of the traumatic event(s).

Note: spontaneous and intrusive memories may not necessarily appear distressing and may be expressed as play reenactment.

 2. Recurrent distressing dreams in which the content and/or affect of the dream are related to the traumatic event(s).

Note: It may not be possible to ascertain that the frightening content is related to the traumatic event.

 3. Dissociative reactions (e.g. flashbacks) in which the child feels or acts as if the traumatic event(s) were recurring. (Such reactions may occur on a continuum, with the most extreme expression being a complete loss of awareness of present surroundings.) Such trauma-specific reenactments may occur in play.
 4. Intense or prolonged psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event(s).
- C. One (or more) of the following symptoms, representing either persistent avoidance of stimuli associated with the traumatic event(s) or negative alterations in cognitions and mood associated with the traumatic event(s), must be present, beginning after the event(s) or worsening after the event(s):

Persistent Avoidance of Stimuli

1. Avoidance of or efforts to avoid activities, places, or physical reminders that arouse recollections of the traumatic event(s).
2. Avoidance of or efforts to avoid people, conversations, or interpersonal situations that arouse recollections of the traumatic event(s).

Negative Alterations in Cognitions

1. Substantially increased frequency of negative emotional states (e.g. fear, guilt, sadness, shame, confusion).
 2. Markedly diminished interest or participations in significant activities, including constriction of play.
 3. Socially withdrawn behavior.
 4. Persistent reduction in expression of positive emotions.
- D. Alterations in arousal and reactivity associated with the traumatic event(s), beginning or worsening after the traumatic event(s) occurred, as evidenced by two (or more) of the following.
1. Irritable behavior and angry outbursts (with little or no provocation) typically expressed as verbal or physical aggression toward people or objects (including extreme temper tantrums).
 2. Hypervigilance
 3. Exaggerated started responses
 4. Problems with concentration
 5. Sleep disturbance (e.g. difficulty falling or staying asleep or restless sleep).
- E. The duration of the disturbance is more than 1 month.
- F. The disturbance causes clinically significant distress or impairment in relationships with parents, siblings, peers, or other caregivers or with school behavior.
- G. The disturbance is not attributable to the physiological effects of a substance (e.g. medication or alcohol) or another medical condition.

Specify if:

With dissociative symptoms: The individual's symptoms meet the criteria for post-traumatic stress disorder, and in addition, in response to the stressor, the individual experiences persistent or recurrent symptoms of either of the following:

3. **Depersonalization:** Persistent or recurrent experiences of feeling detached from, as if one were an outside observer of, one's mental processes or body (e.g., feeling as though one were in a dream; feeling a sense of unreality or self or body or of time moving slowly).
4. **Derealization:** Persistent or recurrent experiences of unreality of surroundings (e.g. the world around the individual is experienced as unreal, dreamlike, distant, or distorted).

Appendix B: Qualtrics Demographic Survey Items

1. Thank you so much for your willingness to participate in our study! Before we interview you, we'd like to collect some demographic information. We know that your time is valuable and we want to maximize the time we spend with you in an interview, thus our demographic survey may seem lengthy. We appreciate your time and all that you do in the field of Deaf Mental Health (DMH)!

2. What is your age?

3. What is your gender?

- Male
- Female
- Other

4. What is your racial/ethnic background?

- Caucasian
- African American
- Hispanic
- Native American
- Pacific Islander
- Asian
- Multi-racial
- Other

5. What is your professional degree type? Please select all that apply.

- Psychiatrist
- Child/Adolescent Psychiatrist
- Clinical Psychologist
- School Psychologist
- Clinical Social Worker
- Licensed Professional Counselor
- Mental Health Counselor
- Certified Alcohol and Drug Abuse Counselor
- Nurse Psychotherapist
- Marital and Family Therapist
- Pastoral Counselor
- Peer Specialist
- Other

6. In which state did you receive your professional degree(s)?

7. In what therapeutic modality(ies) are you trained to practice? Please select all that apply

- Acceptance and Commitment Therapy (ACT)
- Behavioral Therapy
- Cognitive Behavioral Therapy (CBT)
- Cognitive Therapy
- Jungian Therapy
- Psychoanalysis
- Psychodynamic Therapy
- Existential Therapy
- Gestalt Therapy
- Person-Centered Therapy
- Reality Therapy
- Solution-Focused Brief Therapy
- Art Therapy
- Drama Therapy
- Music Therapy
- Equine Assisted Therapy
- Eye Movement Desensitization and Reprocessing (EMDR)
- Family Systems Therapy
- Group Therapy
- Integrative Therapy
- Interpersonal Therapy
- Mindfulness Therapy
- Motivational Interviewing
- Play Therapy
- Other

8. Please describe any previous or concurrent professional positions related to Deaf Mental Health (DMH) (e.g. statewide director of services, adjunct professor in clinical psychology program)

9. How many years of experience have you had in DMH?

- Less than 1
- 1-4
- 5-9
- 10-14
- 15-19
- 20+

10. I identify myself as.... (please select all that apply):

- Culturally Deaf
- Deaf (not culturally)

- Deaf-Blind
- Hard of Hearing
- Hearing
- Late Deafened
- Other

11. With my clients, I have used the following modes of communication over the last 12 months (please select all that apply):

- American Sign Language
- Pidgin Sign Language
- Cued Speech
- English (oral)
- English (written)
- Signed Exact English
- Spanish (oral)
- Spanish (written)
- Other

12. I use cochlear implants myself.

- Yes
- No
- Not applicable
- Other

13. Is your practice located in a rural, suburban, or urban area(s)? Please select all that apply:

- Rural
- Urban
- Suburban
- Other

14. How would you describe your current professional setting(s)? Please select all that apply:

- Secondary educational setting (public/private school, state school for Deaf)
- College or University setting
- Hospital
- Residential setting (long term treatment, group home)
- Outpatient clinic/community mental health
- Other

15. Do you serve both DHH and hearing populations?

- Yes
- No

16. The individuals who are DHH that I served directly in the last 12 months identify as (please select all that apply):

- Culturally Deaf
- Deaf (not culturally)
- Deaf-Blind
- Hard of Hearing
- Hearing
- Late Deafened
- Other

17. How many DHH clients do you currently serve directly?

- 1-9
- 10-19
- 20-29
- 30-39
- 40+

18. I currently serve individuals that use cochlear implants.

- Yes
- No

19. What is the range of ages of clients you served in the last 12 months? Please select all that apply:

- 0-5
- 6-10
- 11-15
- 16-20
- 21-25
- 26-30
- 30-40
- 40-50
- 50+

20. What is the range of educational attainment for the clients you have served in the last 12 months? Please select all that apply:

- PreK to 4th grade
- 5th to 8th grade
- 9th to 12th grade
- High school diploma
- Work training or trade school program
- Certificate/specialization
- Vocational rehabilitation placement
- Continuing education units

- Some college courses
- 2 year program or degree
- Associates degree
- Bachelors degree
- Masters degree
- Advanced graduate degree (PhD, EdD, JD, MD)
- Other

21. The individuals that I served over the last 12 months use the following modes of communication. Please select all that apply:

- American Sign Language
- Pidgin Sign Language
- Cued Speech
- English (oral)
- English (written)
- Signed Exact English
- Spanish (oral)
- Spanish (written)
- Other

22. The individuals who are DHH that I served over the last 12 months have the following co-occurring conditions. Please select all that apply:

- Autism Spectrum Disorder
- ADHD
- Anxiety
- Bipolar Disorder
- Chronic illness
- Conduct Disorder
- Depression
- Eating Disorder
- Epilepsy
- Developmental Disorder
- Intellectual Disability
- Learning Disability
- Personality Disorder
- Physical/Orthopedic/Mobility impairment
- Post Traumatic Stress Disorder
- Schizophrenia or Psychosis
- Substance Misuse or Abuse
- Traumatic Brain Injury
- Visual Impairment/Blindness
- Obsessive-Compulsive Disorder
- Other

23. Please check off the types accommodations and services that your clients used in the last 12 months. If you are unsure about whether an accommodation was offered, please leave the check box blank:

- Sign language interpreter
- Note taker
- Sound amplification/FM System
- Captioning
- Transcribing (CART, remote CART)
- Modified assignments
- Preferential registration
- Tutoring
- Waiver of exams
- Online text communication (IM, chat)
- Hardware for typed text (tablet computers)
- Signaling devices
- Telecommunication (videophone)
- One-to-one support (independent living, classroom aide).

24. Do the clients you serve come from both DHH and hearing families?

- Yes
- No

25. Please briefly describe the degree to which communication is accessible in your clients' family contexts. Please select all that apply.

- No access
- Partial access
- Full access
- Not applicable
- Other

26. What is the range of current employment of your client's families? (Please select all that apply):

- Hourly
- Seasonal
- Part-time
- Full-time
- Family does not work
- Not sure
- Other

27. What is the range of educational attainment of your client's families? Please select all that apply:

- PreK to 4th grade
- 5th to 8th grade
- 9th to 12th grade
- High school diploma
- Work training or trade school program
- Certificate/specialization
- Vocational rehabilitation placement
- Continuing education units
- Some college courses
- 2 year program or degree
- Associates degree
- Bachelors degree
- Masters degree
- Advanced graduate degree (PhD, EdD, JD, MD)
- Other

28. Please describe measures or tools used to identify trauma with your clients. Please select all that apply:

- Behavior Assessment System for Children-2 (BASC)
- Behavior Rating Inventory of Executive Function (BRIEF)
- Brief Symptom Inventory (BSI)
- Child and Adolescent Needs and Strengths-Trauma Comprehensive (CANS)
- Clinical Interview
- Life Events Checklist (LEC)
- Parenting Stress Index-Short Form (PSI, SF)
- Strengths and Difficulties Questionnaire (SDQ)
- Structured Interview for Disorders of Extreme Stress (SIDES)
- Trauma Symptom Checklist for Children (TSCC)
- Trauma Symptom Checklist for Young Children (TSCYC)
- UCLA PTSD Reaction Index
- Other

29. What trauma treatment approaches do you use with your clients? Please select all that apply:

- Trauma-Focused Cognitive Behavioral Therapy
- Cognitive Behavioral Therapy
- Cognitive Behavioral Intervention for Trauma in School
- Dialectical Behavior Therapy
- Trauma Narrative
- Individual Psychotherapy
- Family Therapy
- Child-Parent Psychotherapy
- Parent-Child Interaction Therapy

- Group Therapy
- Specific Trauma Program (e.g. The Safe Harbor Program)
- Other

Appendix C: Semi-Structured Interview Questions

Interview Script

Greeting

Interviewer: Hello! Thank you very much for your willingness to participate in this interview. Before we begin, I'd like to check on a few things:

- 1.) Is the interpreter / communication setup working okay for you? Is everything clear with OJ?
- 2.) Did you have any questions for me in regards to the Demographic Survey? Thank you for completing it!
- 3.) I would just like to review the parameters of consent: 1.) If at any time you would like to stop the interview or become uncomfortable, please let me know and you are free to do so. 2.) All of your interview data will be kept confidential! We will never report your name or include information that would identify you in our reports.
- 4.) Do you have any other questions for me before we begin?

Questions: Description of Trauma

Manifestation

Interviewer: What types of trauma do you think are unique to DHH clients? Please provide examples. If no, please also explain.

Interviewer: How can you identify when trauma has occurred in the lives of your DHH clients? Please provide examples.

Interviewer: How does trauma impact different aspects of your clients' lives? Please provide examples.

Cause and Context

Interviewer: What factors, situations, or experiences do you think contribute to exposure to trauma for DHH individuals? Please provide examples.

Probes interviewees will be asked to address:

Interviewer: How do you think language and communication in early years contribute?

Interviewer: How do you think family relations contribute?

Interviewer: How do you think information deficits contribute?

Interviewer: How do you think school-based experiences contribute?

Interviewer: How do you think social or peer relations contribute?

Questions: Practice

Please refer to the responses on the demographic survey!!

Identification

Interviewer: Why do you use _____ measure/tool when identifying trauma? Please be specific

Interviewer: Do you make any DHH-specific modifications and adaptations to the measure/tool do you use? If not, why not?

Interviewer: How has your use of trauma measures/tools changed over the course of your career?

Interviewer: Do you have any specific examples or cases that come to mind when you think of illustrative identification of trauma with DHH clients?

Treatment and Intervention

Interviewer: Why do you use _____ approach when treating trauma with your clients? Please be specific.

Interviewer: Do you make any DHH-specific modifications and adaptations in treatment do you use? Please be specific. If not, why not?

Interviewer: How has your approach to trauma treatment changed over the course of your career?

Interviewer: Do any specific examples or cases come to mind when you think of illustrative trauma treatment for DHH clients?

Appendix D: Invitation to Participate in Study

Dear _____ (insert name using title)

Greetings!

My name is Sarah and I am a graduate student at The University of Texas at Austin. I am starting a new project looking at best practices in mental health services for d/Deaf and hard of hearing individuals. I would like to invite you to be a participant in our project.

I came across your name and professional title on the (WEBSITE/THROUGH LIST SERVE/ OR CONTACT). I am very much interested in learning about your professional perspectives as a (TITLE) working with d/Deaf and hard of hearing individuals. I am reaching out to professionals in the field to learn about their experiences. I would very much value the opportunity to interview you about your experiences as a mental health provider.

What does the project entail?

We are currently conducting 1-hour long interviews, either remotely or in person. We are able to conduct during the following time slots (all times listed are Central Time):

Mondays: 8am-12pm, 1pm-3pm, and 4pm-8pm
Wednesdays: 8am-8pm
Fridays: 8am-1pm, 4pm-8pm

For remote interviews, we use a variety of communication technologies, including Skype, Face Time, and Omnijoin (an online conference software that can be accessed using any computer platform with an Internet connection). We are also able to gain access to other platforms if you have a preference for a different technology. Please let us know what you prefer. If ASL is your primary language modality, we have Deaf graduate research assistants who are fluent signers as part of the team. Once the interview is scheduled, we will email you our interview questions, official consent and IRB form, as well as instructions for accessing Omnijoin.

If you are interested in participating in an interview, please let me know and we can schedule a mutually convenient time. Please feel free to ask any questions you may have about the interviews or our process! If you are not available but know of others that may be a good fit for this project, we would welcome your recommendations.

Sincerely

Sarah Schoffstall
Graduate Research Assistant

The University of Texas at Austin
sarah.schoffstall@utexas.edu

Appendix E: Open Coding Organizational Framework

IQ1. What types of trauma do you think are unique to DHH clients?					
IQ 2. How can you identify when trauma has occurred in the lives of your DHH clients?					
IQ 3. How does trauma impact different aspects of your clients' lives?					
RQ 1. How do professionals conceptualize and define trauma/traumatic experience for their DHH clients? MU's 1-3					
Qualtrics ID	Hearing Status	Degree	Current Setting	MU 1- DHH Unique Trauma	Code
R_1IEg H5ENV zXBPrK	Deaf	School Counselor	Secondary Educational/ University	I've worked with DHH children most k to 12 some over age of 18. When I've seen trauma from abuse <u>mostly sexual abuse</u> , and um...Trauma, second one, <u>violence. Either in community or in home as a witness.</u> Those two.	Sexual abuse; witness to domestic or community violence

Appendix F: Demonstration of Open Coding Process

Meaning Unit 1- DHH Unique Trauma	Code	Meaning Unit 2- How Identify?	Code	Meaning Unit 3- Impact of Trauma	Code
<p>I've worked with DHH children most k to 12 some over age of 18. When I've seen trauma from abuse mostly sexual abuse, and um... Trauma, second one, violence. Either in community or in home as a witness. Those two.</p>	<p>Sexual abuse; witness to domestic/ community violence</p>	<p>Mostly body language, from students. If sexual abuse, tend shame of their bodies, and cover up their bodies, hunch forward. Or, opposite, sexual acting out, and pushing forward. Wear revealing clothes, push out their breasts. Girls and boys can act lazy, and be promiscuous with different boys and girls no emotional attachment when having sex, I've noticed that. <u>With violence, conversation often relates to who they hate. Students will sit and say things like, hate. Hate white people... live in a community with a lot of gang activities beatings/shootings with groups of people.</u> Related to hearing, I can hear better, people who are different from me, I can zero in on those and identify those traumas.</p>	<p>Body language (shame/ cover bodies or reveal body); Expressions of anger/hate</p>	<p>Severe, significant impact on learning, there's a mind or mental block, can't move on, mental blocks. Other, life can't get along with people or avoid people, with sexually abused people, victims, they're very avoidant of people in the community, don't want friends, they avoid, or they become too involved, very immersed with different people in the community. Those who experience violence, they go to prison, can't find a job, terrible relationships with friends and families, become isolated, and brain isolate themselves, which has a serious impact on their future like having no job, and brain block.</p>	<p>Significant impact on learning/ mental block; Difficulty in relationship (avoidant or clingy); prison or difficulty finding job</p>

Appendix G: Code Book for Selective Coding Processes

Theme 1: Traumatic Events/Experiential Definitions

- **Code 1: Sexual Abuse**

Definition: Forced or undesired sexual behavior by one person to another. Participants most often use the term sexual abuse specifically, but may also refer to sexual assault, molestation or may reference abuse from a specific person in a position of power

Example: *“sexual assault among children and adults”*

Example: *“some people that have faced abuse by their dorm counselors or with another family and she says that a lot of that comes from people thinking that a deaf person won’t tell anyone.”*

- **Code 2: Physical Abuse**

Definition: Any intentional causing of injury or trauma to another by way of bodily contact. Participants often use the term physical abuse, but may also refer to physical assault or physical violence. Please note that Physical Abuse is considered a distinct code from Domestic Violence (see below) since Physical Abuse can occur outside of the home context.

Example: *“we have a high rate of physical and sexual abuse that's been documented before”*

- **Code 3: Verbal Abuse**

Definition: Negative statements, including criticism, yelling or threats, from one person to another. Participants often use the term verbal abuse but it can also include signed abuse. Please note that Verbal Abuse is considered a distinct code from Emotional Abuse (see below) because it is specific verbal or signed statements.

Example: *“He's yelling [signing] at her, he's telling her certain things, and she just didn't understand that that's what domestic violence is. So there's not a lot of physical abuse but there's a lot of this emotional abuse and a lot of abuse that's happening that they don't realize it because a lot them have grown up...”*

Note: In this example, also code for verbal abuse, domestic violence, physical abuse, and emotional abuse

- **Code 4: Emotional Abuse**

Definition: Psychological or emotional control or manipulation from one person to another. Participants often use the term Emotional Abuse, but may also refer to humiliation, or acts intended to reduce the self-worth of another.

Example: *“My biggest notice is isolation, sexual abuse, and emotional abuse are probably the three biggest things that I see and work with.”*

- **Code 5: Financial Abuse**

Definition: Attempt to control finances, financial independence, accessibility to finances, or information about finances from one person to another. Participants may use the term Financial Abuse or may describe broader control tactics or scenarios used to control the Deaf individuals finances or assets.

Example: *“they control their lives, their money, their welfare...make decisions for them”*

- **Code 6: Domestic Violence**

Definition: Violent, or aggressive behavior, specifically within the home context, often within the context of romantic or familial relationships. Participants will often use the term Domestic Violence, but may refer to violence at home

Example: *“A lot of relationships I see DV happening”*

- **Code 7: Community Violence**

Definition: Violence, aggressive behavior, or crime, specifically within the community context, outside of the home including gang involvement. Participants will often use the term Community Violence or may refer to crime or gang activity.

Example: *“They tend to have to work on their own self-advocacy, and getting their help from their gangs or their crew more than the families because there's no communication at home.”*

Note: This would also warrant a Lack of Communication code (but not Lack of Communication Exacerbates Trauma)

- **Code 8: Foster Care/CPS/Multiple Caregivers**

Definition: Involvement with Child Protective Services (or some other acronym for State protective services), the experience of foster care placements, or being with multiple caregivers. In all of these cases, the Deaf individual is not cared for by a biological parent.

Example: *“some of them have been through different foster care or with a family member then back to the state's foster care or constant switching between places and it's hard”*

Example: *“their parents, then they are passed over to their grandparents or aunts so they are being passed around”*

- **Code 9: Medical Experiences or Neglect**

Definition: Traumatic experiences or interactions with medical personnel, settings, or circumstances. Also neglect when in need of medical care or needed medical emergency services.

Example: *“Those kids hadn't been in school, they've been at home, and they haven't seen the doctor or the dentist”*

- **Code 10: Emergencies/Disaster**

Definition: Specific event like a natural disaster, a terrorist attack, a car wreck. If participant discusses co-occurring need for medical attention in addition to disaster,

please also code as 'Medical Experiences or Neglect'. Do not need to specify which type of disaster (natural or man-made).

Example: *"I mean because a lot of the definitions of trauma is when somebody experiences a very traumatic event like a car accident or something and is now recovering from that or severe abuse or a natural disaster or whatever"*

- **Code 11: Loss of Family Member**

Definition: The death of a family member upon whom a Deaf individual was deeply connected or reliant, often for communication purposes.

Examples: *"once the parent passes away; the deaf individual is completely lost"*

- **Code 12: Bullying**

Definition: In the context of social (not familial) relationships, use of force, threats, intimidation, or oppression from one person to another. Participants often use this word specifically as a traumatic event.

Examples: *"Bullying from the deaf group"*

- **Codes 13: Social Isolation**

Definition: Please code social isolation when participants describe a general isolation of the Deaf individual from meaningful interactions with others

Example: *"abuse socially where deaf person feels rejected/ostracized from the deaf group"*

- **Codes 14.15: Communication within the Family Context**

Definition: Please code when participants describe a communication isolation of the Deaf individual, particularly within the family context.

Example: *"I see a lot of trauma with the way they grew up without being able to talk with anyone except maybe at school"*

Example: *"So I think oppression, no access to communication, not being able to hear or understand, having a hearing family, feeling left out"*

- **Code 16: Lack of Communication: Exacerbates Trauma**

Definition: Please code Lack of Communication Exacerbates Trauma when participant specifically indicates that Lack of Communication plays a compounding role, to exacerbate, or make worse a traumatic experience.

Example: *"in some of the cases that I've seen over the years involve some pretty horrific things that are exacerbated by the isolation or exacerbated by not having somebody that they can communicate with or continue longer because there isn't somebody to communicate the concern to"*

- **Code 17: Other, Indicate Separately**

Cognitive Identifiers

- **Code 18: Mistaken beliefs/ Distorted cognitions**

Definition: Incorrect beliefs, also known as cognitive distortions, about the nature of, reason for, or management or acceptance of trauma

Example: *“They don’t know that it is not acceptable regardless of their age, even if they are five; they shouldn’t have to accept that.”*

Example: *“The deaf person thinks, “I’m not getting help, and you continue to molest me, I have to accept it””*

Example: *“Explaining to them, trying to get them to understand, you have to explain to them what it is and they don’t understand it but educating them so in the future they can have a happier life. They don’t even see that. They don’t see that this could be the way it is.”*

- **Code 19: Delayed labeling or understanding of trauma**

Definition: Due to a variety of factors, including delayed access to language, unsupportive environments, etc. the Deaf individual’s own awareness, understanding, or identification of their own experience is delayed. This does not refer to the clinician’s delayed awareness of the trauma.

Example: *“I don’t know that they even realize that what was going on at that time but realize now as an adult when they look back they realize what happened.”*

Example: *“I have a client who just revealed, he and his sister have been engaging in sexual acts since he was about 6. So for about 8 years. This just came to light and just that “I didn’t know it was wrong. I didn’t know even the language to tell my parents, my sister’s hearing, my parents are hearing.” Then once I found out that it was wrong, he’s kind of like, it’s been going on for so long.*

- **Code 20: Compromised executive functioning or decision making**

Definition: Abuse or trauma results in the reduced capacity for momentary planning, judgment, and/or decision making (executive functioning skills).

Example: *“They face challenges in abstract thinking, processing challenges, emotionally challenged, and communication where their understanding of the world around them is quite delayed. Executive functioning skills are another issue that they struggle with”*

*Note: please also code for Delayed labeling or understanding of trauma

- **Code 21: World-Self Schema: “I’m not important”**

Definition: Due to abuse or trauma, the Deaf individual develops a world-self schema specifically around the core belief: I’m not important/worthless/unlovable

Example: *“Sometimes they see situations where the father doesn’t care, or is not involved in their daughter or son’s lives, so they grow up feeling “my father didn’t care about me””*

- **Code 22: Block to learning:**

Definition: Due to trauma or abuse, the Deaf individual's ability to take in new information over time and gain from experience is compromised.

Example: *"Sometimes trauma's biggest barrier is to learning and if their behavior or anxiety appears, their learning reduces."*

Example: *"Severe, significant impact on learning, there's a mind or mental block, can't move on."*

Behavioral-Physical Identifiers

- **Code 23: Trauma carried/observed on body**

Definition: Discussion of physical, bodily indicators of abuse, including body posture, appearance, facial demonstration."

Example: *"Mostly body language, from students. If sexual abuse, tend to shame of bodies"*

Example: *"Their physical appearance, showing anxiety, reluctant to being open to talking about it, those things."*

Example: *"They have a look on their faces, they're angry too. I mean, I guess, with my years of experience, I can easily see it and know it."*

*Note: also code above as Anger/Aggression. *

- **Code 24: Extreme behavioral reactions**

Definition: Description of clients behavioral reactions, regressions, or dysregulation, often discussed in relative terms (i.e. behaviors extremely elevated or extremely depressed), and sometimes discussed in response to a specific trigger

Example: *"I think that the behavioral reactions can get more severe and I think in a lot of hearing patients there is a lot more willingness to look at traumatic experiences in our reactions to trauma and to stress as normative. Right? Like, "Oh this kid is avoiding X situation or something" and if you happen to also be deaf, well there may be a lot fewer choices for your school, for an example"*

Example: *"Maybe strong reactions. I have one client right now, who has high trauma experience with his family. But on the city bus, he quickly tends to blow a temper."*

- **Code 25: Compromised functional independence**

Definition: Impact on an individual's ability to live functionally/independently on a daily basis, including work and life satisfaction.

Example: *"Trauma can impact their everyday functioning like their health in terms of feeling weighed down, heavy, tired, stressed out, just not feeling like they are in the mood to deal with it on a daily basis."*

Example: *"They don't have success in their work lives. They get fired, they quit, they're not satisfied with work"*

Affective Identifiers

- **Code 26: Anger/Aggression**

Definition: Explicit use of this term

Example: *“That’s not going to happen but it seems like there is a pattern of more problem behaviors, more anxiety, more anger outbursts in the dorm or during non-structured times between classes, cafeteria.”*

*Note: also code as Anxiety

Example: *“I think it’s the anger. A lot of times there’s a lot of anger, a lot of frustration and anger”*

- **Code 27: Depression:**

Definition: Explicit use of this term

Example: *“I made a list of different symptoms such as depression.”*

- **Code 28: Anxiety:**

Definition: Explicit use of this term

Example: *“that kind of fear and anxiety that you actually often see right away if you know someone’s been traumatized.”*

Interpersonal Identifiers

- **Code 29: Struggles in relationships- With Others:**

Definition: Description of an interpersonal struggle, focusing mainly on the types of people involved in the struggle, for example, struggles with parents, siblings, teachers, romantic partners, peers, authority figures, etc.

Example: *“It’s really a lot of things connected to interpersonal functioning, decisions around choices with friends or particularly serious romantic relationships choices but also friends”*

Example: *“I think the biggest issue I see is how it affects trust of people who are hearing, with people who are deaf across all aspects of their life whether it’s in trusting people who could be helpers or healers or whether it’s trusting future partners or employers”*

- **Code 30: Struggles in relationships-Specific problems:**

Definition: Description of an interpersonal struggle focusing mainly on the type of struggle, regardless of whom the struggle is with

Example: *“When they’re in the community with others, really can’t function appropriately either avoiding people or too involved with too focused on what happened in the past.”*

Example: *“Social boundaries, like recognizing this person from the grocery store and just say hi, or getting to know an individual to develop trust or deciding whether they need to know this person more before the trust happens. What to share, what not to share. Just a total lack in this area, so I try to teach them the meaning of healthy friendships, and what that looks like.”*

Intrapersonal Identifiers

- **Code 31: Trauma remains built up**

Definition: Participant describes the process of trauma remaining pent up within an individual, held internally.

Example: *“internally it builds up over the years. Manifests in depression, feeling no good, no self-esteem.”*

Example: *“holding their feelings of hurt and anger inside.”*

Example: *“If there’s no communication, no language, it’s like they have feelings that builds up and they don’t understand, don’t know what to do... when they become adults, all of these feelings, all the trauma, is still there”*

- **Code 32: Fear of blame, misunderstanding**

Definition: Participant describes how the Deaf individual, as a result of abuse or trauma, fears specifically that he/she will not be understood, believed, or will be blamed for the abuse/trauma by another.

Example: *“So if a child can’t communicate with their mom and dad or someone at home, they’re not going to feel free to tell them if somebody touched them, for an example. Or they are afraid they’ll be misunderstood. Blamed.”*

- **Code 33: Compromised coping**

Definition: Reduced capacity to manage or handle distressing situations or trauma triggers

Example: *“He saw his father beat his mother all the time so whenever he sees a physical fight, he blows up because he doesn’t know how to manage that trauma.”*

Example: *“You may have not yet developed the strengths to know what to do to get out of that and that was partly what often brings people in”*

Example: *“The coping skills are minimal, self hatred is really big”*

Theme 3: Traumatic Layers

Traumatic Layers

- **Code 34: Generational Trauma**

Definition: Participant mentions longstanding history of abuse or trauma for several generations

Example: *“I think generationally there had been many generations of some of those kinds of things went back generations of just sexual, physical, emotional abuse not just within that family of origin”*

- **Code 35: Poverty**

Definition: Socio-economic status or state of being extremely poor or impoverished

Example: *“I work with a lot of children that come from impoverished environments that are chaotic”*

- **Code 36: Rural Isolation**

Definition: Living in the countryside, rather than in the city, or town, specifically living in isolated areas

Example: *“It’s really isolating, physically in the country where it’s beautiful, but there’s no signing stimulation”*

- **Code 37: Community/Family Substance Involvement**

Definition: Either at the personal, family, peer, or community level, any substance addiction, abuse, misuse, or involvement, including either drugs or alcohol.

Example: *“A man presents with a pretty severe history of addiction and anger, lots of prison time, domestic violence, aggressive behavior, so things like that.”*

- **Code 38: Gang Involvement**

Definition: Participant explicitly mentions involvement or affiliations with, gang involvement

Example: *“I’ve seen one student had been involved with gangs, and he was very against white people, didn’t like white people, and that’s a gang thing”*

Enviro-Linguistic Agency

- **Code 39: Lack of Communication is an opportunity for abuse**

Definition: Participants describe how a lack of communication, specifically, renders a Deaf person a target or more likely to be abused; often, participants will describe how people will take advantage of a Deaf person because they are Deaf

Example: *“the abuse happened to them while they were young, so they didn’t yet have language to understand what was going on, or to push away and say no. And because they’re deaf they more frequently are bullied and picked or, victimized.”*

Example: *“The more the person is without communication, either verbal or sign skills, the worse the higher the percentage/rate abuse can happen”*

Example: *“So they’re misunderstanding the language. They are vulnerable not only to trauma but also to being taken advantage of.”*

- **Code 40: Assumption that Deaf person is not smart or is passive**

Definition: Participants’ description of the attitude or perception that the Deaf individual is incapable, unintelligent, or unsuccessful

Example: *“Lack of communication in the home, no relationship with family members, and family members see deaf children as not being able to be successful”*

- **Code 41: One provider of information**

Definition: Dynamic in which a parent, family member, or interpreter is the sole provider or conveyor of information in a Deaf person's life.

Example: *"the parents are kind of continually put in the role of being the information conveyer that I think that that actually sets a kid up at risk where if the only source of information is the parent"*

- **Code 42: Power Differential**

Definition: Dynamic in which a parent, family member, coach, boss, doctor, interpreter, etc. assumes or limits control of or decision making power for the Deaf individual. This is distinct from a peer-to-peer dynamic (see High Vs. Low Functioning below)

Example:

- **Code 43: High vs. Low Functioning**

Definition: Dynamic in which higher functioning DHH individuals or groups are picking on lower functioning DHH individuals or groups. This could also refer to older children, who are developmentally higher functioning, than younger children

Example: *"Yes, older children misusing younger children on school property or on the bus because the bus is a very long trip for many kids, hours and hours on the bus"*

Familial Trauma

- **Code 44: Receptive communication neglect**

Definition: Description of families choosing or refusing not to learn sign language and as a result, rendering the Deaf individual disempowered, disadvantaged, and neglected.

Please note this code is distinct from **Isolation- Familial**

Example: *"it's mainly the parents who do not want to sign. That plays a huge factor because—I always argue that parents learn sign versus children learn how to speak using speech."*

Example: *"Really, communication, they did not make the effort. Meaning, the Deaf person is not important?"*

Example: *"I think there's a lot of neglect that causes a lot of trauma within the deaf community, starting the neglect of language and communication, of course"*

- **Code 45: Expressive communication blocked**

Definition: Participant describes how the Deaf individual, as a result of abuse or trauma, cannot express themselves, or fears specifically that he/she will not be understood, believed, or will be blamed for the abuse/trauma by another.

Example: *"So if a child can't communicate with their mom and dad or someone at home, they're not going to feel free to tell them if somebody touched them, for an example."*

Example: *"Yes, because I noticed that many deaf kids don't really understand what is going on or know how to express their feelings or emotions"*

- **Code 46: Family's FOI is limited**

Definition: Families themselves have limited knowledge or awareness of important information, services, and actions to take

Example: *“I do think that families are often overwhelmed. They don't have the resources even for families that really want to learn. There's no structured way for them if they don't go to the school for the deaf and then move to [city] then it's going to be incredibly difficult for them to develop ASL skills.”*

Example: *“I immediately think of this one kid, who's autistic. He is deaf and his parents are also deaf. He would beat on them and they really didn't know about services for people with autism. They didn't know how to advocate. They went to the school for the deaf and they came in to the school for the deaf and didn't really realize that kids could get autism related services too.”*

- **Code 47: Lack of adaptive modeling**

Definition: Within the family context, the lack of modeling of adaptive coping mechanisms or management of adversity, due either to lack of exposure to adversity or through neglect to model.

Example: *“I don't know if it's trauma specifically but certainly not only the lack of communication but parents who are overprotective and don't expose their kids and therefore don't learn coping mechanisms. So anytime that there is trauma or any type of event that they need to learn how to respond in a healthy way. They don't learn those coping mechanisms”*

Fund of Trauma Knowledge

- **Code 48: FOI Abuse/Trauma/Danger/Personal safety**

Definition: Lack of knowledge of what constitutes abuse, what is danger, what is safety. Explicit use of terms.

Example: *“Lack of knowledge of what is abuse. Exactly, what? Being physically grabbed? Shaken? What? What exactly is abuse?”*

- **Code 49: FOI Right/Wrong/Acceptable Boundaries**

Definition: Lack of knowledge of what is considered normal, right, wrong, or appropriate boundaries in behaviors or relationships. Explicit use of terms “right, wrong, normal, appropriate”

Example: *“In some ways, they may not know that it's wrong either because they've not been able to learn that that kind of behavior is not appropriate.”*

Example: *“It goes back to learning what is right and wrong, learning how you should react, what is right”*

- **Code 50: FOI Help seeking**

Definition: Lack of knowledge of how to get help or what to do, or where to go. Explicit use of terms

Example: *“Don’t have information they don’t have the tools to understand and look for help. They don’t know what to do.”*

- **Code 51: FOI Medical history**

Definition: Lack of knowledge of own medical history or medical information. Explicit use of terms.

Example: *“So I can think in particular one girl that I worked with where she didn’t know a lot about her own medical history, and her own medical history was really complex”*

Theme 4: Approaches to ID: Clinical Interview

- **Code 52: Narrative strength**

Definition: Clinical interviews allow the client to ‘tell a story’ as a way to narrate their experience

Example: *“Because I think it provides a narrative structure. I think it provides a lot of background information.”*

Example: *“Sometimes it's important for them to tell their story or you won't be able to make an impact on helping them.”*

- **Code 53: How clients respond as a source of data**

Definition: The process of the clinical interview serves as another source of data; how and when clients respond to questions yields valuable information.

Example: *“It’s mostly just the clinical interview and the reactions during clinical interview”*

- **Code 54: Part of agency intake process**

Definition: Clinical interview conducted as a standard procedure in the professional setting

Example: *“Well actually they are required by the clinic that I work with. Its just part of the intake assessment for everyone.”*

- **Code 55: No other tools**

Definition: For a variety of reasons, including lack of normed assessment measures, participants report using only the clinical interview

Example: *“Because what deaf-friendly assessments are there? At my old job, I couldn’t find any trauma assessments for deaf people.”*

Theme 5: Modifications Clinical Interview

- **Code 56: Emphasis on historical timeline**

Definition: For a variety of reasons including language deprivation and traumatic experiences, Deaf individuals may not have comprehensive recollections of timeline of events, thus an emphasis on history and timing during the clinical interview is essential

Example: *“We strive to get the best history information we can so we can decide whether we should go ahead with counseling or if they’ve already tried that route then we will hold that off until later.”*

- **Code 57: No modifications**

Definition: No modifications made

Example: *“Not really, I just talk and work with them. If the parents are involved then I will just get an interpreter and that’s it.”*

- **Code 58: Specific questions relevant to Deaf experience**

Definition: Adding questions to a clinical interview in such a way that would capture relevant details about the Deaf individual’s experience

Example: *“we have to ask those specific questions and then add our own questions. Whether they used spoken language or sign language when they grew up. Did they have support?”*

Theme 6: Approaches to Treatment:

- **Code 59: Trust building**

Definition: Participant explicitly mentions the importance of trust with a client, or may describe the significance in building a relationship with a client

Example: *“I find that if I don’t have the trust and the relationship, then, it’s no good”*

Example: *“It was years of treatment to just even trust again and to believe it was okay to tell the story.”*

- **Code 60: Explaining confidentiality**

Definition: Participant explicitly mentions the importance of explaining or discussing confidentiality with a client.

Example: *“I remind them. It’s confidential. It stays here. It’s trust. They must trust me especially because I’m deaf, and they wonder if I will go out and tell others about the meeting? So I re-emphasize that everything stays here I don’t share”*

- **Code 61: Following client’s pace**

Definition: Participant describes or emphasizes how they allow client’s to determine the pace of the therapeutic process

Example: *“I think recognizing that process too of just following their pace but ready to push a little too.”*

Example: *“I follow the lead of the student and decide what works best for them.”*

- **Code 62: Support therapy/holding environment**

Definition: Participant explicitly uses the word ‘support’ or ‘support therapy’ to describe their approach. Participant may also describe ‘holding’ the client’s emotions or creating a non-judgmental space for their clients.

Example: *“Caring, supportive approach is very important.”*

Example: *“Sometimes just supportive therapy too, I don’t remember if that was the question but just listening to the person’s story has value too and questioning that whole aspect of taking control. Whatever therapy modality or whoever the right- taking ownership back”*

- **Code 63: Education on trauma**

Definition: Participant describes education for their clients related specifically to trauma or trauma informed trainings for other professionals

Example: *“we’ve been doing trauma informed care trainings across the state and doing those both for clinicians at all levels of service”*

Example: *“Education. Teach them how to calm down, breathe, how to build their coping skills, their healing skills”*

Example: *“For example, domestic violence, to build their awareness that that never has to happen again because if they pay attention to the red flags in the beginning in the of the relationship, they can get out. So, that teaches about red flags, for example, if the husband is abusive when he’s drunk, when he’s mad and drunk.”*

- **Code 64: Opportunities for choice**

Definition: Participant describes the therapeutic process of creating opportunities for choice or agency, or education of healthy choices with clients. Please note that this code is distinct from **Emphasis on positive behaviors** (see below) because it is a more conceptual emphasis on empowerment of clients’ choices and control

Example: *“So I have to sit with them and talk and have them think about possible choices. So every time I catch them talking about something, I would take the opportunity to ask them to give me examples of possible consequences.”*

- **Code 65: Emphasis on positive behaviors**

Definition: Participant describes noticing and providing positive reinforcement for clients’ healthy or safe behaviors

Example: *“I would make a comment during or after the event and say, “I noticed you did that which was quite impressive! I’m proud of you! Keep doing that!” They would respond with a smile. That is what I typically do with students at the school. Basically promote them by saying that I recognize it even though they might appear like they were doing nothing and were just sitting there and not bothering their friends. So I would say “you could have distracted the others but you choose to sit quietly and pay attention, wow!”*

Theme 7: Modifications to Treatment:

- **Code 66: Individualization for every client/family**

Definition: Participants' description of individualizing treatment, prioritizing flexibility, and utilizing person-centered, eclectic or integrative approaches, and relying less on manualized approaches.

Example: *"It depends on the person"*

Example: *"It's an individual approach depending on the person. I think I've learned to follow the person, instead of following the book "do this, do that"*

- **Code 67 Recognition of trauma pervasiveness**

Definition: Overtime, participants' recognition of the impact or prevalence of trauma grows

Example: *"Well just how common it [trauma] is. I think I don't even screen for it anymore. A lot of times I just assume it is there"*

Example: *"It became clearer the more time that I was working in the field directly that pretty much had to treat anybody who walked through the door as potentially having a trauma history"*

- **Code 68: Use of professional supports (CDI, peer supports)**

Definition: Involvement of a professional third party,

Example: *"I may have to pull in someone, a deaf interpreter to help in some cases."*

Appendix H: Emergent Themes and Selected Codes

Research and interview questions included in order to display overall organization

Research Questions (1-6)	Interview Question (1-17)	Themes (1-14)	Selected Codes (1-68)
1. How do professionals who work with DHH adolescents and young adults conceptualize and define trauma?	1. What types of trauma are unique to DHH clients?	1. Experiential, events-based definition of trauma	1. Sexual Abuse 2. Physical Abuse 3. Verbal Abuse 4. Emotional Abuse 5. Financial Abuse 6. Domestic Violence 7. Community Violence 8. Foster Care/ CPS/Multiple caregivers 9. Medical Experiences 10. Emergencies/Disasters 11. Loss of Family Member 12. Bullying 13. Isolation: Social 14.15 Communication Isolation in Family Context 16. Lack of Communication Exacerbates Trauma 17. Other
1. How do professionals who work with DHH adolescents and young adults conceptualize and define trauma?	2. How can you identify when trauma has occurred in the lives of DHH clients? 3. How does trauma impact different aspects of clients' lives?	2. Cognitive Indicators of Trauma	18. Mistaken Beliefs/Distorted Cognitions 19. Delayed labeling or understanding 20. Compromised executive functioning 21. World/self schema: I'm not important 22. Block to learning
1. How do professionals who work with DHH adolescents and young adults conceptualize and define trauma?	2. How can you identify when trauma has occurred in the lives of DHH clients? 3. How does trauma impact different aspects of clients' lives?	3. Behavioral-Physical Indicators of Trauma	23. Trauma carried/observed on body 24. Extreme behavioral reactions 25. Compromised functional independence
1. How do professionals who work with DHH adolescents and young adults conceptualize and define trauma?	2. How can you identify when trauma has occurred in the lives of DHH clients? 3. How does trauma impact different aspects of clients' lives?	4. Affective Indicators of Trauma	26. Anger 27. Depression 28. Anxiety
1. How do professionals who work with DHH	2. How can you identify when trauma has occurred in the lives of DHH	5. Interpersonal Indicators of Trauma	29. Struggles in relationships: others 30. Struggles in relationships:

adolescents and young adults conceptualize and define trauma?	clients? 3. How does trauma impact different aspects of clients' lives?		specific problem
1. How do professionals who work with DHH adolescents and young adults conceptualize and define trauma?	2. How can you identify when trauma has occurred in the lives of DHH clients? 3. How does trauma impact different aspects of clients' lives?	6. Intrapersonal Indicators of Trauma	31. Trauma remains built up 32. Fear of blame, misunderstanding 33. Compromised coping
2. What factors, situations, or experiences contribute to exposure to trauma?	4. What factors, situations, or experiences contribute to exposure to trauma (including language and communication, family relations, information deficits contribute, school-based experiences, and social or peer relations)?	7. Traumatic Layers	34. Generational Trauma 35. Poverty 36. Rural Isolation 37. Community/Family Substance Involvement 38. Gang Involvement
2. What factors, situations, or experiences contribute to exposure to trauma?	4. What factors, situations, or experiences contribute to exposure to trauma (Including language and communication, family relations, information deficits contribute, school-based experiences, and social or peer relations)?	8. Enviro-Linguistic Agency	39. Lack of communication is opportunity for abuse 40. Assumption Deaf person not smart 41. One provider of information 42. Power differential 43. High vs. Low Functioning
2. What factors, situations, or experiences contribute to exposure to trauma?	4. What factors, situations, or experiences contribute to exposure to trauma (including language and communication, family relations, information deficits contribute, school-based experiences, and social or peer relations)?	9. Familial Trauma	44. Receptive communication neglect 45. Expressive communication blocked 46. Family's FOI limited 47. Lack of modeling
2. What factors, situations, or experiences contribute to exposure to trauma?	4. What factors, situations, or experiences contribute to exposure to trauma (including language and communication, family relations, information deficits contribute,	10. Fund of Trauma Knowledge	48. FOI Trauma/Abuse 49. FOI Right/Wrong/Boundaries 50. FOI Help-Seeking 51. FOI Medical History

	school-based experiences, and social or peer relations)?		
3. What approaches to trauma identification do DMH professionals use for DHH individuals	10. Why do you use this measure/tool? 11. Any specific examples or cases of illustrative trauma identification?	11. Widespread Preference for Clinical Interview	52. Narrative Strength 53. How clients respond as a source of data 54. Part of agency intake process 55. No other tools
4. What modifications to identification are made to match to characteristics and trauma experiences of DHH clients?	12. Do you make any DHH-specific modifications or adaptations to the measures? 13. How has your approach to trauma treatment changed over your career?	12. Modifications to Clinical Interview	56. Emphasis on historical timeline 57. No modifications 58. Specific questions relevant to Deaf experience
5. What approaches to trauma treatment do DMH professionals use for DHH individuals?	14. Why do you use this approach when treating trauma? Please be specific. 15. Any specific examples or cases of illustrative trauma treatment for DHH clients?	13. Therapeutic Emphases	59. Trust building 60. Explaining confidentiality 61. Follow client's pace 62. Support therapy 63. Education on Trauma 64. Opportunities for choice 65. Positive behaviors
6. What modifications in treatment are made to match to characteristics and trauma experiences of DHH clients?	16. Do you make any DHH-specific modifications or adaptations to the treatment? 17. How has your approach to trauma treatment changed over your career?	14. Modifications to Approach	66. Individualization 67. Recognition of trauma pervasiveness 68. Use of professional supports

Appendix I: Interview Data Coding Visual Overview

Presence of a code indicated with an 'x'	Participant A	Participant B
Theme 1: Traumatic Events/Experiences		
Code 1. Sexual Abuse	x	
Code 2. Physical Abuse		
Code 3. Verbal Abuse		
Code 4. Emotional Abuse		
Code 5. Financial Abuse		
Code 6. Domestic Violence	x	
Code 7. Community Violence	x	
Code 8. Foster Care/CPS/Multiple Caregivers		
Code 9. Medical Experiences or Neglect		
Code 10. Emergencies/Disaster		
Code 11. Loss of Family Member		x
Code 12. Bullying		x
Code 13. Isolation: Social		x
Code 14.15 Communication Isolation in Family Context	x	
Code 16. Lack of Communication: Exacerbates Trauma		
Code 17. Other: Indicate separately		

All participant data was then tallied for an overall frequency and converted to a percentage. Data was then compared and contrasted.

Appendix J: Interview Data Quantified

Overall Presence of Code, N, %	Deaf Presence of Code, N, %	Hearing Presence of Code, N, %
<p>Theme 1</p> <p>Communication Isolation in Family Context-16, 84.2%</p> <p>Sexual Abuse- 12, 63.2%</p> <p>Domestic Violence- 10, 52.6%</p> <p>Bullying- 10, 52.6%</p> <p>Isolation: Social- 9, 47.4%</p> <p>Physical Abuse- 6, 31.6%</p> <p>Foster Care/CPS- 5, 26.3%</p> <p>Medical Experiences/Neglect- 5, 26.3%</p> <p>Lack of Communication Exacerbates Trauma- 5, 26.3%</p> <p>Loss of Family Member- 4, 21%</p> <p>Emergencies/Disaster- 3, 15.8%</p> <p>Emotional Abuse- 3, 15.8%</p> <p>Other- 3, 15.8%</p> <p>Verbal Abuse- 2, 10.5%</p> <p>Financial Abuse- 2, 10.5%</p> <p>Community Violence- 2, 10.5%</p>	<p>Theme 1</p> <p>Communication Isolation in Family Context 6, 75%</p> <p>Domestic Violence- 5, 62.5%</p> <p>Bullying- 5, 62.5%</p> <p>Physical Abuse- 3, 37.5%</p> <p>Sexual Abuse- 3, 37.5%</p> <p>Isolation: Social- 3, 37.5%</p> <p>Financial Abuse-2, 25%</p> <p>Community Violence- 2, 25%</p> <p>Verbal Abuse-1, 12.5%</p> <p>Foster Care/CPS- 1, 12.5%</p> <p>Medical Experiences/Neglect- 1, 12.5%</p> <p>Loss of Family Member- 1, 12.5%</p> <p>Lack of Communication Exacerbates Trauma- 1, 12.5%</p> <p>Other- 0, 0%</p> <p>Emergencies/Disaster- 0, 0%</p> <p>Emotional Abuse- 0, 0%</p>	<p>Theme 1</p> <p>Communication Isolation in Family Context- 10, 90.1%</p> <p>Sexual Abuse- 9, 81.8%</p> <p>Isolation: Social- 6, 54.5%</p> <p>Domestic Violence- 5, 45.5%</p> <p>Bullying- 5, 45.5%</p> <p>Foster Care/CPS- 4, 36.4%</p> <p>Medical Experiences/Neglect- 4, 36.4%</p> <p>Lack of Communication Exacerbates Trauma- 4, 36.4%</p> <p>Physical Abuse- 3, 27.2%</p> <p>Loss of Family Member- 3, 27.7%</p> <p>Emergencies/Disaster- 3, 27.7%</p> <p>Emotional Abuse- 3, 27.2%</p> <p>Other- 3, 27.2%</p> <p>Verbal Abuse- 1, 9%</p> <p>Financial Abuse- 0, 0%</p> <p>Community Violence- 0, 0%</p>
<p>Theme 2</p> <p>Delayed labeling/understanding- 5, 26.3%</p> <p>Mistaken beliefs/Distorted cognitions- 4, 21%</p> <p>World/Self Schema- 4, 21%</p> <p>Compromised executive functioning/decision making- 3, 15.8%</p> <p>Block to learning- 2, 10.5%</p>	<p>Theme 2</p> <p>Mistaken beliefs/Distorted cognitions- 3, 37.5%</p> <p>Delayed labeling/understanding- 2, 25%</p> <p>World/Self Schema- 2, 25%</p> <p>Compromised executive functioning/decision making- 2, 25%</p> <p>Block to learning- 2, 25%</p>	<p>Theme 2</p> <p>Delayed labeling/understanding- 3, 27.2%</p> <p>World/Self Schema- 2, 18.2%</p> <p>Mistaken beliefs/Distorted cognitions- 1, 9%</p> <p>Compromised executive functioning/decision making- 1, 9%</p> <p>Block to learning- 0%</p>
<p>Theme 3</p> <p>Extreme behavioral reactions to triggers- 10, 52.6%</p> <p>Compromised functional independence- 7, 36.8%</p> <p>Trauma carried/observed on body- 5, 26.3%</p>	<p>Theme 3</p> <p>Compromised functional independence- 7, 87.5%</p> <p>Extreme behavioral reactions to triggers- 4, 50%</p> <p>Trauma carried/observed on body- 4, 50%</p>	<p>Theme 3</p> <p>Extreme behavioral reactions to triggers- 6, 54.5%</p> <p>Trauma carried/observed on body- 1, 9%</p> <p>Compromised functional independence- 0, 0%</p>
<p>Theme 4</p> <p>Anger- 9, 47.4%</p> <p>Anxiety- 6, 31.6%</p> <p>Depression- 5, 26.3%</p>	<p>Theme 4</p> <p>Anger- 4, 50%</p> <p>Depression- 3, 37.5%</p> <p>Anxiety- 2, 25%</p>	<p>Theme 4</p> <p>Anger- 5, 45.5%</p> <p>Anxiety- 4, 36.4%</p> <p>Depression- 2, 18.2%</p>
<p>Theme 5</p> <p>Struggles in relationships,</p>	<p>Theme 5</p> <p>Struggles in relationships,</p>	<p>Theme 5</p> <p>Struggles in relationships,</p>

problem- 13, 68.4% Struggles in relationships, others- 9, 47.4%	problem- 7, 87.5% Struggles in relationships, others- 3, 37.5%	problem- 6, 54.5% Struggles in relationships, others- 6, 54.5%
Theme 6 Compromised coping- 4, 21% Trauma remains built up- 3, 15.8% Fear of blame- 2, 10.5%	Theme 6 Trauma remains built up- 2, 25% Compromised coping- 1, 12.5% Fear of blame- 1, 12.5%	Theme 6 Compromised coping- 3, 27.2% Trauma remains built up- 1, 9% Fear of blame- 1, 9%
Theme 7 Generational Trauma- 5, 26.3% Poverty- 5, 26.3% Rural Isolation- 5, 26.3% Community/Family/Substance Involvement- 5, 26.3% Gang Involvement- 3, 15.8%	Theme 7 Generational Trauma- 3, 37.5% Rural Isolation- 2, 25% Community/Family/Substance Involvement- 2, 25% Poverty- 1, 12.5% Gang Involvement- 1, 12.5%	Theme 7 Poverty- 4, 36.4% Rural Isolation- 3, 27.7% Community/Family/Substance Involvement- 3, 27.7% Generational Trauma- 2, 18.2% Gang Involvement- 2, 18.2%
Theme 8 Power differential- 12, 63.2% Lack of communication opportunity for abuse- 7, 36.8% One provider of information- 4, 21% High vs. Low Functioning- 3, 15.8% Assumption Deaf person not smart- 3, 15.8%	Theme 8 Power differential- 3, 37.5% Lack of communication opportunity for abuse- 2, 25% High vs. Low Functioning- 2, 25% Assumption Deaf person not smart- 2, 25% One provider of information- 1, 12.5%	Theme 8 Power differential- 9, 81.8% Lack of communication opportunity for abuse- 5, 45.5% One provider of information- 3, 27.2% High vs. Low Functioning- 1, 9% Assumption Deaf person not smart- 1, 9%
Theme 9 Receptive Communication Neglect- 9, 47.4% Expressive Communication Blocked- 7, 36.8% Family's FOI limited- 5, 26.3% Lack of Adaptive Modeling- 3, 15.8%	Theme 9 Receptive Communication Neglect- 6, 75% Expressive Communication Blocked- 5, 62.5% Family's FOI limited- 1, 12.5% Lack of Adaptive Modeling- 0, 0%	Theme 9 Family's FOI limited- 5, 45.5% Receptive Communication Neglect- 3, 27.2% Lack of Adaptive Modeling- 3, 27.2% Expressive Communication Blocked- 2, 18.2%
Theme 10 FOI Right/Wrong- 9, 47.4% FOI Trauma/Abuse- 8, 42.1% FOI Help-seeking- 7, 36.8% FOI Medical history- 5, 26.3%	Theme 10 FOI Trauma/Abuse- 5, 62.5% FOI Right/Wrong-3, 37.5% FOI Help-seeking- 3, 37.5% FOI Medical history- 2, 25%	Theme 10 FOI Right/Wrong-6, 54.5% FOI Help-seeking- 4, 36.4% FOI Trauma/Abuse- 3, 27.2% FOI Medical history- 3, 27.2%
Theme 11 Narrative Strength-5, 26.3% How Clients response as a source of data-3, 15.8% Part of agency intake process-4, 21.1% No other tools-6, 31.6%	Theme 11 Narrative Strength- 2, 25% How Clients response as a source of data- 1, 12.5% Part of agency intake process- 1, 12.5% No other tools- 2, 25%	Theme 11 Narrative Strength-3, 27.2% How Clients response as a source of data-2, 18.2% Part of agency intake process-3, 27.2% No other tools-4, 36.4%

<p>Theme 12</p> <p>Emphasis on historical timeline-3, 15.8%</p> <p>No modifications-3, 15.8%</p> <p>Specific questions relevant to Deaf experience-7, 36.8%</p>	<p>Theme 12</p> <p>Emphasis on historical timeline-3, 37.5%</p> <p>No modifications-1, 12.5%</p> <p>Specific questions relevant to Deaf experience-3, 37.5%</p>	<p>Theme 12</p> <p>Emphasis on historical timeline-0, 0%</p> <p>No modifications- 2, 18.2%</p> <p>Specific questions relevant to Deaf experience-4, 36.4%</p>
<p>Theme 13</p> <p>Trust building-9, 47.4%</p> <p>Explaining confidentiality-4, 21.1%</p> <p>Following client's pace-13, 68.4%</p> <p>Support therapy-11, 57.9%</p> <p>Education on trauma-8, 42.1%</p> <p>Opportunities for choice-8, 42.1%</p> <p>Emphasis on positive behaviors-4, 21.1%</p>	<p>Theme 13</p> <p>Trust building-5, 62.5%</p> <p>Explaining confidentiality-3, 37.5%</p> <p>Following client's pace-6, 75%</p> <p>Support therapy-6, 75%</p> <p>Education on trauma-4, 50%</p> <p>Opportunities for choice-6, 75%</p> <p>Emphasis on positive behaviors-4, 50%</p>	<p>Theme 13</p> <p>Trust building- 4, 36.4%</p> <p>Explaining confidentiality-1, 9%</p> <p>Following client's pace-7, 63.6%</p> <p>Support therapy-5, 45.5%</p> <p>Education on trauma-4, 36.4%</p> <p>Opportunities for choice-2, 18.2%</p> <p>Emphasis on positive behaviors-0, 0%</p>
<p>Theme 14</p> <p>Individualization for every client-10, 52.6%</p> <p>Recognition of trauma pervasiveness-5, 26.3%</p> <p>Use of professional supports-6, 31.6%</p>	<p>Theme 14</p> <p>Individualization for every client-5, 62.5%</p> <p>Recognition of trauma pervasiveness-1, 12.5%</p> <p>Use of professional supports- 4, 50%</p>	<p>Theme 14</p> <p>Individualization for every client-5, 45.5%</p> <p>Recognition of trauma pervasiveness-4, 36.4%</p> <p>Use of professional supports- 2, 18.2%</p>

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