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Trauma-sensitive rehabilitation counseling: Paradigms and principles

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Abstract.
BACKGROUND: Individuals with disabilities are more likely to have experienced trauma over the course of the lifespan, however, these experiences and their impact on individual functioning have yet to be fully recognized within rehabilitation counseling practice, research, and education.
OBJECTIVE: The following manuscript outlines trauma-informed principles related to rehabilitation service provision.
METHODS: An overview of relevant theories that may be unfamiliar to rehabilitation professionals is included, as well as recommended assessment tools for use in practice and research.
CONCLUSIONS: By employing specific tenants of trauma-informed care, infused with traditional rehabilitation practice, rehabilitation counselors are in a unique position to comprehensively address consumers' needs and ultimately foster more constructive outcomes.

Keywords: Trauma, trauma-informed care, disability, rehabilitation counseling

1. Introduction

The term *trauma-informed care* is widely understood in nursing, some specialties of medicine and psychology, and to a lesser extent, in some counseling specialties (Substance Abuse and Mental Health Services Administration [SAMSHA], 2018a). The relevance of trauma and its' impact has yet to fully resonate within the Rehabilitation Counseling profession, despite it's very strong connection to health, education, and employment outcomes (Gilbert et al., 2009), all of which affect the consumer, the counselor, the researcher, and the educator in rehabilitation settings. It is estimated that 70% of Americans will experience at least one type of trauma in their lifetime, and of those, 20% will develop post-traumatic stress disorder (PTSD; Sidran Institute, 2018). Within this larger group at risk for trauma exposure, some experience greater risk, including females and persons with disabilities, making rehabilitation counselors and researchers very likely to interact with trauma survivors (SAMHSA, 2018a; Sullivan & Knutson, 2001; Strauser, Lustig, & Urek, 2007). It is essential that rehabilitation professionals have knowledge of trauma types, their impact in the lives of survivors, and knowledge of best practices for working with trauma survivors. Rehabilitation providers are in a unique position to foster optimal outcomes related to disability and trauma, and will likely engage their consumers more productively if they are trauma-informed and trauma-sensitive.

Despite the long-understood connection between disability and trauma (Felletti, et al, 1998; Sullivan & Knutson, 2001), rehabilitation counseling scholarship has not sufficiently focused on how trauma impacts people with disabilities, or how

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to effectively conceptualize trauma in a person's life, so as to intervene appropriately. In fact, a review of the literature related to vocational outcomes and trauma revealed very little information in over a decade (Strauser, Lustig, Cogdal, Urek, 2006; Strauser, et al., 2007). Much of the research since this time connecting trauma, disability, and vocational outcomes focuses on traumatic brain injury or traumatic loss of limb, or specific findings from samples of incarcerated individuals (Gordon, Zafonte, Cicerone, Cantor, Brown, Lombard, et al., 2006; Stensrud, Guilbride, Bruinkool, 2018). In an effort to address this gap in the literature, the current paper defines trauma types and related terminology, operationalizes trauma-sensitive rehabilitation counseling, outlines the risks and outcomes associated with trauma, distinguishes trauma-informed approaches from specific trauma interventions, and provides a rationale for trauma-informed care. Each of these topics are very relevant to rehabilitation providers and researchers. Additionally, an overview of recommended assessments and screening instruments, and the specific ways in which trauma-informed care can enhance rehabilitation counseling outcomes are provided.

1.1. Trauma-informed terminology

The terms *trauma, child maltreatment,* and *adversity* are frequently used inter-changeably by lay-persons and some professionals, but each term is distinct and warrants explanation. *Trauma* is generally defined as a highly distressing or life-threatening event which can encompass a single, acute event (such as a sexual assault, automobile accident, or natural disaster), or can be chronic (living with a domestically violent partner or parent, or living in a combat zone) (American Psychological Association, 2018; Foa, Keane, Friedman & Cohen, 2009). *Traumatic events* can be experienced at any time in the lifespan, and personal and environmental factors contribute largely to individual reactions to trauma. Exposure to chronic trauma is related to longer-lasting, and more serious outcomes compared to acute trauma exposure (Shonkoff, Garner, and the Committee on Psychosocial Aspects of Child and Family Health, 2012).

A particularly pernicious form of chronic trauma, *child maltreatment*, refers to interpersonal forms of violence, neglect, or exploitation that occurred in the home between a child and caretaker. Child maltreatment typically involves instances of sexual abuse, physical abuse, emotional abuse, emotional neglect and physical neglect (Centers for Disease Control [CDC], 2014; World Health Organization Society for Prevention of Child Abuse and Neglect, 2006). Federal laws provide the minimum standards under the Child Abuse Prevention and Treatment Reauthorization Act (U.S. Department of Health and Human Services Administration for Children and Families, 2010), which stipulates that abuse is any act or failure to act by a parent or caregiver that results in physical, sexual, or emotional harm, or leads to serious injury (physical or psychological), including death. Each state provides specific legislation for various categories of abuse, further complicating and confusing providers. To offer clarity to the reader, brief definitions are included, but more information on federal and state legislation for each category can be found by accessing the Child Welfare Information Gateway (2018) website (https://www.childwelfare.gov/topics/systemwide/laws-policies/state/). *Physical abuse* is any "non-accidental physical injury to a child". *Sexual abuse* includes specific sexual acts, including manipulation and exploitation of a child, which may or may not include physical touching. *Emotional abuse* includes psychological injury to a child that results in reduced emotional stability, changes in behavior, withdrawal, or other symptoms of a psychiatric disorder, including anxiety, depression or aggression. There is disagreement among experts regarding the degree of observable negative outcomes that are required for abuse to be substantiated (Glaser 2002; Glaser 2011). *Neglect* can be physical when parents fail to provide for their child's basic needs such as food, safety, medical care, or shelter, and can be emotional when parents or caregivers fail to provide for their child's emotional needs, such as withholding affection and encouragement. At times, emotional abuse and emotional neglect are conceptualized together as *psychological maltreatment* (Glaser 2002). Some states include parental substance abuse as a type of maltreatment, others do not. Emotional abuse and emotional neglect are largely considered the most difficult to detect; to better distinguish between emotional abuse or neglect and poor parenting, we recommend further reading, including Wolfe & McIsaac's (2011) paper outlining the nuances.

The breakthrough study on c*hildhood adverse experiences* (ACEs; Felliti et al.,1998) demonstrated that people who reported 4 or more ACEs, including maltreatment as previously defined, and other experiences such as witnessing domestic violence,

living with a parent or caretaker who is mentally ill, abusing substances, and/or incarcerated, or loss of a parent from divorce or abandonment, were 1.6–12 times more likely to report cancer, heart disease, asthma, autoimmune disorders, depression, substance use disorders, and suicidality, compared to those who reported no ACEs (Felitti, et al., 1998; Dube, Anda, Felitti, Edwards, & Croft, 2002). Much of the research on these experiences points to the inter-relationships among maltreatment types, adversities, and trauma, as well as the strong negative effect of these exposures on health, employment, education, and a range of social outcomes (Felitti, et al., 1998; Crozier & Barth, 2005; Gilbert, et al., 2009). Age at time of exposure, length of exposures, and severity of exposures are all important moderating factors explaining the impact on survivors (Fergusson et al., 2013). Much of the trauma-informed literature focuses on child maltreatment and adversity due to its lasting negative impacts across multiple life domains. As such, this paper aligns with the typical paradigm of a trauma-informed perspective with an emphasis on childhood maltreatment and childhood adversity.

1.2. Disability, trauma and toxic stress

There is a strong connection between chronic stress and negative health outcomes (Shonkoff et al., 2012). Exposure to long-term, stress-inducing conditions such as: war, poverty, abuse, violence, and other types of chronic instability, causes the bodies' stress response to be activated for long periods of time. As individuals stay in a heightened state of arousal, this causes stress to have a deleterious effect on health and functioning as the body often fails to return to a baseline state of arousal. Childhood maltreatment is a type of chronic, toxic stress. For children who are exposed to this category of stress for prolonged periods, and have limited support from protective caregivers to help the child feel secure enough to return to baseline, the stress response system is altered, often permanently. Thus, neural circuits, brain structures and many body functions associated with or impacted by the body's stress-response are also altered permanently (Fergusson et al., 2013; Hildyard & Wolfe, 2002; Shonkoff et al., 2012). Health consequences of these alterations may not be observable for years or even decades after the exposure to this type of toxic stress.

The dominant theory explaining the relationship between toxic chronic stress exposure and negative health is the over-activation of the hypothalamic-pituitary-adrenocortical axis and the sympathetic-adrenomedullary system, which results in increased levels of corticotropin-releasing hormone (CRH). The over-activation of these systems in the brain that lead to increased CRH levels cause imbalances in both the parasympathetic and sympathetic branches of the nervous system (Shonkoff et al., 2012). These branches of the nervous system are responsible for regulating the body's fight-flight-freeze responses to stress (sympathetic branch), and just as importantly, the capacity to restore the body's energy to a resting phase (parasympathetic branch). When these branches are not regulated, the body's capacity to respond to new stressors is reduced and even prohibited at times resulting in further dysregulation of the stress-response system. The nervous system regulates all other bodily functions. Therefore, an imbalanced nervous system has the capacity to negatively impact many other physiological systems and functions resulting in a range of physical and psychiatric disorders, diseases and symptoms. Not all persons who experience toxic and chronic stress develop serious disabilities (Foa, Keane, Friedman, & Cohen, 2009). Little is understood about ecological factors that protect against chronic and toxic stress, leading to resiliency in some. While all who are exposed will not develop disabilities, many do. Rehabilitation counselors are in a unique position to explain this to consumers with disabilities who experienced maltreatment or other forms of chronic, toxic stress, while also providing protections against future stress. Not all who have disabilities will connect their health to childhood experiences, but for those who do, validation of the uniquely challenging life events paves the way for healing and recovery, and likely, a better working alliance with a trauma-sensitive rehabilitation counselor.

1.3. Risk factors

A history of child maltreatment is significantly more common among adults with a disability when compared to adults without a disability (Fisher, Hodapp, & Dykens, 2008; Jaudes & Mackey-Bilaver, 2008; Sullivan & Knutson, 2000). Research findings support that maltreatment exposure and severity level increases risk for disability, including mental and emotional disorders later in development (Fergusson, Boden, & Horwood, 2008; Sedlak, et al., 2010; Springer, Sheridan, Kuo, & Carnes, 2007). Severity of maltreatment was found to significantly increase the risk for mental illness and substance abuse in

adulthood even when controlling for confounding factors (Dube et al., 2002; Dube et al., 2003; Fergusson et al., 2013).

Neurobiological theories explain how toxic, chronic stress, such as child maltreatment, leads to disability and negative health outcomes, as explained above (Merrick & Latzman, 2014; Fellitti et al., 1998; Springer et al., 2007; Fergusson et al., 2008; Fergusson et al., 2013). The relationship between childhood maltreatment and disability is bi-directional as disability in childhood also contributes to increased risk for maltreatment. In 2012, 13% of children who experienced at least one form of maltreatment also reported some form of disability (Center for Youth and Communities, 2015). Children with behavioral and learning disabilities were found to be at significantly increased risk for maltreatment (Kairys et al., 2001). Children with disabilities were found to experience physical abuse, neglect, and sexual abuse at rates 1.6, 1.8, and 2.2 times higher respectively, compared to control groups without disability (Sullivan & Knutson, 1998; Sullivan & Knutson, 2000). In a national study of child protection agencies, the incidence of maltreatment among children with disabilities was found to be between 1.7 to 3 times higher than children without disability (Sullivan & Knutson, 2000; Westat, Inc., 1993).

Disability increases the risk for maltreatment largely due to environmental factors in the home. The added stress of raising and caring for a child with a disability who does not respond to typical parental interventions, contributes to heightened frustrations and stretched emotional and financial resources, resulting in higher rates of physical abuse, emotional abuse and neglect (Hibbard & Desch, 2007; Kairys et al., 2001). Children with disabilities experience more isolation and are more likely to have communication limitations compared to peers without disability, leaving them with fewer people to disclose abuse and adverse experiences, which can worsen and prolong the exposure to abuse (Kairys et al., 2001). Parents of children with certain disabilities are often under-resourced to manage daily life activities relevant to their children's physical, mental, learning and emotional limitations. This can lead to higher rates of emotional neglect and emotional abuse, and can also lead to less time spent educating children on appropriate sexual boundaries, including how to recognize sexual predators or inappropriate sexual or physical experiences. Children with certain physical disabilities may be accustomed to being touched in ways and in contexts such as help with toileting, bathing, and dressing, so that the combination of being dependent on caregivers, and not knowing the difference between appropriate and inappropriate touching, increases sexual abuse rates (Kairys et al., 2001). The environmental factors outlined above explain the increased risk for maltreatment among children with disabilities. A trauma-sensitive provider understands these risk factors for children with disabilities and advocates in schools, in communities, and in families to prevent abuses for those at risk.

1.4. Life outcomes associated with childhood trauma

The connection between childhood adversity and disability in adulthood has been established and accepted in the medical community for almost two decades (CDC, 2016a). As mentioned previously, adults in a large, representative sample who reported 4 or more ACEs in childhood were between 4 and 12 times more likely to report serious disorders and a range of diseases in adulthood (Fellitti et al., 1998). This study led to many others that later confirmed this relationship, as well as other studies connecting childhood maltreatment to a range of life reductions, including education deficits, vocational and economic deficits, social and relationship deficits, as well as specific behavioral and symptom impairments (Anda et al., 2006; Crozier & Barth, 2005; Gilbert et al., 2009; Zielinski 2009). Specifically, children with maltreatment histories performed significantly lower on both cognitive and academic functioning compared to children without these histories (Crozier & Barth, 2005). Behavioral and learning disabilities have been categorized as sequelae resulting from maltreatment (Sullivan & Knuton, 1998). Adults who reported child maltreatment were twice as likely to be unemployed and living at or below the poverty level (Zielinski, 2009). Incarceration rates are higher among those who survived child maltreatment and other forms of trauma (Strensrud et al., 2018). Higher levels of aggression, lower probability for positive relationships, higher levels of emotional dysregulation, greater prevalence for SUD, greater rates of incarceration, are outcomes strongly and consistently connected to childhood maltreatment and adversity (Anda et al., 2006; Wolf & Shi, 2012).

According to the CDC (2014) and SAMSHA (2018b), the cognitive effects from child abuse and maltreatment contribute to deficits in problem solving, memory, concentration, conflict resolution,

organizational skills, and other executive functioning required for successful learning, educational, and training outcomes. These reductions in education and training contribute to reductions in employment in adolescence and adulthood (LaCava, Lanspery, Curnan, Hughes, 2015), establishing a trajectory of under-employment or unemployment across the lifespan. A twelve-year study investigating the effects of maltreatment on educational outcomes found that adolescent survivors of maltreatment were more likely to miss school, demonstrate social and behavioral problems, and were less likely to anticipate college attendance compared to their peers who did not report maltreatment (Lansford et al., 2002). Additional lasting effects of child maltreatment include reduced capacity to cope with stress and regulate emotions (Shenk, Griffin, & O'Donnell, 2015), and difficulty in building relationships with others (SAMHSA, 2018b). Communication with others and the capacity for self-control, teamwork, and responsibility of tasks, were all deemed to be critically important job skills in today's labor market (Robels, 2012). Trauma symptoms, specifically 'avoidance/numbing' explained dysfunctional career thoughts among those with and without disabilities (Strauser et al., 2006). Maltreatment survivors with disabilities face added barriers to successful employment, and deserve additional supports to strengthen their work skills, education or training, and other reinforcements that if not provided, constitute underservice.

Experts are calling for many adult diseases and conditions to be classified as developmental disorders, given what we now know about the effects of toxic stress on the developing immune system (Shonkoff et al., 2012). While all developing humans are exposed to stress, different types of stress contribute to the body's stress response system in ways that explain long-term positive or negative health outcomes. Not all stress is toxic; in fact, most stress that is abnormal can be classified as 'tolerable' when appropriate supports are present or the individual possesses coping skills to manage the emotions that often accompany these events (Shonkoff et al., 2012). Examples of tolerable stressors include losing a parent to a premature death such as cancer in the context of a loving, supportive system with another caregiver and others to provide emotional support. A less severe form of stress is considered 'positive' when developmental progress results, such as the distress experienced when children learn to self-sooth after being left for brief periods of time with trained caretakers, such as day-care providers, or when students experience considerable learning and enhanced efficacy after preparing for a highly stressful exam. Trauma-informed rehabilitation counselors can look for ways to reduce potentially toxic stress to tolerable stress, or even a tolerable stress to positive stress. Rehabilitation counselors are trained to help reduce stress when possible; working towards this goal using a trauma-informed lens enhances this approach and may result in fewer reductions in health, learning, education and employment.

1.5. Recovery from maltreatment and trauma

Despite the significant problems associated with the lasting impact of maltreatment on health, education, employment, and social outcomes, research supports that recovery from this type of trauma is possible (Foa et al., 2009; SAMSHA, 2018b). When trauma is processed therapeutically, new ways of coping, trusting and functioning are possible. Trauma-sensitive providers are essential for the recovery process (SAMSHA, 2018a). Successful implementation of trauma-informed practices have been found to improve overall care in nursing and mental health settings (Muskett 2014). Specifically, having trauma-informed staff, using assessments to identity those at risk, helping consumers with emotion regulation, and supporting consumer strengths were recommended as important trauma informed principles by the National Association of State Mental Health Program Directors (NASMHPD; Muskett 2014).

Trauma-informed service is available and prominent in some health delivery systems including pediatrics, many mental health agencies, domestic violence shelters, and many substance abuse treatment facilities (Capezza & Najavits, 2012; Harris & Fallot, 2001). Other systems and organizations that employ rehabilitation providers could benefit from trauma-informed policies and practices. Uninformed providers can inadvertently contribute to treatment failures, worsening of symptoms and increasing stigma (SAMSHA, 2018a; Harris & Fallot, 2001). Many individuals who survived childhood maltreatment are being served in rehabilitation settings by well-intentioned, but, likely inadequately informed practitioners. Rehabilitation counselors work in state/federal VR offices, substance abuse treatment facilities, correctional settings, veterans support services, and a range of other non-profit, community based agencies that facilitate a range of

life goals for those living with disability. An uninformed provider does not know the prevalence of child maltreatment and adversity, and how these experiences are connected to disability. This may lead to misunderstanding as to how and why consumers demonstrate specific behaviors that if seen through a trauma-informed lens, are more easily understood.

One way to combat these failures is to require proper training in detecting and addressing child maltreatment issues for rehabilitation providers employed by organizations serving individuals with disabilities. Improved education on assessment procedures and appropriate communication strategies is critical in order to prevent re-traumatization, enhance consumer-provider relationships, reduce the negative impact of trauma in the lives of survivors, facilitate healing and recovery and prevent intergenerational patterns from repeating (Muskett 2014). The remainder of this paper outlines assessments, communication strategies, and other resources necessary for the most basic trauma-informed service provision.

1.6. Trauma-informed rehabilitation counseling services

A trauma-informed approach is aligned with the strength based, holistic philosophy of rehabilitation counseling. Rehabilitation interventions rely on frameworks such as the World Health Organization's International Classification of Health and Functioning (2001), which includes personal, environmental and functional considerations as they apply to individual health and relevant goals. As such, the ICF model shifts the provider's perspective away from symptoms and diagnoses to a more complex, holistic, and individualistic perspective. A trauma-informed approach similarly shifts the provider's focus away from the presenting problem(s) to a deeper understanding of what happened to an individual that could explain deficiencies in education, employment, health, social functioning, and complex symptoms and behaviors that present barriers to employment, such as substance abuse, incarceration, or emotion dysregulation. Trauma-informed providers understand that many people seeking healthcare, rehabilitation services for Chronic Illness and Disability (CID), treatment for Substance Use Disorders (SUD), are not aware themselves of the connection between past traumatic exposures and current life circumstances (Harris & Fallot, 2001). A trauma-informed provider understands how traumatic events, particularly those in childhood, contribute to biological and neurological changes that can impact people across the lifespan and across multiple life domains, including health, education and employment.

Trauma-informed providers include assessment of trauma in their consumer conceptualizations, based on knowledge of risk factors and symptoms likely related to types of trauma. Trauma-informed providers know when to include trauma-trained professionals in the rehabilitation team, know how to report suspected child maltreatment, know the laws (or where to find them regarding child maltreatment in their state), and know how to effectively communicate with people who have survived trauma so that re-traumatization does not occur. Finally, a trauma-informed provider is aware that many people who survive trauma demonstrate resiliency, and resiliency-building strategies should be tailored for consumers as part of comprehensive and strength-based consumer conceptualization, similarly to how rehabilitation counselors tailor strength-based approaches to a range of goals, including employment or re-employment and the psychological adjustment to disability. A trauma-informed rehabilitation counselor is demonstrating best ethical practice, but does not necessarily need to be certified in specific trauma interventions to provide best practice.

People with any category of disability severe enough to present an impediment to employment are deemed eligible to receive services from their respective state office of VR, provided the intention of receiving services is to obtain, maintain or retain employment. The Rehabilitation Services Administration oversees the state/federal VR system that provides these services to people living with disabilities. Because the primary goal of VR services is to facilitate employment, past traumas and childhood maltreatment are not systematically assessed as part of the consumer intake and conceptualization process, and thus, this important part of many consumers' lives are not taken into consideration during the case management process. The lead author conducted a review of randomly selected intake forms for state VR offices; this process revealed comprehensive items on intake forms addressing physical health and symptoms, use of assistive devices, mental health, substance abuse, family members, work history, education, prior counseling, relationships, goals, strengths, and fears, but no specific mention of trauma. This omission may be contributing to a range of problems, including the following: consumers with trauma histories feeling invalidated or misunderstood

by the person who has been assigned to help, premature case closures due to incomplete consumer conceptualization, reduced working alliances among consumers and counselors, missed opportunities to refer consumers to additional therapeutic supports including parenting supports for some; and importantly, missed opportunities for both consumers and counselors to view behaviors and tendencies that contribute to loss of employment through the lens of trauma. Trauma-informed rehabilitation providers can reduce these problems by doing the following: understand the connection among certain life adversities that increase the odds for maltreatment exposure; assess for maltreatment and other trauma types based on risk factors or consumer presentation; conceptualize consumers with trauma-sensitivity; validate consumers' traumatic experiences; communicate effectively and sensitively with consumers about past traumas; work to identify exposure risk with the aim of reducing and preventing risks. These activities are not excessively or unreasonably burdensome on the VR process, but do have the potential to improve services for consumers with disabilities.

1.7. Trauma-informed communication and counseling strategies

Building on the neurological and biological tenets (briefly outlined above) that explain how trauma manifests as a range of symptoms that negatively impact multiple life domains over time, theories including Attachment Theory, Self-Constructivist Theory, Relational Frame Theory, Acceptance Commitment Theory, Dialectical Behavioral Theory, have emerged (or re-emerged) to explain how and why trauma survivors view themselves and the world differently (Hayes, 2004; McCann & Pearlman, 2015). A thorough review of the theories that best explain the lasting impact of trauma and effective interventions is beyond the scope of this paper; many of these have been empirically tested and validated and are accepted as 'best practice' for treating a range of trauma symptoms (Hayes, 2004; 2015). However, a few key points and strategies will be included as a way to help readers appreciate the importance of language when working with trauma survivors.

Relational Frame Theory (Hayes, 2004) posits that human language and thoughts depend on context, or relations to other thoughts, words and experiences. Children learn to associate words and ideas with events based on their experiences. A developing child who is exposed to toxic, chronic stress in the form of maltreatment is also navigating life stages that will inform his or her understanding of self and the world. If a child is emotionally maltreated in the form of frequent and harsh criticisms, that child's self-view is likely to be negative. That negative self-view is not accurate, or reflective of reality, but to the child, it is true. And the critical and harsh language comes to be associated with fear, dread, anxiety and hopelessness. A child who is physically or sexually maltreated may not be explicitly criticized in the same way, but the developing child generates self-descriptions that are very negative, such as, "I am bad", "I am unlovable", "I can't do anything right", in an attempt to explain the abuse. In both cases, language has the power to generate intense emotions that are very distressing, which frequently results in attempts to avoid emotions and control automatic self-talk. It is not difficult to imagine a consumer inaccurately viewing him or herself as incompetent or unworthy of a job, and avoiding job interviews or other proactive tasks required for vocational exploration in an attempt to avoid these highly distressing thoughts. Avoidance and numbing are common maladaptive coping strategies among trauma survivors, and are known to be related to poorer social and vocational outcomes (Strauser et al., 2006; Weiss, Tull, Anestis, & Gratz, 2013). Additionally, avoidance and numbing are likely to interfere with the counseling process (Cortois & Ford, 2013).

Acceptance and Commitment Therapy (ACT; Hayes, 2004) is an outgrowth of RFT and posits that this paradox of trying to control automatically generated self-thoughts and distressing emotions is not only unrealistic, but highly problematic. Rather than try to control or avoid emotions, strategies such as acceptance, diffusion, and mindfulness should be employed when confronting distressing memories, thoughts or words. Simple techniques can be taught in counseling sessions, such as generating a neutral word and repeating it over and over for several minutes until the consumer is aware that a word is just a sound and loses its meaning when repeated in this way (Fletcher & Hayes, 2005). This technique progresses using distressing words and memories. The goal of ACT is to practice flexibility in place of the rigid attempt to control and avoid what simply cannot be avoided and controlled. Techniques related to ACT and mindfulness are intended to increase insight that the past cannot be altered, the future cannot not be controlled, and fully experiencing the present, even when it is unpleasant, can be experienced as

tolerable. Shifting consumer's stress from what is perceived to be 'intolerable' to 'tolerable' is the core of many trauma-targeted interventions.

Dialectical Behavior Therapy (DBT; Heard & Linehan, 1994; Lynch, Chapman, & Rosenthal, 2006) emphasizes the importance of using validating statements to not only genuinely connect with consumers, but as a means of disrupting dysregulated emotions, which are among the most problematic trauma symptoms (Shenk, Putnam, & Noll, 2012). Validations are communications that convey messages of empathy and acceptance and range from the most basic (Level 1) to what is 'radical' emotional validation (Level 6). These validations are aligned with counseling micro-skills; for instance, level 1 and 2 validations include eye-contact, being present, and listening and accurately reflecting. Levels 3 and 4 involve greater understanding of the emotional component of a consumer's story by guessing the emotion that was likely experienced, or inferring emotional experiences based on knowledge about the consumer's background and personal factors. For example, a level 4 validation might be something like "I can imagine how deflated you might be feeling after a setback like this. After what you've survived, not getting the job you interviewed for might make you feel like you will never get back on your feet". Levels 5 and 6 involve statements that normalize reactions to situations that consumers might otherwise expect a counselor to view as problematic. An example of this level of validation might be: "I would have probably done the same thing in your position." This can be particularly effective when consumers are sharing experiences they feel ashamed about, or ones for which they have experienced stigma, such as abusing drugs or making choices that others might view negatively, including expressions of anger or rage, or not showing up for a scheduled job interview.

Utilizing validations communicates to consumers that their reactions or behaviors make sense given their experiences. Once consumers feel validated, they are less likely to feel dysregulated emotionally as they learn that their current mal-adaptive coping strategies were once adaptive and necessary in the context of trauma, but are no longer useful, and in fact may be contributing to problems. Learning to identity this tendency by accepting that behaviors can be both helpful in one context, and problematic in other context, helps people release their rigid beliefs such as "my thoughts, my actions, my words, my emotions define me" in favor of "I am me regardless of what thoughts, memories, emotions or reactions I have". When people hold on to rigid beliefs that their words, emotions, and actions define them, they often feel defensive and will be less likely to adapt a more flexible perspective, which is necessary for the kind of change that counseling services require of consumers.

These theories and accompanying counseling strategies are presented in truncated form because they are clear examples of how a trauma-sensitive rehabilitation counselor can be effective using language in a skilled and informed way. If some readers are unfamiliar with the theories presented and are uncomfortable using them, we recommend additional reading and training, particularly Heard and Linehan, (1994) and Fletcher and Hayes (2005). At the very least, counselors with the most fundamental training should be skilled enough to implement level 5 validations; counselors should take precautions to avoid invalidating statements, such as "it is your choice to abuse drugs, I can't help you if you continue to use drugs"; or "you didn't show up for a job interview and you didn't call me to talk about it; I can't do the work for you." These kinds of statements communicate judgment from the counselor, and a lack of understanding of possible contextual factors that when viewed using a trauma-lens, explain some behaviors, such as abusing drugs, or avoiding experiences that trigger negative emotions.

The theories and strategies above are *not* described here as trauma-interventions, but as communication strategies that are appropriate for counselors to implement in the absence of trauma-specific training or certification. Targeted interventions, such as *Trauma-informed Cognitive Behavioral Therapy* (Deblinger, Mannarino, Cohen, Runyon, & Steer, 2011), or *Eye-Movement Desensitization Reprocessing* (Spates et al., 2009), or other validated interventions designed to treat symptoms of post-traumatic stress disorder (PTSD, Foa et al., 2009) require additional advanced training. There are a range of evidence-based programs (curriculum is usually available for purchase) that have been empirically tested for a range of populations and each can be reviewed for their relevance, strengths, and limitations by accessing websites, such as those operated by federal government offices, including Substance Abuse and Mental Health Services Administration (SAMHSA), and Center for Disease Control (CDC), and National Center for Biotechnology Information (NCBI), among other free resources dedicated to providing accurate and updated information to providers working with trauma survivors.

1.8. Recommended trauma assessment procedures

As stated earlier, a trauma-informed approach aligns with the strength-based, and holistic approaches already emphasized in rehabilitation settings. Rehabilitation counselors are trained to conceptualize their consumers using models such as the ICF as a way to systematically practice holistic approaches, and protect against a tendency to view a person as a cluster of symptoms or functional limitations. This strength-based philosophy is akin to a trauma-informed approach that similarly promotes a view of adversity that can result in resiliency rather than victimhood. This can be extended to understand that behaviors, such as abusing substances, were likely once-effective strategies adopted as a way to cope with trauma, and as such can be viewed as one's trauma-survival skill set that needs altering, rather than a stigmatized behavior, character flaw, or defining feature of a person's life. Beyond a general assessment of consumers using a framework such as the ICF, other strategies to include in a trauma-informed system is a universal screening for many consumers receiving services from rehabilitation counselors, with more targeted assessments when necessary.

Comprehensive consumer assessment and conceptualization should include trauma exposures when assessing personal and environmental factors using the International Classification of Health and Functioning (ICF) framework (WHO, 2001). The experience of trauma has enormous implications for how individuals experience CID, which is the purpose of using the ICF to assess consumers overall health and functioning. Without this knowledge, discrepancies in capacity and performance may be misattributed to other factors. For instance, a trauma-informed provider who understands that a consumer who is emotionally dysregulated as a result of childhood maltreatment has valuable information to share with their consumer who struggles in relationships and maintaining employment. This consumer's identified primary or secondary CID can include a range of disorders, such as SUD or other psychiatric disability, for which the consumer and counselor may misattribute the cause of failed relationships and chronic under-employment. Vocational services can connect a consumer to potential employers, but without identifying maladaptive coping that contributes to under employment or unemployment, the vocational services alone will not address the symptoms that likely resulted from trauma, and are explaining to a large extent the reduced performance in life domains.

Using the ICF model to identity functional limitations allows for counselor and consumer to explore the specific ways that trauma symptoms impact work performance. For instance, inclusion of accommodations for trauma related symptoms, which may or may not include PTSD, are important in vocational supports. An example of an appropriate workplace accommodation for someone who was exposed to childhood maltreatment and subsequently lives with trauma symptoms might include time off from work when needed to meet with trauma-trained therapist; modified breaks to allow use of specific electronic applications designed to manage dysregulated emotions or stress intolerance; support animal trained to provide comfort and help manage stress. The Job Accommodation Network (https://askjan.org) is recommended for further exploration of job accommodations and assistive technology appropriate to trauma and PTSD.

Suggested assessments are presented based on the recommendation to include them as part of trauma-informed rehabilitation service provision. Trauma-informed rehabilitation providers should be knowledgeable about the signs of maltreatment, and about the symptoms of physical and psychological health that are often connected to trauma exposures. Suggested assessments are provided below based on their strong psychometric properties, validation on diverse samples, and use for various ages, or trauma types. Limited information is provided here, but all have strong enough validity and reliability estimates to warrant recommendation. Table 1 provides a quick reference for the assessments described in detail below.

1.8.1. The Traumatic Life Events Questionnaire (TLEQ)

The TLEQ is a thorough, but quick assessment for traumatic event identification, typically requiring 10–15 minutes to administer. The TLEQ consists of 23 items regarding the trauma event itself and the fear and hopelessness associated with it. The initial item asks participants if they have experienced a specific type of traumatic event, and if a 'yes' is indicated, participants will score the frequency in which it occurred. Scores range from "never" to "more than 5 times." Some of the categories of events include: accidents, physical abuse, sexual assault, other threats (which contains sexual harassment and stalking), and other (Peirce, Burke, Stoller, Neufeld, & Brooner, 2009).

Table 1
Recommended assessments for use in trauma-informed rehabilitation service provision

Assessment	Focus	Population age	Items	Time to administer	Training and education
Adult Adolescent Parenting Inventory-2	Self-report. Assesses abusive and neglectful parenting attitudes	Parents/pre-parents	40	10–15 minutes	Master's level or experienced clinician*
Adverse Childhood Experiences-Abuse Short Form	Self-report. Screens for emotional, physical, and sexual abuse; neglect; violence; and other household dysfunctions	Adolescent/adult	8	5 minutes	Master's level or experienced clinician*
Childhood Trauma Questionnaire	Self-report. Screens for history of child maltreatment, focusing on physical, sexual and emotional abuse, physical and emotional neglect	Early adolescent/Adult	28	5 minutes	Master's level or experienced clinician*
Clinician-Administered PTSD Scale (CAPS) OR (CAPS-CA)	Semi-structured clinical interview. Screens for symptoms of post-traumatic stress disorder	Children, Adolescents and adult versions available	30	25–45 minutes	Master's level or experienced clinician*
The Traumatic Life Events Questionnaire	Self-report or interview. Screens for traumatic events, and fear/hopelessness associated with the event. Identification of event that causes the most distress	Adults	23	10–15 minutes	Master's level or experienced clinician*

*Note: While not all assessments require verification of education or training, we recommend minimum training level due to the sensitive nature of items contained in assessment for ethical administration and interpretation of scores.

The last question requests individuals to identify the event that produces the most distress. There are two versions: a self-report and interview style. Kubany et al. (2000) found that the TLEQ had good construct validity, adequate sensitivity and specificity, with average test-retest reliability (.83), but was low for specific items. The TLEQ was found to have good convergent validity with the Traumatic Life Events Interview (TLEI), with correlation coefficients averaging .80 (Read, Bollinger, & Sharkansky, 2003). The diagnostic rate of PTSD increased from 25% from a structured interview to 33% when using the TLEQ assessment (Peirce et al., 2009). A gender difference among the type of traumatic events experienced was found: men were more likely to report traumatic accidents and women were more likely to report childhood sexual assault. This was highly correlated with the structured interview, which indicated men reporting accidents as highly traumatic, but women indicated young adult sexual assaults (Pierce et al., 2009).

1.8.2. Childhood Trauma Questionnaire (CTQ)

The CTQ is a quick and easy measurement for assessing child maltreatment. The questionnaire can be completed in approximately 5 minutes, yet it thoroughly examines 5 different types of childhood trauma. The CTQ is assigned a level B qualification assessment, therefore only clinician's with a master's degree or license may administer the measure. The CTQ is a 28-item self-report screening instrument to detect a history of child maltreatment in adults, as well as assess the frequency and severity of maltreatment across five categories: *emotional abuse*, *physical abuse, sexual abuse, emotional neglect*, and *physical neglect* (Bernstein & Fink, 1998). Three items are used as validity checks. Responses on the instrument involve a 5-point Likert scale which range from "Never True" to "Very Often True". Possible scores on the CTQ range from 25–125, aligning with severity levels from none to extreme. The items on the CTQ have a good internal with the maltreatment cut-off score demonstrating good convergence with clinician ratings of child maltreatment (Bernstein et al., 2003). Normative data were collected from 231 patients engaged in substance abuse treatment from two veterans' affairs hospitals in New York City (Bernstein et al., 2003). Within the sample, Latino and African American consumers were over-represented. The aforementioned factor items resulted in high levels if internal consistently reliability as Cronbach's alpha coefficients ranged from $\alpha = .79–.94$; the entire scale resulted in a Cronbach's alpha coefficient of $\alpha = .95$. Test-retest reliability was also high for the instrument ($r = .88$) for individuals ($N = 40$) who were asked to complete the CTQ again after 3.6 months. The CTQ sexual abuse ($r = .58$), physical abuse ($r = .42$), and emotional abuse ($r = .51$)

scores were highly correlated with corresponding factors on the Childhood Trauma Interview, indicating a high degree of convergent validity. Also, discriminant validity for the CTQ was established using measures of verbal intelligence ($r = .10$) and social desirability ($r = .10$); no significant correlations were found between these measures and the CTQ.

1.8.3. Adverse Childhood Experiences-Abuse Short Form (ACE-ASF).

The ACE-ASF is brief and free to use, but is recommended to use in conjunction to other measures or interviews in order to gain understanding into an individual's experience with childhood adverse experiences. It is one of the most widely used instruments to assess child abuse exposure (CDC, 2016b). The ACE is comprised of 10 domains that measure emotional, physical, and sexual abuse; neglect; violence; and other various household dysfunctions (Meinck, Cosma, Mikton, & Baban, 2017). The ACE-ASF is a short-form of the ACE, comprised of 8 items that are solely focused on abuse in adolescents and adults; household dysfunction was removed in the short form. There are minimal research studies that examine the reliability and validity of the ACE-ASF. Factor loadings were high for physical/emotional abuse and sexual abuse, 0.902 and 0.961 respectively. Internal consistency was measured using a Cronbach's alpha and demonstrated a variation among items: $\alpha = 0.57$ for physical and emotional abuse subscale, $\alpha = 0.83$ for the sexual abuse subscale, and $\alpha = .71$ for the total ACE-ASF scale (Meinck et al., 2017). Concurrent criterion validity was measured using factor scores of the physical/emotional abuse and sexual abuse items and other relationships.

1.8.4. Adult Adolescent Parenting Inventory-2 (AAPI-2).

The AAIP-2 typically takes about 10–15 minutes to administer and requires a fifth-grade reading level to complete. For individuals who are unable to read, the administrator may read the items aloud. The AAIP-2 is a valid instrument to assess for abusive and neglectful parenting attitudes, but demonstrates moderate reliability and may be supplemented with alternative information gathered from consumers. The AAIP-2 is available in multiple languages and 2 norming populations (English-speaking and Spanish-speaking) and is in the process of developing expanded use for various populations. The AAPI-2 is comprised of 40 items and takes approximately 20 minutes to administer. Each item is presented as a 5-point Likert scale: strongly agree, agree, disagree, strongly disagree, and uncertain. Factor analysis revealed five factors/subscales, which include: expectations of children, use of corporal punishment, parental empathy towards child's needs, parent-child family roles, and children's power and independence (Conners, Whiteside-Mansell, Deere, Ledet, & Edwards, 2006). Factor analysis was completed to assess the 5 subscales. Cronbach's alpha was used to assess reliability for the AAPI-2 and found an overall alpha of $\alpha = 0.85$, equal alphas for the lack of empathy and corporal punishment subscales of $\alpha = 0.79$, and a low internal consistency for oppressing children's power and independence with an alpha of $\alpha = 0.50$ (Conners et al., 2006). For internal validity, three of the subscales (inappropriate expectations, lack of empathy, and corporal punishment) correlated significantly with the full scale, using alpha <0.05 as the criteria. In order to assess for discriminant validity, the HOME observational interview was used and found a small correlation with the lack of empathy scale (0.22, $p < 0.01$). Results indicated a correlation between participants who endorsed corporal punishment and those who abuse their children, an indication for diagnostic and discriminant validity.

1.8.5. Clinician-Administered PTSD Scale (CAPS).

The CAPS and CAPS-CA need to be administered by an experienced clinician with a level 3 qualification. Because both the CAPS and CAPS-CA are sensitive to clinical changes, they can be used to monitor and track treatment progress. The administration time may vary, but typically last 25–45 minutes for the CAPS and 45 minutes for the CAPS-CA. The CAPS and CAPS-CA may be used with some flexibility, and an administrator may choose to only assess criteria A–F only or just specific symptoms during a time-frame. This scale can be used with children, adolescents, and adults. The initial assessment was used with adults to measure children's symptoms, ages 16 and older. However, the Clinician-Administered PTSD Scale for Children and Adolescents (CAPS-CA) was developed to specifically target children ages 8–15 years of age (Strand, Sarmiento, & Pasquale, 2005). The CAPS-CA is a semi-structured clinical interview that evaluates an individual's frequency and intensity of traumatic symptoms and how they impact functioning. The assessment reviews each of the 17 symptoms of a PTSD diagnosis and examines the impact over a one-month duration. The CAPS-CA can take between 30-minutes to 2

hours to complete the entire interview depending upon the participant's engagement. The CAPS is considered the "gold standard" and demonstrates a .82 sensitivity and .64 specificity (Kok, de Haan, van der Velden, van der Meer, Najavits, & de Jong, 2013). Excellent inter-rater agreement was found with reliability coefficients ranging from .92 to .99 (Weathers, Keane, & Davidson, 2001). Additionally, raters found perfect agreement with diagnoses of PTSD. Convergent validity was measured against the Mississippi Scale for combat veterans at .70 and the PK scale of the MMPI at.84. The CAPS was measured for discriminant validity against depression and anxiety scales and results indicate correlations of .61–.75 and .66–.76 respectively. The CAPS-CA was examined for reliability and results indicated a total scale Cronbach's alpha of $\alpha = 0.86$ in the age group of 13–18 (Diehle, de Roos, Boer, & Lindauer, 2013).

1.9. Future directions in rehabilitation research

While research regarding trauma and child-maltreatment is well-established, more research is needed to fully understand the specific vocational impact of traumatic histories on individuals with CID. Future research should focus on determining the degree to which rehabilitation counselors utilize trauma-informed approaches, utilize screening and assessment related to traumatic histories, and capacity for ethical decision making related to service provision in this area. Also, research that includes trauma's impact as part of a personal factor in ICF consumer conceptualization is encouraged among rehabilitation researchers.

2. Conclusions

Trauma histories are more common in the lives of individuals with disabilities. Rehabilitation providers who are trauma sensitive and who utilize trauma-informed principles will better serve their clients. Trauma-sensitive rehabilitation providers not only understand the risk factors for those most likely to be exposed to trauma, but are knowledgeable about accompanying symptoms that can complicate adjustment to disability and reaching life goals, including employment. Trauma-sensitive rehabilitation providers know how to assess for trauma exposure, understand the appropriate reporting procedures, and are careful in their discussions with consumers, and their families when discussing trauma and its impact. Trauma-sensitive rehabilitation providers can implement communication strategies outlined in this paper to facilitate a range of goals.

Conflict of interest

None to report.

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