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Trauma-Informed Acceptance and Commitment Therapy for Substance Abuse

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CERTIFICATE OF APPROVAL

Clinical Research Project

This is to certify that the Clinical Research Project of

Whitney Nasse

has been approved by the
CRP Committee on August 5, 2022
as satisfactory for the CRP requirement
for the Doctorate of Psychology degree
with a major in Clinical Psychology

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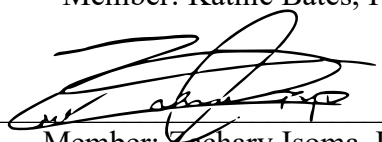

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Abstract

The high co-morbidity of trauma and substance use disorders has prompted the need for more trauma-informed care within the available substance abuse treatments. The purpose of this research was to dissect and identify the strengths of two empirically studied treatment approaches for trauma and substance abuse. Furthermore, a suggested protocol was defined, showing the integration of these two models as a proposed treatment modality for trauma and substance abuse populations. Implications and recommendations for further research on this topic are also highlighted.

TRAUMA-INFORMED ACCEPTANCE AND COMMITMENT THERAPY

FOR SUBSTANCE ABUSE

DEDICATION

I owe everything to my parents because, without them, I would have never been able to spend half of my life dedicated to my education. Their support and unconditional love have pushed me to become the woman I am today. They have encouraged and allowed me to pursue my dreams in ways I never imagined possible. They continue to cheer me on even when I doubt my abilities to be able to accomplish my own goals. I have learned the value of a work ethic and dedication from my father, who I continue to look up to every day. My mother has pushed me to never settle for anything but greatness and has taught me to value family and connection with others. Without them, none of this would have been possible, and I am so grateful to have two of the best role models that I continue to strive to make proud every day.

I also want to thank my sister and her three children for continuing to give me a purpose and something to continue striving to be better for. Every time I see my niece and nephews' faces, I feel a spark inside of me that wants to make any impact I can in this world to make it a safer and more accepting environment for them to grow up in.

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CHAPTER I: INTRODUCTION

Trauma and substance abuse have been linked and studied for many years (Calmes et al., 2013; Gielen et al., 2012; Mandavia et al., 2016). The overall findings have shown that individuals who have experienced trauma in their lives are at an increased likelihood of engaging in substance use to cope. Alternatively, engaging in substance use also increases the likelihood the individual may be susceptible to experiencing a trauma-related events (Calmes et al., 2013; Courtois, 2004; Mills, 2015). The treatment approaches recommended for each of these disorders have often been separated to target specific symptomology within each diagnosis. Since these disorders often overlap, it is important to address the symptoms of both disorders to potentially increase the effectiveness of treatment for the individual.

There may be success in combining two different transtheoretical treatment approaches that show effectiveness with each disorder. The high comorbidity of substance abuse and trauma has prompted experts over the years to advocate for more use of trauma-informed care within treatment settings (Courtois, 2004; Mills, 2015). Trauma-informed care can be described as the process of creating a framework of treatment in a safe environment that is developed through a lens of understanding the etiology of trauma and how it affects the lives of our clients (Herman, 1992; Pringer & Wagner, 2020). To provide a healthy atmosphere for recovery and to prevent re-traumatization, it is important to understand the effect each condition has on the other (Mills, 2015). First, it is essential to define each disorder and then outline each of the therapeutic models that can be integrated for these disorders.

Trauma-Related Disorders

According to the *Diagnostic and Statistical Manual of Mental Disorders (DSM-5),* trauma can be defined as witnessing or experiencing an event that involves real or threatened

harm to the individual (American Psychiatric Association, 2013). This event can lead to symptoms associated with posttraumatic stress disorder (PTSD). These symptoms can be categorized into four clusters: re-experiencing, avoidance, negative cognitions and mood, and arousal. Re-experiencing for an individual can include having intrusive memories and thoughts related to the trauma. These thoughts are typically unwanted and can cause the individual distress. The individual may then avoid people, places, and things related to the trauma in hopes of lessening the negative cognitions and mood they are experiencing. The arousal symptoms may be seen in irritability and an exaggerated startle response (American Psychiatric Association, 2013).

Even if an individual does not meet the criteria for a diagnosis of PTSD, it does not mean they have not experienced significant trauma (Courtois, 2004). Every person has their own unique way of coping with the difficulties they have witnessed and been exposed to in their life. Multiple individuals may experience or witness the same exact event, but only one may be left with PTSD. The diagnosis of PTSD was originally conceived to encompass the adverse reactions experienced by combat veterans after returning home from war. Since then, PTSD has evolved to include real or threatened death and experiencing or even witnessing. Despite the advances made with the criteria for PTSD, some clinicians still believe that PTSD is not a perfect fit for specific populations, including victims of child abuse and domestic violence (Courtois, 2004).

Complex trauma is a form of trauma that occurs frequently and cumulatively over time, typically within particular relationships and contexts (Courtois, 2004). The examination of the consequences of child abuse changed the perception of trauma, and it now includes all aspects of domestic violence and attachment trauma that exist within the context of the family and other close relationships. In this context, a child is often so vulnerable that they are manipulated and

conditioned in various ways. The child's development can be severely compromised and lead to many mental health and substance abuse problems typically seen later in life (Courtois, 2004; Gielen et al., 2012; Root, 1989). These children may not show PTSD symptomology later in life, but the longstanding abuse and neglect these children have endured should be recognized by professionals as complex PTSD and treated effectively (Courtois, 2004).

A longitudinal study completed from 2008 to 2012 revealed that individuals who had experienced one or more potentially traumatic events also had co-occurring mental health or substance abuse issues (Forman-Hoffman et al., 2016). These individuals were more likely to have used mental health services and have correlating medical conditions. There are many factors in trauma-related disorders, and research has shown that individuals with trauma are also more susceptible to other conditions, including anxiety, depression, asthma, and high blood pressure (Forman-Hoffman et al., 2016).

Substance Use Disorders

Substance use disorder (SUD) is classified in the *DSM-5* as a pattern of substance-related behaviors that an individual continues to engage in despite the consequences faced (American Psychiatric Association, 2013). The amount of consumption, attempts to cut down or control use, desire or cravings, consequences, and impairment are all evaluated in the criteria for a SUD (American Psychiatric Association, 2013).

Physical dependence alone does not permit the diagnosis of a SUD (American Psychiatric Association, 2013). Physical dependence usually relates to tolerance (i.e., needing more to produce similar effects) and withdrawal (i.e., symptoms that occur when the drug is eliminated), but there also must be an impact on someone's level of functioning. Individuals who are abusing substances must also experience an impact on their social, occupational, or emotional

functioning. The impairment must occur within these major areas of their functioning to qualify for a SUD (American Psychiatric Association, 2013; Dass-Brailsford & Myrick, 2010).

Addiction is often a complex term used to describe individuals struggling with substance abuse (Davies et al., 2015). Individuals who struggle with substance abuse are often faced with difficult and unwanted thoughts, feelings, and emotions that can contribute to the maladaptive behaviors often seen within addiction (Davies et al., 2015; Lee et al., 2015). In many cases, substance use disorders are often associated with mental health conditions, including trauma (Lee et al., 2015).

Comorbid Trauma and Substance Use Disorders

Over the years, clinicians have found that treating substance use and trauma together has proven difficult due to the high likelihood of re-traumatization and the utilization of substances to cope with traumatic events (Courtois, 2004). It is important to understand the overlap between trauma and substance use to provide the most effective evidence-based approaches to clients seeking treatment. Substance use and trauma are intertwined, leading many individuals to use drugs as a way of coping with the negative emotions associated with the trauma. Additionally, individuals who engage in risky behaviors, including substance abuse, can also be more vulnerable to experiencing a traumatic event. When an individual is in an unhealthy environment and using substances, they are more likely to be exposed to or experience a traumatic event (Courtois, 2004). Some individuals have not experienced trauma prior to engaging in substance abuse; however, abusing substances makes an individual more vulnerable to trauma exposure (Mandavia et al., 2016). Alternatively, people who have experienced childhood trauma and then utilize substances to cope with the trauma will also be at a higher risk of suffering more trauma in adulthood (Mandavia et al., 2016).

Researchers have attempted to explore the prevalence of comorbidity between individuals diagnosed with substance use disorders who also have a history of trauma (Gielen et al., 2012). Gielen and colleagues conducted a cross-sectional design comparing a group of people with SUD (432 participants) and a healthy control group (475 participants). These participants were gathered from 11 different treatment centers within the Netherlands from October 2008 to May 2009. The investigators made a comparison of the prevalence of PTSD and trauma exposure between individuals with and without substance use disorder. Participants included individuals with a SUD who were asked to self-rate their symptoms using the Self-Rating Inventory for PTSD (SRIP; Hovens et al., 1994).

The results showed that 36.6% of individuals with SUD scored high on symptoms significant with PTSD, compared to 10.2% in the healthy control group (Gielen et al., 2012). Overall, there was a significant relationship between SUD and whether an individual met the cutoff score for PTSD. Consistent with findings from Mills et al. (2006), results indicated that having either disorder can increase the odds of having the other. In fact, individuals were 5.27 times more likely to score positive on PTSD symptomology if they had comorbid SUD than if they did not. Finally, almost every participant with a SUD (97.4%) reported at least one traumatic experience in their lifetime, further exhibiting the relationship between substance abuse and trauma exposure (Gielen et al., 2012). As seen in the results of this study, an appropriate and effective protocol to treat individuals with SUD and trauma exposure or PTSD is warranted.

As previously discussed, individuals who experience a traumatic event have a higher risk of engaging in substance use to cope, and individuals who have been engaging in substance use tend to have a higher risk of being exposed to a traumatic event (Mandavia et al., 2016). A

longitudinal study of 5,653 participants from 2008-2012 completed by Forman-Hoffman et al. (2016) found that 60% of individuals who experienced one or more potentially traumatic events (assessed by the past year PTSD module) engaged in illicit drug use compared to the 45.9% who did not engage in substance abuse. Participants in the study who had experienced trauma were also more likely to have a substance abuse diagnosis or have sought out treatment for substance abuse (Forman-Hoffman et al., 2016). Another study found that in the presence of repeated negative emotional interactions (i.e., trauma), individuals experience a lack of emotion regulation, which can lead to more severe psychiatric symptoms and maladaptive ways of coping (Mandavia et al., 2016). The symptoms can be difficult for the individual to cope with, especially when they are left with a lack of coping abilities from experiencing complex trauma. Abusing substances becomes the most realistic way to manage emotions for these individuals (Dass-Brailsford & Myrick, 2010; Mandavia et al., 2016).

Overall, research has shown a strong correlation between trauma and SUDs leading to the need for trauma and SUDs to be treated together (Dass-Brailsford & Myrick, 2010; Forman-Hoffman et al., 2016; Gielen et al., 2012; Mandavia et al., 2016). Trauma and SUDs have a decent amount of research on treatment protocols for each disorder separately, but the effectiveness of treatments for these co-occurring disorders is still marginal (Covington et al., 2008; Dass-Brailsford & Myrick, 2010). We know these disorders exist together often, but we lack empirically based treatment approaches specifically for the combination of these diagnoses (Covington et al., 2008; Dass-Brailsford & Myrick, 2010).

Trauma Triphasic Model (TTM)

The TTM is a phase-based approach, which includes three phases of treatment (Herman, 1992; Ford & Courtois, 2020; Pollock et al., 2017; Van Vliet et al., 2018). The first phase of the

TTM is identified as safety and stabilization, which allows the clinician to create a safe place for the client to develop the necessary tools to be able to move in to phase two. The second phase of the TTM is known as remembrance and mourning, which focuses on processing the trauma or traumatic experiences. The third phase of the TTM is identified as reconnection and integration, where the clinician and client work to integrate the tools learned into the client's everyday life and to develop a life beyond the trauma (Herman, 1992; Ford & Courtois, 2020; Pollock et al., 2017; Van Vliet et al., 2018).

The TTM is different from other trauma treatment approaches because it allows flexibility for the clinician to be able to move between the phases and to meet the client where they are in their journey throughout treatment (Herman, 1992). Some approaches to trauma begin with exposure; however, if the client does not feel safe to process the trauma or have the necessary tools for emotion regulation, re-traumatization or even early termination could happen during treatment (Herman, 1992; Ford & Courtois, 2020; Van Vliet et al., 2018). The phase-based approach to treatment has been recommended for treating individuals who have experienced any history of trauma including being diagnosed with PTSD, complex trauma, and dissociative identity disorder (DID; Herman, 1992; Ford & Courtois, 2020; Pollock et al., 2017; Van Vliet et al., 2018). The TTM is also known for being transtheoretical, given its ability to fit into any empirically supported approach (Herman, 1992).

Judith Herman spearheaded the forefront of phase-based trauma-informed care. In her book, she outlined the TTM in detail and illustrated the foundations of each phase of treatment with case examples for the clinician to learn firsthand. She emphasized that trauma treatment should always be comprehensive because of the complex effects on human functioning (Herman, 1992). Although Judith Herman gave her suggestions for interventions and exercises that can be

included within the three phases, these activities are not essential or required for the fulfilment of the TTM. The goal of the TTM is to take a step back from the trauma, build a strong foundation to be able to process the trauma, and reintegrate the tools learned into everyday life. The TTM focuses on empowerment and helping the clients to regain control of their life post-trauma. Herman notes that trauma treatment is rarely simple and linear, so the flexibility of an approach that can be integrated with other approaches is ideal for the best outcome overall. She further emphasized that it is important to move slowly and safely to prevent re-traumatization (Herman, 1992).

The first stage of the triphasic model focuses on developing safety. The relationship between the client and the therapist must feel very secure and safe prior to addressing traumatic memories (Ford & Courtois, 2020; Herman, 1992). Preparing the client for phase two of treatment (trauma processing) is crucial during phase one. The therapist should address the difficult emotions that may occur during the exposure phase (phase two) and develop a plan and resources to manage these emotions. The client must identify what they do when they are distressed, and then the client and therapist can evaluate these skills and change or develop healthier coping skills. The relationship between the therapist and client should be collaborative and not authoritarian. Maintaining strong boundaries with the client is important because they will try to test these boundaries from time to time. During phase one, the therapist also wants to respect the client's choices while maintaining the client's safety (Ford & Courtois, 2020). A part of some individuals' trauma has been related to inappropriate and unwarranted touch, so it is important to be cautious of touch when working with clients (Herman, 1992). The length of phase one is going to be different for every client, depending on their situation and their emotional and cognitive abilities. It may take a very long time for individuals with certain

disorders or some comorbid diagnoses (Herman, 1992; Ford & Courtois, 2020; Van Vliet et al., 2018).

One technique that could be used during phase one is grounding. One example of grounding is guiding the client through the "five, four, three, two, one" exercise (Herman, 1992). The clinician asks the client to identify five things around them they can see, four things around them they can touch, three things around them they can hear, two things around them they can smell, and one thing around them they can taste. This exercise allows the client to reconnect with the present moment during the session (Herman, 1992).

Another aspect of phase one may be increasing the client's somatic awareness—sensations within the body (Ford & Courtois, 2020). Many clients with trauma histories lack this awareness, which can be developed in treatment. One exercise is having the client close their eyes and pay attention to sensations (e.g., sounds, textures). Another exercise is a body inventory, where the therapist starts with the feet and moves up the whole body, instructing the client to describe the sensations they feel related to each body part. Although some individuals who have experienced severe traumatic experiences related to their body may struggle to get in touch with the present moment awareness aspect of body scans and muscle relaxation techniques, research has suggested that these affect regulating and distress tolerance exercises are safe and important for forming a well-established baseline prior to phase two (Ford & Courtois, 2020). The clinician should always be aware of the possibility of re-traumatization and discuss warning signs with the client thoroughly during phase one (Herman, 1992).

Teaching the client how to say "no" could be another important aspect of phase one (Herman, 1992). The therapist needs to give them the experience of being able to say no and help them practice it. The client should feel comfortable telling the therapist no, which can help

during phase two if the client becomes too overwhelmed and needs to stop. Some nonverbal techniques may include dance, music, art, and collages. The goal is to be able to move the client more toward being able to verbalize what is happening for them. These techniques may be safer for some clients than expressing themselves verbally (Herman, 1992).

Mindfulness is also another technique that may be used to help with attention and emotion regulation (Ford & Courtois, 2020; Harris, 2009). This technique works to build self-acceptance and compassion as well as bringing body and self-awareness. One goal of mindfulness is to teach the client to be able to separate state from trait (Herman, 1992). The therapist could practice mindfulness during the session with the client and introduce new techniques to be able to be utilized in further stages of treatment. Decreasing distress and being able to differentiate between different emotional states will help the client to gain more insight and assist the client during phase two of treatment (Ford & Courtois, 2020). Once the core grounding techniques have been established, the therapist can utilize them during phase two and three if the client becomes too overwhelmed or begins to dissociate (Ford & Courtois, 2020).

During phase two, the therapist focuses on processing the traumatic memories (Herman, 1992). Manualized exposure models or more organic narrative approaches may be used during this phase (Gelinas, 2003; Pringer & Wagner, 2020; Van Vliet et al., 2018). The goal is to help the client acknowledge the trauma and its meaning. The client learns to mourn what was lost or never gained as a result of their traumatic experiences. It is important for the therapist to validate, carry the emotional burden, and listen empathetically to the client. The therapist and client walk through the trauma together, starting from what their life was like before the trauma and then how the trauma has affected their sense of self, world, and others. The therapist and client should learn what the trauma taught the client about themselves and the world. They should explore

what parts of the client had to be given up to be safe (Ford & Courtois, 2020). It is important that the therapist watches for signs that the client is becoming hyper-aroused or dissociating. The therapist may even need to encourage the client to slow down or utilize the coping strategies practiced in phase one (Ford & Courtois, 2020). If the therapist needs to interrupt the client's exposure, it is important to explain what one is doing and why (Herman, 1992).

One technique that could be used for phase two is the three-step narrative approach (Herman, 1992). The first step is to name the trauma. The clinician needs to conduct a full clinical interview to decipher the symptoms the client is experiencing and be able to effectively diagnose the appropriate disorder. This aspect of the process can serve as clarification and normalization for the client when they are able to understand the depth of the diagnosis and how it relates to them. Some clients may feel a sense of relief knowing that they are not crazy and that there is something that defines what they are personally experiencing. "Knowledge is power," and treatment adherence can increase when a client can increase insight regarding their diagnosis. Also, having language that the client can use to identify their experiences can give them an even greater sense of power over their trauma (Herman, 1992).

The second step is to outline the trauma by designating titles to the primary incidents (Herman, 1992). The clinician works to assist the client in regaining control over their story, and one way to do this is by giving the experiences names. Sometimes, the individual's story can become stereotyped and lack detail due to the overwhelming symptoms associated with the trauma. The clinician's job is to guide the client in describing the trauma with the necessary tools (Herman, 1992).

The third step is to fill in the details one at a time (Herman, 1992). This is the point where the client uses the language learned to be able to tell their story in full and to regain the power

and control they have lost in relation to the trauma. The pace and timing of this process are crucial as failure to have that stability and communication could lead to re-traumatization. The story may be partially fragmented initially, but with the therapist's help, the client can voice their story more linearly. The therapist and client process each aspect of these steps together. The goal is to have the client be able to tell a linear story of the traumatic experience as they remember it (Herman, 1992).

Phase three occurs when the therapist and client work on growing beyond the trauma (Herman, 1992). During this phase, the individual who has experienced the trauma recognizes that they have been victimized. One of the goals is to be able to have the client envision a life beyond the trauma. The therapist should assist the client in connecting more to the community and maintaining a strong support network. The therapist and client work on strengthening the skills the client has learned thus far and applying them to their life in the world (Ford & Courtois, 2020). A clinician can accomplish this with their client by having the client set boundaries related to their trauma in their everyday life. The client may have to set boundaries with family members or friends. For example, the client may start to realize the societal and environmental pressures that have contributed to their victimization. The clinician must work with the client on disclosures and confrontations. This means the client needs to have a difficult conversation with family and friends about the trauma they have endured. The client may not want to confront their perpetrator or abuser but may find it helpful to tell their story to others who are close to them. The response from the family or friends does not matter, but the truth behind the trauma and the story the client tells is what is most important. By doing this, the client is practicing the skills they have learned in phase one, like saying no and setting firm boundaries. It is important for the clinician to prepare the client for the possible responses they may receive

after having these conversations (Ford & Courtois, 2020). The clinician can work with the client to start implementing all the new coping skills they have learned in managing their distress related to the trauma in their normal day-to-day activities (Herman, 1992).

Herman (1992) related phase three to self-defense classes. The client works to learn how to defend themselves and utilize the skills needed to calm their bodies down during a stressful moment. They learn to recognize the adrenaline for what it is and persevere even when they thought they never could. They start to choose these dangerous situations to challenge themselves and their skills. These exercises often build the encouragement and empowerment needed to create a life beyond the trauma. The client may start slowly exposing themselves to triggers (i.e., person, places, or things that cause the client to relive their traumatic experience) while performing their grounding techniques (Herman, 1992).

Another aspect of phase three is when the client starts developing a new sense of self (Herman, 1992). The client has been a victim in their mind for so long, but during the final phase of reintegration, the client is able to reconnect to some of their old values and integrate new aspects that are important to them. As the client starts to come into their own identity, they can develop new interests and hobbies that they previously felt did not fit them due to their trauma. The clinician should help the client identify their positives and strengths and increase compassion for their new identity (Ford & Courtois, 2020). The individual can also start establishing healthier connections at this point after being able to rebuild trust with others. The clinician encourages seeking friendships and relationships that are not based on a false sense of self. These relationships have the capacity to be more genuine and authentic now that the client has established a healthier sense of self (Herman, 1992). For example, intimacy may have been a

struggle due to the trauma, but during phase three, the client is able to establish healthier boundaries around intimacy and not be tied to the preoccupations of the trauma (Herman, 1992).

The final part of phase three is activism and advocacy (Herman, 1992). The clinician assists the client in finding their voice, which can lead the client to develop new alliances with others who have experienced similar events. The individual may not want to publicize their trauma, but they may want to be a part of other organizations that advocate for trauma survivors in the hopes of helping others. When a client spends their time helping someone else going through their struggle, it can support the client to also feel loved and heard. In the final stages of treatment, it is also important for the clinician to educate the client on how trauma recovery does not have an end and symptoms may resurface at times during significant life events or changes. Enhancing the client's motivation to be open to re-seeking treatment when needed is essential before terminating (Herman, 1992).

According to Herman (1992), it does not matter what one calls the stages as long as one follows each phase. When a therapist introduces trauma treatment in phases, it can help the client digest the trauma in smaller amounts, which lessens the risk of the client de-stabilizing due to being overwhelmed or dissociating during treatment (Gelinas, 2003). These three phases have been defined differently in the research; therefore, for the purposes of this literature review, it is important to clarify the different versions and their terminology. According to Gelinas (2003), the phases have been referred to as: "stabilization and symptom reduction; metabolization and integration of traumatic material; and personality reintegration and rehabilitation of the self in relationship and in the world" (p. 92). A recent Australian study defined the treatment in two phases: stabilization and trauma processing (Boer et al., 2021). This study also recommended completing phase one in a group therapy setting and then moving phase two into individual

therapy to save treatment costs for the individuals (Boer et al., 2021). For the current literature review, stage one was referred to as safety and stabilization, stage two as remembrance and mourning, and stage three as reconnection and integration.

Acceptance and Commitment Therapy

Trauma-informed care could be integrated into any theoretical approach. Acceptance and commitment therapy (ACT) is a third-wave behavioral therapy that was developed by Steven Hayes (2004) out of relational frame theory (RFT) and has received support in the research literature for the treatment of substance abuse (Wilson & DuFrene, 2012). Combining the TTM and ACT is an area that warrants further exploration as having the potential to increase the effectiveness of treatment for individuals with co-occurring substance abuse and trauma.

Theoretical Foundation of ACT

Steven Hayes and his colleagues began developing ACT concepts out of Skinnerian approaches because they believed behaviorism was not completely encompassing the cognition and language that human experience entails (Hayes et al., 2001; Hayes et al., 2006). ACT was built out of Relational Frame Theory (RFT), which has a philosophical root known as functional contextualism (FC; Harris, 2009; Hayes et al., 2001; Törneke, 2010). A full description of RFT and FC is beyond the scope of this paper but can be found in the available literature (e.g., Harris, 2009; Hayes et al., 2001; Törneke, 2010).

RFT and FC stem from Skinner's radical behaviorism (Harris, 2009; Hayes et al., 2001). FC examines the function of behaviors in the context of an individual's environment. Most philosophical models of psychology view the etiology of psychopathology as stemming from many dysfunctional or problematic parts (i.e., unhelpful thoughts, feelings, and behaviors) that have to be changed or repaired (Harris, 2009; Hayes et al., 2001). However, FC examines the

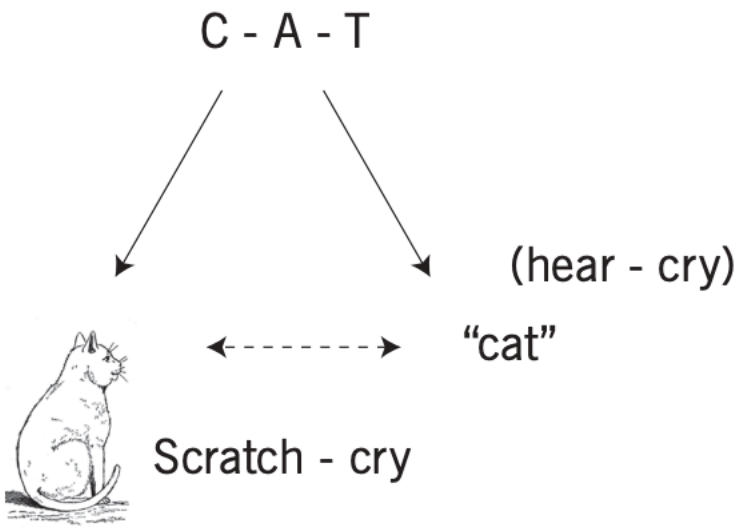
function or purpose in which these thoughts and feelings take place (Harris, 2009; Hayes et al., 2001; Törneke, 2010). This means that FC believes all behaviors are functional within context, and it is not until a behavior is limiting an individual's ability to live a meaningful life that it is seen as problematic or restrictive. The goal of FC is to be able to predict and influence behaviors by noticing how the behavior functions in the context of an individual's life. The mechanisms of most psychological theories work to reduce or replace the unwanted thoughts and feelings, but ACT aims to fundamentally transform the client's relationship to these thoughts and feelings (Harris, 2009; Hayes et al., 2001).

Relational frame theory (RFT) is a psychological theory of human language that is derived from the concepts, languages, and images that individuals learn and develop over time (Hayes et al., 2001). RFT is the unique ability for humans to engage in arbitrarily applied relational responding, meaning that an individual's response to one stimulus is in relation to another stimulus. RFT posits that there is an arbitrary number of relations and that these responses to the concepts lead to higher cognition (Törneke, 2010). For example, people start to make connections with language and then start to see the world through the networks that they have created from the relationship of language and images. Steven Hayes would argue that when an individual becomes tied to these concepts and attach meaning to the language it can create psychological distress (Hayes et al., 2001).

Learning language and building relational frames is a key component of RFT (Harris, 2009; Hayes et al., 2001; Törneke, 2010). Relational framing consists of derived stimulus relations. For example, if A = B and B = C, then there is a relation drawn between A and C that is derived even though it is not directly trained (Hayes et al., 2012; Törneke, 2010). Another example is when a child is learning how to label their environment, a teacher or parent will show

the child a picture and say the word “dog,” then the teacher will ask “what is this a picture of?” The child will respond “dog.” The teacher can also say “point to the dog” and the child will derive from the previously learned relation that the spoken word “dog” is related to the picture of a dog. Another example of how relational frames are built is seen in Figure 1 (Hayes, Strosahl, & Wilson, 2012, p. 43). This shows the relationship between a child learning the word c-a-t and how it relates to a furry mammal. Later if the child is hurt by a cat and cries, they develop a new relational network, which leads the child to cry upon hearing the word cat even though there is no direct history of events occurring with the name cat.

Figure 1



Source: Acceptance and commitment therapy: The process and practice of mindful change (p. 43) by Hayes, Strosahl, & Wilson, 2012, Guilford Press.

Individuals develop relations as a child and then begin to derive more and more relations over time (Harris, 2009; Hayes et al., 2001; Törneke, 2010). This allows individuals to expand their knowledge and continue learning while using what they have learned and relating them to different contexts. It allows individuals to generate a multitude of new thoughts without having to experience them directly. The relational networks that individuals derive can also be expanded

into mental health by associating unhelpful language on to their self, which can lead to an individual becoming attached to that language and meaning (Harris, 2009; Hayes et al., 2001; Törneke, 2010).

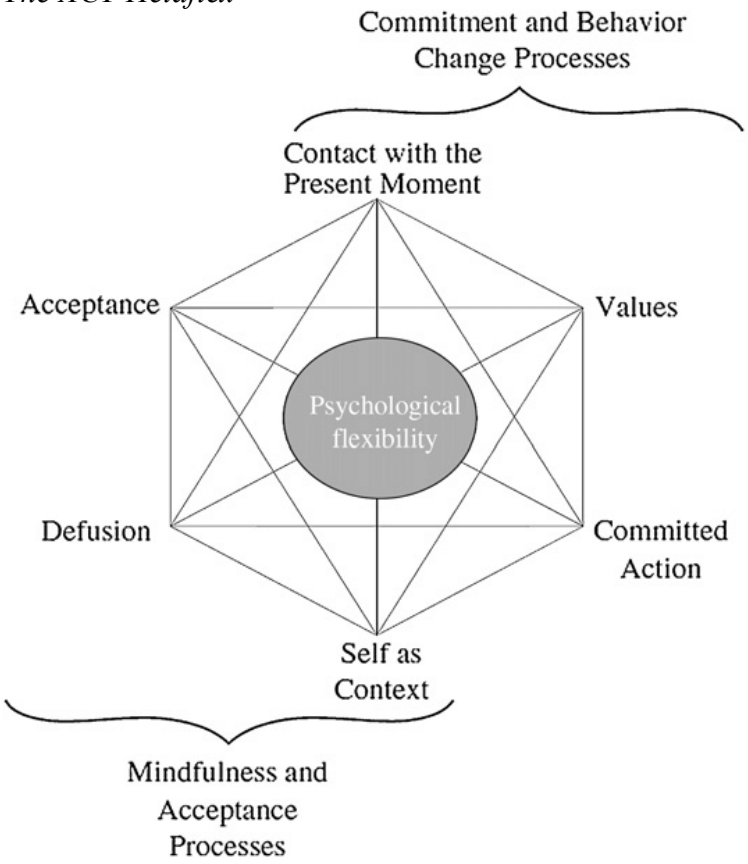
ACT was developed as an extension of RFT with FC as the philosophical foundation. Consistent with a FC philosophy, ACT does not impose that we accept every little thing, but rather it encourages "acceptance under two circumstances: when control of thoughts and feelings is limited or impossible, and when control of thoughts and feelings is possible, but the methods used reduce quality of life" (Harris, 2009, p. 134). The primary goal of ACT is to increase psychological flexibility. Psychological flexibility is being able to be fully present in the moment and aware of emotions, sensations, and thoughts, including unhelpful ones to the extent that doing so increases personally meaningful behaviors (Harris, 2009). ACT aims to increase psychological flexibility by assisting clients in examining the function of their behaviors in context and whether they are congruent with the individual's values. When the values and behaviors are not aligned, unwanted thoughts and feelings usually drive these behaviors. When an individual starts to investigate what their mind is telling them, they may begin to see a pattern in their actions and begin to feel stuck. This feeling is defined in ACT as a moment of creative hopelessness, which will be described more in depth later on as it relates to substance abuse and trauma (Hayes et al., 2003). During creative hopelessness, the individual can then look at whether these actions are helping them achieve their goals or hurting them in the process (Hayes et al., 2003). Overall, ACT strives to assist clients in recognizing their suffering and utilizing the information they are receiving from their psychological processes to gain more psychological flexibility and to live a value-driven life (Harris, 2009).

Six Core Processes

The core processes associated with the development of psychological flexibility consists of six interrelated, mutually dependent core constructs (Hayes et al., 2006). Because of the multi-faceted, interrelated nature of ACT, the *hexaflex* (Figure 2) is one of many representations of psychological flexibility in ACT. As indicated in Figure 2, the hexaflex is divided into six constructs, two primary processes, and one combined goal. The left side of the hexaflex includes skills that focus on covert behaviors by employing mindfulness and acceptance strategies and consist of acceptance, cognitive defusion, present moment awareness, and the contextualized self. The right side of the hexaflex is focused on overt behavior change strategies, consisting of the contextualized self, combined with two behavioral action components: values identification and committed action. All six processes are essential in producing behavior change in a person's life in the presence of uncomfortable experiences. ACT is most effective when all six processes are integrated in a dynamic, inter-related, and cohesive process rather than individually (Hayes et al., 2013). Therefore, the development of psychological flexibility involves the contribution of all constructs, but not necessarily equally (Hayes et al., 2006; see Figure 2).

Figure 2

The ACT Helaflex



Source: Acceptance and commitment therapy: The process and practice of mindful change (p. 63) by Hayes, Strosahl, & Wilson, 2012, Guilford Press.

The six core therapeutic processes of ACT include: contact with the present moment, acceptance, defusion, self-as-context, values, and committed action (Hayes et al., 2011). When an individual is excessively controlled by their psychological reactions, they can become rigid in their thinking, which can lead to psychological inflexibility or the opposite of the 6 core processes including conceptualized past and feared future, experiential avoidance, cognitive fusion, attachment to the conceptualized self or self-as-content, lack of values clarity, and inaction, which will be touched on throughout the discussion of the six processes (Hayes et al., 2011).

Contact with the Present Moment. According to Harris (2009), contact with the present moment means fully experiencing the here and now. This means that the client is aware of what is happening in the current moment and not distracted by the past or future. In ACT, mindfulness exercises are often used in order to build up skills for contacting the present moment. ACT is considered a mindfulness and acceptance-based intervention that is part of the overall third-wave cognitive-behavioral therapy (CBT; Harris, 2009; Hayes, 2004; Hayes et al., 2011). Mindfulness activities can be seen as assisting people in extending the amount of time they devote to the present moment. All of the ACT processes are connected to present-moment awareness as a client needs to be in the moment to be able to engage with all other processes (Harris, 2009; Hayes, 2004; Hayes et al., 2011; Weehof et al., 2016; Walser & Westrup, 2007).

From an ACT perspective, one type of mental behavior that can lead to human suffering includes focusing on remembered past and imagined future events (Killingsworth & Gilbert, 2010). Research indicates individuals spend much of their day worrying about things that have not happened yet or dwelling on things that have already happened, forgetting to sit with themselves in the present moment and fully experience what is occurring (Harris, 2009; Hayes, 2004; Hayes et al., 2011; Weehof et al., 2016; Walser & Westrup, 2007). Some research indicates 47% of our thoughts are focused on the past and future, leading individuals to miss present moment experiences (Killingsworth & Gilbert, 2010). Research has shown that fusion to future events can lead to disorders like generalized anxiety and obsessive-compulsive (Bardeen & Fergus, 2016; Chawla & Ostafin, 2007; Thompson-Hollands et al., 2013) and fusion to past events can be linked to trauma disorders (Bardeen & Fergus, 2016; Courtois, 2004; Davies & Clark, 1998).

Mindfulness-based interventions that target present moment awareness have been studied for many years and continue to lead to improvement in quality of life and mental health overall (Bowen et al., 2009; Bowen et al., 2014; Chiesa & Serretti, 2014; Fox et al., 2016; Shorey et al., 2017; Veehof et al., 2016; Wielgosz et al., 2019; Zemestani & Ottaviani, 2016). Due to its adaptability and well-documented therapeutic approaches for individuals who may not respond to conventional mainstream treatments, present-moment awareness or mindfulness can focus on a wide range of diseases and co-morbid disorders (Wielgosz et al., 2019). Fox and colleagues (2016) found multiple activation sites in the brain during mindfulness meditation practices. Since many psychological disorders are linked to cognitive processing dysfunctions, mindfulness training can be utilized to modify or improve key cognitive functions that are related to psychological disorders (Fox et al., 2016; Wielgosz et al., 2019). Mindfulness helps us sit within the present moment and develop more awareness of what is occurring within our body (Harris, 2009; Hayes et al., 2011). Mindfulness has also been used with trauma and substance related disorders as a tool to help the individual engage with people and activities that they have felt distanced or detached from due to their trauma and/or substance related symptoms (Batten & Hayes, 2005, Blackledge & Hayes, 2001).

Acceptance. According to the research, acceptance is described as actively engaging with psychological events directly, fully, and without unwarranted defense while behaving in ways that lead an individual more toward their values (Batten & Hayes, 2005; Blackledge & Hayes, 2001). Acceptance is a core process of ACT that targets experiential avoidance (Bardeen & Fergus, 2016; Chawla & Ostafin, 2007). Experiential avoidance is when humans attempt to avoid uncomfortable stimuli and use maladaptive coping mechanisms in the process. These experiences are rooted in human language and cognition (Blackledge & Hayes, 2001), and these

avoidance strategies are linked to unhelpful psychological outcomes for individuals (Bardeen & Fergus, 2016; Chawla & Ostafin, 2007). The purpose of acceptance is not necessarily enjoying the emotions experienced at all times, but rather making space for these emotions in an individual's life (Blackledge & Hayes, 2001; Harris, 2009). Acceptance and mindfulness-based approaches have been found to be useful in treating co-morbid disorders including PTSD and SUDs (Batten & Hayes, 2005; Blackledge & Hayes, 2001).

Research on experiential avoidance indicates emotional restriction and thought suppressionare ineffective when encountering painful internal stimuli and could lead to depression and anxiety (Blackledge & Hayes, 2001; Bowen et al., 2009). Verbal control strategies (i.e., changing the thought) may also not be helpful because the individual's private experiences have been engrained in them for so long which makes it difficult to suppress (Hayes et al., 2001). Avoidance strategies work to alleviate distress in the short term, but the suppression of such thoughts and feelings can cause greater distress in the long term (Blackledge & Hayes, 2001). For example, Davies and Clark (1998) conducted a study on thought suppression in which they split 32 participants into either a suppression group or a control group. Both groups were shown a video of an actual disaster and a video about polar bears. The suppression group was told to suppress their thoughts about the first film and to record their thoughts about the second, while the control group was told to record their thoughts about both films. They found that individuals who were told not to think about the tape they were shown had more thoughts related to the tape later than the control group. The findings from this study suggest that when an individual attempts to suppress or not think about an event it may cause a rebound effect that leads to the event being the main thought (Davies & Clark, 1998).

Cognitive Defusion. Cognitive defusion has been described in the literature as "looking at thoughts rather than from thoughts" (Harris, 2009, p. 437). It allows individuals to make space between their self and their thoughts and feelings in order to not be so controlled by them. Cognitive defusion is also known as deliteralization and is a technique used to help individuals cope with unhelpful thoughts and feelings (Blackledge, 2015). For example, when an individual repeatedly has the thought "I am a failure", they start to believe that thought is factual, which then can lead to feelings of depression and anxiety. This process is referred to in ACT as fusion to internal content, meaning that the individual has a hard time separating what is factual and what is just a thought. Often, individuals become so attached to their thoughts that they forget that they are just words or language being thought or spoken. The goal is to "defuse" the individual from their thoughts in order to start noticing the thoughts for what they are (Blackledge, 2015; Harris, 2009).

Research on cognitive defusion suggests that sometimes individuals have recurrent intrusive and disruptive thoughts, which can lead an individual to think those thoughts are facts and cause distress (Blackledge, 2015). Defusion techniques attempt to separate an individual's thoughts in their minds from themselves and their values in order to help with those intrusive thoughts (Blackledge, 2015). With defusion, an individual learns to watch our thoughts occur and "hold them lightly instead of clutching them tightly" (Harris, 2009, p. 59). Defusion exercises can often be intertwined with acceptance and mindfulness because it is another cognitive process that requires awareness and works towards generating acceptance of one's thoughts (Hayes et al., 2011).

Self-as-Context. Self-as-context is known in the literature as the starting point for a person's experience and the vantage point from where an individual makes their observations

(Moran et al., 2018). Self-as-context can also be referred to in the literature as self-as-process. Self-as-context or self-as-process work is described in the literature as what targets the self-as-content (Hayes et al., 2012). Self-as-content is the inflexibility process, and it is also known in the literature as the conceptualized self (Harris, 2009). Self-as-content is the fusion with stories that individuals have developed about themselves, their identity, and their history (Harris, 2009). The verbal content of the self comes from the lived experiences throughout the client's whole life (Harris, 2013; Hayes et al., 2011). Inflexibility occurs when a client is fused to their self-as-content and they lose the distinction between being the individual who is experiencing life in the moment and being the individual tied to stories and thoughts they have about their life (Harris, 2013; Hayes et al., 2011). As an individual elaborates their relational network through interactions, functions of their environment will change and lead to these new perspectives of the self (Harris, 2013; McHugh et al., 2020).

Research has shown that focusing on self-as-content can lead to more distress as the client lacks the ability to take different perspectives and is solely focused on the things they have learned over time (Moran et al., 2018). For example, when an individual is fused to events of the past and the content related to their self, it may be linked to trauma symptoms including thought intrusion and negative changes in thoughts and mood (Bardeen & Fergus, 2016; Courtois, 2004; Davies & Clark, 1998). Research has also found that individuals who had a higher sense of self-as-context and lower sense of their self-as-content had less distress and mental health symptoms overall (Moran et al., 2018).

The goal when working with self-as-context and self-as-process is to increase awareness of the self and to decrease the attachment to the conceptualized self (Hayes et al., 2012). Self-as-context is at the core of mindfulness because it has the ability to observe and become aware of

different perspectives, which underpins many psychological processes (Harris, 2013; McHugh et al., 2020). Self-as-context exercises can incorporate mindfulness and even acceptance processes within (Hayes et al., 2011).

Values. Values are defined in ACT as activities that give meaning to our lives (Harris, 2009; Wilson & Dufrene, 2009). They are described as being freely chosen instead of values that have been placed on the individual. Values differ from goals in that values are never accomplished but are seen more as a compass that guide behaviors and help individuals to make choices for their life (Harris, 2009; Hayes et al., 2011; Wilson & Dufrene, 2009). A key mechanism in values is verbal establishing stimuli (Ju & Hayes, 2008). Verbal stimuli works to elicit behavior, and when values are involved, it can be an increased motivator for behavior change within clients (Dahl, 2015). The clinician can work to establish values as an action that leads to more behaviors aligning with what the client finds important in their life. One intervention that could be used to target values is the "what do you want your life to stand for" exercise. This exercise asks the client to imagine themselves at their funeral and all of their family members speaking about how they lived their life. The goal is for the client to identify what they want to be remembered as and how that aligns with the life they are living in the present moment (Hayes et al., 2011).

When an individual does not have clear and established values, they can act in ways that take them away from what is most important to them (Harris, 2009). Sometimes an individual may be controlled by rules of their environment or society that have them act in a certain way in order to avoid unpleasant personal or public experiences (Plumb et al., 2009). If an individual's values do not align with their behaviors, they can experience more distress, and research has shown that a lack of values clarification can be linked to anxiety and substance related disorders

(Branstetter-Rost et al., 2009; Harris, 2009; Hayes et al., 2011; Plumb et al., 2009; Wilson & DuFrene, 2009).

Values are an important part of ACT in the sense that they guide the course for treatment because they guide the direction that the individual wants to go in their life (Harris, 2009). Branstetter-Rost and colleagues (2009) researched whether or not adding a values component to acceptance work for individuals enduring pain would be helpful. The researchers recruited 99 participants and assessed pain tolerance through a subjective rating of pain that was gathered after the participant removed their hand from a cold bucket with ice. In relation to values and pain, the participants were also told to imagine swimming in ice cold water to save a family member. This was utilized as a majority of the participants chose family as their top value. The findings suggested that the combination of acceptance and values did have an impact on overall pain tolerance but not on threshold of pain. The researchers found that the individuals were not reporting that the experience with their hand in the ice was more pleasant, but they were able to behave differently overall because of their strong value of family. Therefore, this research suggests that strong values can influence an individual's behavior (Branstetter-Rost et al., 2009).

Committed Action. Committed action is a values-based action that is used in circumstances to create a pattern of behavior change consistent with values (Hayes et al., 2011). Committed action is crucial in behavioral activation and/or change (Bach & Moran, 2018; Dahl, 2015; Harris, 2009; Hayes et al., 2011). Committed action includes being able to make space for unpleasant feelings while moving toward the values the individual wants to live by (Bach & Moran, 2018; Harris, 2009). The moment an individual notices their behavior going against their values and they re-direct it, they are engaging in committed action (Hayes et al., 2011).

Inaction is identified as the inflexibility process to committed action and is defined as behavioral avoidance to reduce or eliminate aversive emotions (Bach & Moran, 2018; Harris, 2009; Hayes et al., 2011). Inaction can be the state of feeling stuck or lacking motivation to do things. Avoiding unhelpful or uncomfortable feelings through inaction can be costly for patients and result in more distress. This may leave a client feeling stuck and lack values-driven behaviors. Inaction can be influenced by a lack of motivation and be hindered by private events such as emotions, thoughts, and distractions. The other five processes in ACT can be used to help the client identify barriers to committed action and increase willingness to engage in unpleasant experiences that can lead the client to more psychological flexibility overall (Bach & Moran, 2018; Harris, 2009; Hayes et al., 2011).

Committed action targets inaction through behavior that functions to service an underlying value. (Bach & Moran, 2018; Dahl, 2015; Harris, 2009; Hayes et al., 2011). There is committed action in every core process of ACT whether it be committing to present moment awareness or acceptance or being able to execute behaviors that align with what is important to the client (Hayes et al., 2011). The clinician works with the client to create actions or goals during the therapeutic process that require steps that will move them in the direction they want to go based on their values (Bach & Moran, 2018; Hayes et al., 2011). Research has shown that when a client commits to engaging in healthier behaviors that align with their values, the symptoms related to trauma and substance abuse begin to alleviate (Azkhosh, et al., 2016; Bach & Moran, 2018; Bahrami & Asghari, 2017; Batten & Hayes, 2005; Meyer et al., 2018).

Overall, the six core processes overlap with one another (Harris, 2009; Hayes et al., 2006; Hayes et al., 2011). For example, as present-moment awareness is being targeted, so can acceptance and defusion. When an individual is practicing mindfulness, noticing is also being

accomplished through self-as-context or the ability to take different perspectives. It is the difference between, “I feel anxious” and “my mind is having an anxious thought”. The ability to utilize a combination of the ACT processes together is what makes ACT effective in targeting the inflexibility that occurs in psychopathology (Harris, 2009; Hayes et al., 2006; Hayes et al., 2011).

Exercises used within ACT

ACT uses many metaphors and experiential exercises in practice to help the client to see things from a different perspective rather than just trying to understand the concepts intellectually (Stoddard & Afari, 2014). RFT describes metaphors as the concepts that allow individuals to connect relational networks between things that are different in order to see a cause and effect (Hayes et al., 2001). One example of a metaphor commonly used is the “crying baby on the plane” (Stoddard & Afari, 2014). If one travels often, they have probably encountered a child who has cried next to them on the plane. The therapist sets the scene for this metaphor by explaining that they are on the plane, and a child is crying next to them, and the parents are doing everything they can to get the baby to stop crying, but the child is doing what children do when they are unhappy. The therapist explains to the client that they have a few options. They could help the parents silence the baby, show their frustration and give dirty looks to the parents, or accept that the baby is crying and continue doing what they had planned to do on the flight. Many clients confuse acceptance with resignation. This metaphor is a great example of how individuals can accept something occurring around them without thinking that what is happening is acceptable (Stoddard & Afari, 2014).

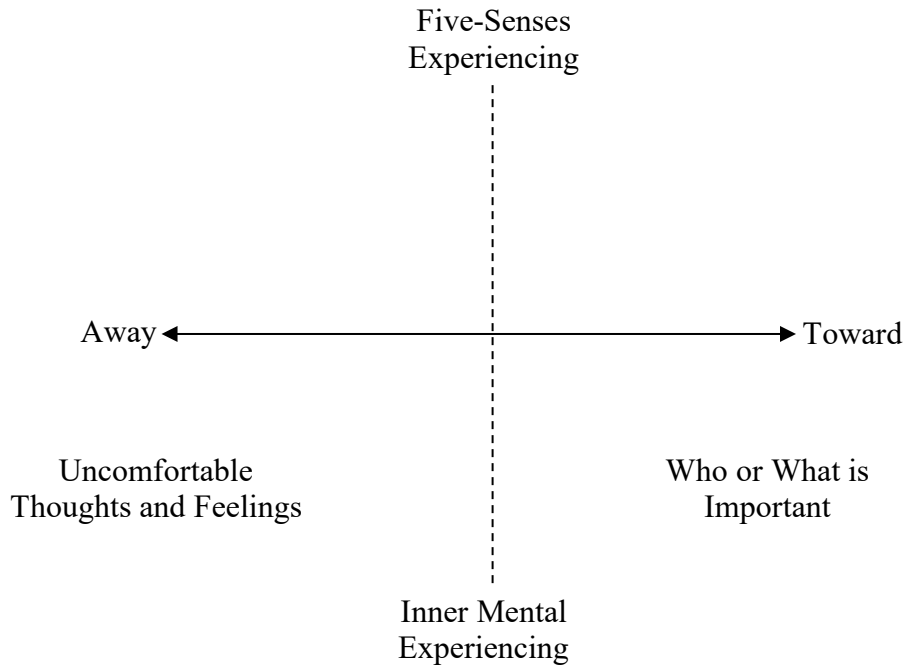
Another popular exercise is “leaves on a stream” (Stoddard & Afari, 2014). This exercise is often used in a group setting but can also be used in individual therapy. The therapist walks the

client through the experiential exercise by having the client imagine that they are sitting in front of a stream with leaves floating down in front of them. The therapist asks the client to notice the leaves and notice the thoughts they are having simultaneously. The therapist instructs the client to place each thought on top of a leaf floating down the stream and watch it as it floats away. This technique is commonly used to explain defusion to the client. The clinician explains to the client that they do not want to change or control their thoughts but simply see their thoughts for what they are (Stoddard & Afari, 2014).

Another essential model similar to the hexaflex that can be used as an exercise within ACT is the matrix (Harris, 2009; Hayes et al., 2011; Polk et al., 2016; Figure 3). The ACT matrix focuses on values that the individual has and then what thoughts and feelings are getting in the way of the individual achieving those values. The clinician explains to the client how their behaviors are moving them more away from the things that are most important to them. The center of the matrix is identified as the "noticing" aspect of oneself. The clinician helps the client see who is making these decisions and how these choices affect their values (Harris, 2009; Hayes et al., 2011; Polk et al., 2016; see Figure 3).

Figure 3

The ACT Matrix



Source: The Essential Guide to the ACT Matrix: A Step-by-Step Approach to Using the ACT Matrix Model in Clinical Practice (p. 3) by Polk et al., 2016, Context Press.

Overall, ACT is described as an evidence-based approach that has shown some effectiveness in addressing substance use (Azkhosh et al., 2016; Bowen et al., 2009; Chiesa & Serretti, 2014; Hayes et al., 2004; Lee et al., 2015), social anxiety (García-Pérez & Valdivia-Salas, 2018), physical discomfort (McCracken, 1998; Veehof et al., 2016), alcohol-related and co-occurring mental health diagnoses (Batten, 2005; Petersen & Zettle, 2009), and trauma-related disorders (Batten & Hayes, 2005; Blackledge, 2004; Orsillo & Batten, 2005; Walser & Westrup; 2007). ACT is an empirically based treatment and is transtheoretical, meaning it can be utilized in any treatment approach. It is best to use all processes together throughout the treatment instead of trying to separate (Hayes et al., 2011). The overall goal is to increase psychological flexibility by teaching a combination of mindfulness, acceptance, and values-

based activities (Hayes et al., 2011). The rationale of ACT seeks to help patients navigate their uncomfortable experiences and work toward living a more meaningful life despite the emotional and physical barriers. ACT does this by integrating all six processes into the treatment as discussed previously. Finally, unlike other therapeutic approaches, ACT does not promise the reduction of the intensity of the discomfort; rather, it intends to have the patient more engaged with life during times of emotional and physical distress (Harris, 2009).

Statement of Problem

ACT is a process-based therapeutic approach that has shown to be effective with various mental health issues, including substance use disorders and trauma, separately. However, ACT has shown less research related to individuals who struggle with co-occurring trauma and substance use disorders. Previously, clinicians have suggested treating trauma and substance abuse separately; however, exposure to childhood trauma (i.e., sexual, emotional, physical, or verbal) often leads individuals to engage in lifetime substance abuse or alcohol abuse (Forman-Hoffman et al., 2016; Mandavia et al., 2016). If these problems are related, it follows that they should not be treated separately. There may be several functions of problematic drinking that are not related to reducing, eliminating, or controlling distressing internal stimuli (i.e., pleasure seeking, entertainment, etc); however, research has suggested that some individuals use these substances to cover for the psychological symptoms experienced from the trauma (e.g., depression, PTSD, anxiety; Forman-Hoffman et al., 2016; Mandavia et al., 2016). If both disorders are not treated, it could compromise the treatment altogether (Peterson & Zettle, 2009).

Clinicians are not always taught to treat more than one disorder at a time, and state and federal funding often do not reimburse for mental health and substance abuse treatment being provided simultaneously. Therefore, clinicians tend to focus on which disorder they think is the

most prevalent or is the underlying condition. Peterson and Zettle (2009) found that individuals diagnosed with depression and alcohol use disorder had greater treatment outcome success if they were treated with ACT that concurrently addressed both depressive and alcohol-related issues versus the standard individual therapy that addressed alcohol abuse. This study shows that only using one approach to treat one of the diagnoses instead of using a transdiagnostic approach or combining two approaches to treat both disorders can greatly impact overall effectiveness (Peterson & Zettle, 2009).

Another issue that clinicians face when deciding what treatment would be best for their clients is cost (Cook et al., 2019). Treatments recommended for trauma are extremely expensive for the clinician to become trained in, like eye-movement desensitization and reprocessing (EMDR) (American Psychiatric Association, 2013). Integrating EMDR within a phase-based trauma approach has been shown to be effective (Gelinas, 2003); however, most clinicians are unable to pay the money it costs to be trained as an EMDR therapist, especially when a clinician is working within a low socioeconomic status (SES) environment, and they are not being paid enough for their services. A majority of the population struggling with substance abuse and trauma are from low SES (Luoma et al., 2008; Mandavia et al., 2016). It is important to make manualized treatments more available and cost-efficient for clinicians to be able to access for their clients. Many of the ACT resources are free from the contextual science website. Resources for integrating a phase-based treatment approach are also readily available for clinicians to access (Cook et al., 2019; Courtois, 2004; Herman, 1992).

Overall, there is minimal research on the effectiveness of treatments created specifically to target these co-occurring disorders. The trauma triphasic model has become the standard for trauma-informed care and has shown to be effective for treating mild to severe and complex

trauma (Courtois, 2004; Herman, 1992; Van Vliet et al., 2018). ACT has shown to be transdiagnostic and effective in treating various disorders, including substance abuse, depression, and anxiety (Bahrami & Asghari, 2017; Batten & Hayes, 2005; Lee et al., 2015; Meyer et al., 2018; Orsillo & Batten, 2005). Therefore, combining ACT and the TTM, which work to target both substance abuse and trauma, can increase the effectiveness of treatment for the client.

Purpose of the Study

The purpose of this project was to critically review the literature to identify an effective way to assimilate a theoretical approach into a transtheoretical model to treat the co-occurring disorders of substance abuse and trauma. The objective was to theoretically integrate ACT (using research on ACT effectiveness and outcomes) into the transtheoretical trauma triphasic model and provide more information for a future protocol to be made for clinicians to utilize with clients struggling with trauma and substance abuse. The overall goal would be for studies to be conducted on the efficiency of this protocol with the substance abuse and trauma population in the hopes of being utilized as an effective treatment protocol in the future.

Research Questions

The following questions guided this literature review:

1. How does ACT treat substance abuse?
2. How does ACT treat trauma related disorders?
3. How can ACT and the TTM be combined to target substance abuse and trauma-related disorders?

Research Procedure

Information regarding the topics discussed was gathered by searching EBSCO and Google Scholar. The literature was gathered through searches of English articles with terms such

as *acceptance and commitment therapy for substance use, co-occurring substance use and trauma, PTSD and SUD, trauma triphasic model, acceptance and commitment therapy for trauma, trauma-informed treatment, the prevalence of trauma,* and *substance abuse*. Literature was primarily searched from 2005 to 2021; however, due to the early establishment of ACT and the TTM, some theoretical information was published prior and was referenced to understand the development of each theoretical approach. Additionally, relevant studies were examined for possible references.

CHAPTER II: ACT APPROACH FOR SUBSTANCE ABUSE

The purpose of this chapter is to identify how ACT has been and can be useful in treating SUD. The effectiveness of utilizing a third-wave approach for substance abuse such as ACT has been studied for over a decade (Lee et al., 2015). ACT specifically has preliminary evidence supporting its use for substance use disorders (Bowen et al., 2014; Chiesa & Serretti, 2014; Stotts et al., 2012; Zemestani & Ottaviani, 2016). However, there is no one specific manual for using ACT with substance use because ACT does not promote manualized approaches to treatment as there is no one-size-fits-all approach. Since ACT is very flexible, the six core processes can be used in many ways pertaining to substance use. ACT focuses on the way individuals view psychological pain, and it teaches tools that can be used to accept unwanted thoughts, feelings, and emotions that often lead to a maladaptive form of coping, including substance abuse (Azkhosh et al., 2016; Lanza et al., 2014; Lee et al., 2015; Stotts et al., 2012).

ACT Theory of Substance Abuse

ACT views substance abuse as the behavior functioning as avoiding the unwanted and painful emotions experienced (Hayes et al., 2004; Walser & Westrup, 2007; Wilson & DuFrene, 2012). ACT recognizes that the beginning of addiction is different for everyone. For example, some individuals use substances to engage in social situations more comfortably and some individuals find substances as a way of coping with painful things they have experienced. Eventually, the individual becomes addicted to the substance and develops a pattern of behaviors that pulls them away from their values (Hayes et al., 2004; Walser & Westrup, 2007; Wilson & DuFrene, 2012).

Individuals who experienced trauma also engage in substance abuse as an attempt to avoid traumatic cues and invasive memories, which perpetuates the experiential avoidance cycle

and can lead to more distress (Walser & Westrup, 2007; Wilson & DuFrene, 2012). Substance abuse is a common way for trauma survivors to be able to escape feared emotions by altering their internal experience (Mandavia et al., 2016; Root, 1989; Walser & Westrup, 2007). These substances become the individual's way of coping, and without them, the symptomology of the traumatic experience is heightened and uncomfortable (Root, 1989).

Evidence for ACT for Substance Abuse

According to the National Institute on Drug Abuse (2020), the evidence-based treatments recommended for substance abuse are cognitive-behavioral therapy, contingency management interventions/motivational incentives, community reinforcement approach plus vouchers, motivational enhancement therapy, the matrix model, 12-step facilitation therapy, and behavioral therapies. Some research that has compared the effectiveness of different treatment approaches for substance abuse has shown favorable opinions of ACT (Lanza et al., 2014; Mohammadi et al., 2020). The first wave of cognitive therapy focuses on changing a client's unhealthy thoughts and behaviors using techniques such as restructuring; however, research has shown that using these approaches, such as CBT, has not always been effective for individuals with SUDs (Lanza et al., 2014). ACT may be an effective alternative to CBT for the treatment of SUDs (Lanza et al., 2014; Mohammadi et al., 2020).

ACT in a group setting has also been compared to the 12-step approach of Narcotics Anonymous (Azkhosh et al., 2016). The study recruited 60 participants from Shiraz who were using opiates and were admitted to drug rehab centers. The mean age was 27 years, and the mean education level was 10 years. They were randomly assigned to three different groups with 20 participants per group. The first group received 12 sessions of ACT, the second group engaged in the 12-step program, and the third group received methadone maintenance treatment as usual.

The psychological well-being scale (Ryff & Singer, 1996) was used to measure six domains including autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance. The findings suggested that self-acceptance increased dramatically in the ACT group, which was consistent with previous research findings (Azkhosh et al., 2016). These results suggest that utilizing ACT can increase psychological flexibility in clients with opiate addiction and can be used to decrease distress during the withdrawal and recovery process (Azkhosh et al., 2016).

ACT has also shown evidence for treating patients struggling with opioid detoxification and withdrawal. In a pilot study by Stotts et al. (2012), a 24-session ACT-based opioid detoxification was developed and tested for 56 patients, both male and female, attending a methadone clinic compared to a drug counseling group. A majority of the participants were White (77%), then Black (13%), and Hispanic (10%). The ACT group received 24 weekly individual sessions during their treatment, and the drug counseling group also received 24 weekly individual sessions incorporating psychoeducation and coping skills for relapse prevention. The participants were assessed using the Detoxification Fear Survey Schedule (DFSS; Milby et al., 1997), which measures the level of fear during the withdrawal phased. Findings from this study indicated no difference between conditions on opioid use during treatment; however, participants in the ACT condition were more successful in completing detoxification (55% completion in ACT versus 37% in drug counseling), and participants in the ACT condition presented significant reductions on the Fear of Withdrawal subscale of the DFSS, indicating an increased willingness to endure uncomfortable withdrawal symptoms compared to the drug counseling condition (Stotts et al., 2012).

Hayes and his colleagues (2004) conducted a preliminary trial of ACT combined with methadone maintenance compared to the 12-step alternative. The participants (N = 138) were selected from methadone clinics in Reno, Nevada and had been on methadone for the last 60 days. The average age of the sample was 42 years old, 49% of the participants were male, and 13% identified as ethnic minorities. For the treatment conditions, participants were randomly assigned to methadone maintenance alone (MM), acceptance and commitment therapy plus methadone maintenance (ACT), or to the intensive 12-step facilitation therapy plus methadone maintenance (ITSF). Specifically, each person in the ACT group was treated using a 16-week treatment plan comprising 48 sessions. The treatment included 32 individual 1-hour sessions and 16 group 90-minute sessions in addition to the methadone maintenance regimen. Therapists used a written therapy handbook that included a thorough discussion of the ACT therapy components and the recommended order in which they should be addressed (Hayes et al., 2004). One of the therapists who provided individual treatment led the group sessions. A different written protocol was used for each session. The goal of the group sessions was to apply ACT concepts to real-life situations like finances and relationships.

Results suggested that at the 6-moth follow-up drug screen, 61% of participants in the ACT group tested negative, which was statistically significant compared to the 28% in the MM group. The addition of ACT to methadone maintenance was linked to lower dropout rates and a decrease in opiate use compared to their baseline, as well as lower subjective estimates of total drug use during follow-up (Hayes et al., 2004, 2011). Some of the tools used in this study were taken from Hayes et al. (2004), demonstrating how to elicit behavior change in a client using creative hopelessness (see Figure 4).

Brief acceptance and commitment therapy has also been shown to have positive outcomes after a single session for substance abuse and health-related behaviors (Barreto et al., 2019). Researchers in this study conducted a brief clinical interview on 39 out of 136 participants, who were recruited from a midwestern university and ranged in age from 18 to 29. Participants were majority female (79%) and White (74%), then Black (12%), Latinx (4%), Asian-American (3%), and multi-racial (2%). The participants engaged in one 60-minute ACT session that worked on their targeted behavior (i.e., tobacco use, alcohol use, marijuana, nutrition, exercise, or sleep) and completed an ACT matrix that identified internal and external barriers to the individual's progress. Upon identifying the barriers, researchers introduced ACT-consistent exercises led by the ACT trained therapists to assist the participant in overcoming physical or psychological challenges that may arise throughout the month while also setting specific, measurable, attainable, realistic, and timely (SMART) goals to provide a concise yet detailed outline to help the participant stay on track toward their targeted change. Last, researchers promoted motivation for change by asking participants to create a commitment statement based on their desired behavior change over 30 days. Results found that participants showed a significant positive change in the ACT condition (51% compared to 15%) within the targeted domains in regard to self-confidence, physical exercise, healthy eating habits, and sleep quality. These results suggest that brief psychotherapy can be beneficial in making significant changes in patients' lives and ease the daily workload of mental health providers (Barreto et al., 2019).

A pilot study comparing mindfulness-based relapse prevention (MBRP) and standard 12-step relapse prevention used a program that consisted of eight 2-hour weekly sessions with two therapists (Bowen et al., 2014). The study recruited 286 participants from a private substance

abuse treatment facility. The participants ranged in age from 18 to 70 years, 71.5% of the participants were male, and 42.1% were of ethnic/racial minority. They were randomized into either a MBRP group, regular relapse prevention group (RP), or the treatment as usual (TAU) group. The major themes of each session for the MBRP group were the role of "automatic pilot" in addiction, mindfulness in high-risk circumstances, and balancing acceptance and action. The first 3 weeks focused on establishing a solid understanding of physical, emotional, and cognitive events. Additional sessions focused on how to practice mindfulness in the presence of relapse triggers and how to recognize the function of thoughts in the relapse process. The emphasis in the final sessions was on a healthy lifestyle, self-care and compassion, and social support. Guided meditations ranging from 20 to 30 minutes, experiential skills-based practices, and discussion of practical applications were all included in each session. For assigned homework, participants received pamphlets and audio-recorded mindfulness exercises, as well as tracking sheets to measure daily cravings and mood (Bowen et al., 2014)

The study found that the individuals who received the MBRP had lower frequency and intensity of cravings (9.1 in the MBRP group compared to 15.8 in the TAU group) and higher acceptance and mindfulness-based coping strategies than the standard 12-step relapse prevention group (Bowen et al., 2009, 2014). This study shows the effectiveness of mindfulness-based interventions being used in substance abuse treatment. It is important to note that one of the key fundamental processes in ACT includes mindfulness; however, it is not the primary aspect of ACT. ACT differs from MBTA in that ACT integrates mindfulness techniques into the other core processes of ACT to increase psychological flexibility (Chiesa & Serretti, 2014; Lee et al., 2015).

Overall, ACT has been shown to be effective in working with individuals struggling with substance abuse (Azkhosh et al., 2016; Barreto et al., 2019; Hayes et al., 2004, 2011; Lanza et al., 2014; Mohammadi et al., 2020; Stotts et al., 2012). Based on the research above, ACT has been shown to decrease substance abuse consumption and behaviors related to addiction. More research can be done on different substance abuse populations to give a more general outcome of ACT treatment within addictions. However, this research is a good foundation for tailoring ACT for individuals with SUD (Azkhosh et al., 2016; Barreto et al., 2019; Hayes et al., 2004, 2011; Lanza et al., 2014; Mohammadi et al., 2020; Stotts et al., 2012).

Tailoring ACT for Substance Use

ACT is best used when the processes are intertwined within the treatment instead of being used exclusively (Harris, 2009; Hayes et al., 2011). Below is merely a framework on how ACT can be tailored specifically for the treatment of SUD based on the research discussed previously.

Creative Hopelessness

ACT describes creative hopelessness in substance abuse as that moment when the client realizes all the decisions they have been making have been leading to consequences in their life, and they may feel stuck and not know what to do next (Hayes et al., 2003). This period can be referred to as creative hopelessness because it allows the client to get creative about their next steps. Assisting the client during this process is similar to motivational interviewing, wherein the clinician works to assist the client in increasing openness to change. Some primary points the clinician focuses on during this time are what the client has tried and why these strategies have not worked. Identifying what the client wants, what the client has tried, and how it has worked is the overall goal for this part of treatment (Hayes et al., 2003). If the behavior needing change is

the individual's use of substances, the therapist can use the steps listed in in Figure 4 (Hayes et al., 2003) to target the creative hopelessness.

Figure 4

Working with Creative Hopelessness

Goals	Strategies	Interventions
Gain informed consent and commitment to therapy.	Develop knowledge necessary for informed consent. Develop a therapy contract.	Address alternative treatments. Address risks and benefits. Propose a specific time frame to review. Orient person to therapist and client roles.
Describe the client's change agenda and how it hasn't worked.	Detailed discussions of the client's experience with the problem. Help the client evaluate the experience.	What do you want from life? How have you tried to get it done? How has it worked?
Undermine client attachment to change agenda.	Develop workability as a yardstick.	Focus on workability. Talking to describe versus talking to make a difference. Use of metaphor. Use inherent paradox.
Engender willingness to abandon the unworkable change agenda.	Evoke creative hopelessness. Distinguish blame from response-ability.	You are stuck. Man in the Hole Metaphor. Chinese Handcuffs Metaphor. Feedback Screech Metaphor. Tug-of-War with a Monster Metaphor. Learned skill metaphors (e.g., playing baseball, music, dancing).
Undermine useless "understanding."	Use paradox, confusion, and deliteralization to destabilize "understanding."	How does that work for you? Interventions tailored to client feedback.
Undermine client attachment to change agenda.	Use distinguishes current hopelessness from eventual workability. Avoid the old agenda claiming the new.	Defocus on hopelessness as belief or feeling; focus on experiencing the effects of change efforts. Proscribe change efforts.

Source. *Acceptance and commitment therapy, an experiential approach to behavior change*. (p. 91) by Hayes et al., 2003, Guilford Press.

One technique that can be used early on in treatment for substance abuse is the “man in the hole” metaphor (Hayes et al., 2003):

> The situation you are in seems a bit like this: Imagine that you’re placed in a field, wearing a blindfold, and you’re given a little tool bag to carry. You’re told your job is to run around the field blindfolded. That is how you’re supposed to live life. And so you do what you are told. Now, unbeknownst to you, in this field, there are a number of widely spaced, fairly deep holes. You don’t know that at first—you’re naïve. So, you start running around, and sooner or later, you fall into a large hole. You feel around, and sure enough, you can’t climb out, and there are no escape routes you can find. Probably what you would do in such a predicament is take the tool bag you were given and see what is in there; maybe there is something you can use to get out of the hole. Now suppose that the only tool in the bag is a shovel. So, you dutifully start digging, but pretty soon, you notice that you're not out of the hole. So, you try digging faster and faster. But you're still in the hole. So, you try big shovelfuls, or little ones, or throwing the dirt far away or not. But still, you are in the hole. All this effort and all this work, and oddly enough, the hole has just gotten bigger and bigger and bigger. Isn't that your experience? So, you come to see me thinking, “Maybe he has a really huge shovel-a gold-plated steam shovel.” Well, I don't. And even if I did, I wouldn't use it because digging is not a way out of the hole-digging is what makes holes. So maybe the whole agenda is hopeless—you can't dig your way out, that just digs you in.” (pp. 101-102)

In relation to substance abuse, this metaphor helps the client see how the efforts they have put in so far are not working and how they expect something to fix it, and it is not that simple. For example, the client may be spending time with individuals who use substances, working with individuals who use substances, or still working in a job that requires them to be around drugs. Even though they are attempting to remain sober their attempts have failed, and it is time to try new strategies. Another metaphor that can be used during this time is "tug-of-war with a monster," where the clinician demonstrates the client's problems as a game of tug-of-war. The clinician shows the client that the more they pull, the harder it gets, and the real goal is not to win but rather to drop the rope. The goal is for the client to recognize that what they have been doing is counterintuitive and to be more open to alternatives. For example, if the client is contemplating whether or not they should stop using drugs and they continually fight with their family or friends who want them to remain sober, this metaphor may help the client to realize that the more they play tug of war the more they are going to lose. Once this goal has been reached, the creative hopelessness phase of treatment can be completed (Hayes et al., 2003).

Mindfulness

Another integral part of the use of ACT is mindfulness. Mindfulness-based treatment approaches (MBTA) have shown to be effective for many mental health diagnoses, including substance use disorders (Bowen et al., 2014; Chiesa & Serretti, 2014; Zemestani & Ottaviani, 2016). The goal of MBTA is to teach the client to live in the present moment and to become more aware of their thoughts, feelings, and emotions from a nonjudgmental space. MBTA are practiced and reinforced throughout the work done with the client. MBTA teaches the client to look at their triggers and recognize them for what they are. It teaches clients to become more aware of the sensations they are experiencing and creates a place of acceptance of those

sensations (Bowen et al., 2014; Chiesa & Serretti, 2014; Zemestani & Ottaviani, 2016). When used within substance abuse, the clinician can work with the client to practice mindfulness exercises in the presence of relapse triggers. The clinician and client can work to focus on present moment thoughts and feelings and what leads the client to engaging in behaviors that are not consistent with their values (Bowen et al., 2014; Chiesa & Serretti, 2014; Zemestani & Ottaviani, 2016).

Self-as-Context

Understanding the self from an ACT perspective can be very difficult for clients to comprehend (Hayes et al., 2006; Hayes et al., 2011). In this phase of treatment, the clinician works to help the client break down the varieties of self related to their substance abuse. The *conceptualized self* is who the client sees themselves being (Hayes et al., 2003). This sense of self creates problems if the client is not living up to the expectations of their conceptualized self. For example, if the client sees themselves being someone who is sober and taking care of their responsibilities, then they may not be living up to those expectations which can cause distress. The *ongoing self* (i.e., self-as-process) is the client as they are and as they continue growing and evolving. This self has certain content that has been created over time that leads the client to lack awareness of their authentic self. The *observing self* (i.e., self-as-context) is the self that notices all of the thoughts, feelings, and behaviors from the outside. According to Hayes et al. (2003), the goals of this phase are to "undermine attachment to the conceptualized self, create awareness of self-as-perspective, and contrast the conceptualized self with the observer self" (p. 188). When working with clients who struggle with addiction, it is important to discuss their conceptualized self and the psychological barriers preventing them from experiencing the conceptualized self (Hayes et al., 2006; Hayes et al., 2011).

Some interventions that can be used during this phase are the mental polarity exercise, observer exercise, and the chessboard metaphor (Hayes et al., 2003). During the mental polarity exercise, the clinician has the client close their eyes and listen to the thoughts described by the therapist. The therapist then starts giving two extremes of thought; for example, “I’m worthless” and “I’m perfect.” After this exercise, the clinician and client discuss what the experience was like and which thoughts were harder to believe. For the chessboard metaphor, the therapist asks the client to imagine a chessboard and that their thoughts and feelings are the black and white pieces in the game. Ideally, the client wants to have all the positive thoughts overcome the negative ones, but it is not possible. As the client relates to this metaphor, the therapist can explore who the client really is if they are not the dichotomous chess pieces. This exercise can be physically acted out in therapy or used through guided imagery (Hayes et al., 2003).

Defusion and Acceptance

Individuals who struggle with substance abuse may experience rejection, punishment, and embarrassment, contributing to negative self-perception (Azkhosh et al., 2016). ACT focuses on the fusion of thoughts related to the substance abuse and the experiential avoidance that drives the individual to perform behaviors consistent with their addiction and not consistent with their values (Lanza et al., 2014). The goal of ACT is to achieve the psychological flexibility that leads the individual to implement more behaviors that align with what is most important to them, even if it means facing the difficult emotions that come with the performance of these behaviors (Shorey et al., 2017).

The six core processes of ACT attempt to alter two developments: experiential avoidance and cognitive fusion (Luoma et al., 2008). ACT works to facilitate more acceptance of unwanted emotions by creating space for them and living more in the present moment (Shorey et al., 2017).

Separation from one's thoughts, also known as cognitive defusion, aids in the person's ability to avoid the urge to engage in substance abuse as a way of coping (Bahrami & Asghari, 2017). These factors contribute to increased self-acceptance, emphasizing the individual's beliefs, acceptance of inner experiences, and enhanced psychological well-being (Azkhosh et al., 2016).

Bahrami and Asghari (2017) conducted research on ACT with individuals struggling with substance abuse and found positive effects for increasing acceptance. They measured the level of addiction in individuals with substance use disorders from seven different aspects using the Addiction Severity Inventory (ASI; Butler et al., 2005) including medical condition, occupational status, alcohol use status, substance use status, legal status, family status, and psychological condition. Their preliminary study of 30 participants recruited from drug rehabilitation centers found that the utilization of ACT led to a decrease in the severity of these seven aspects that encompasses addiction. The authors posited that to decrease experiential avoidance, the individual must increase experiential acceptance. In AA and NA, there is discussion of letting go of the things the individual cannot change. With ACT, the purpose is not to let go but rather to invite the painful experiences one cannot change and work to increase value-driven behavior that leads one more toward one's overarching goals (Bahrami & Asghari, 2017; Shorey et al., 2017).

When working with defusion and acceptance within substance abuse, Hayes et al. (2003) suggested to "attack the arrogance of words" (p. 151). "The mind is not your friend" exercise helps the client recognize their own self-talk and the language they use to reference themselves. For example, some individuals struggling with addiction may refer to themselves as an addict or a bad parent. The clinician works to explain to the client that a lot of the language our minds articulate is unhelpful, but they cannot get rid of their mind. The therapist helps the client start

seeing their mind as separate from themselves and their values. The language changes from "What are you thinking?" to "What is your mind telling you?" In the context of substance abuse, these strategies can be useful in helping the client to realize that they do not need to make decisions based on the chatter that occurs in their mind. The clinician continues this discussion around accepting the unhelpful chatter and willingness to make different choices based on the client's values (Hayes et al., 2003).

Values

Values clarification in substance abuse treatment is extremely important (Wilson & DuFrene, 2012). Finding values through recovery can be very difficult . What is important to the client struggling with addiction can also become very clouded by the drugs. For example, a client who values having a healthy relationship with their child can become clouded by the competing value of being free from pain by using substances. Even though they value their child even more, the relief that the drugs provide is being consistently reinforced. Humans seek pleasure over pain, and "pleasurable things are known as reinforcers" (Wilson & DuFrene, 2012, p. 98). Reinforcers are commonly associated with our most basic needs, such as food and sex. As such, the act of being a good parent is not always reinforced as quickly as food, sex, or even drugs (Wilson & DuFrene, 2012).

Committed Action

To see changes, the client must turn their values into commitment (Wilson & DuFrene, 2012). When working with the substance abuse population, the goal of ACT is not to reduce the cravings but rather to increase the client's quality of life, psychosocial functioning, and values-driven behavior (Lee et al., 2015). The individuals are taught to take a step back and to see their thoughts, feelings, and behaviors for what they are in order to develop a different perspective on

their experiences and make decisions that lead them toward what is most important to them. Their committed action requires the use of psychological flexibility to relate more to their inner experiences and to be able to make the necessary changes needed to move away from the maladaptive behaviors related to addiction (Lee et al., 2015).

Conclusion

ACT has shown effectiveness in treating substance use disorders for over a decade (Bowen et al., 2014; Chiesa & Serretti, 2014; Lee et al., 2015; Stotts et al., 2012; Zemestani & Ottaviani, 2016). ACT has even shown greater effectiveness than some evidence-based treatments recommended for substance abuse by the National Institute on Drug Abuse (Lanza et al., 2014; Mohammadi et al., 2020; National Institute on Drug Abuse, 2020). Many individuals who struggle with substance abuse have used substances as a method of coping and avoiding psychological pain and suffering related to unwanted thoughts, feelings, and emotions (Stotts et al., 2012). ACT works to facilitate psychological flexibility and openness to these emotions by utilizing and teaching the client the six core processes and addressing the creative hopelessness the client has found themselves in. There will never be a one-size-fits-all approach to substance abuse treatment, and there are certain aspects of each therapeutic approach that tend to be more favorable than others when working with this population. The flexibility of ACT allows these aspects to be integrated into other therapeutic approaches to increase treatment effectiveness overall (Azkhosh et al., 2016; Lanza et al., 2014; Lee et al., 2015; Stotts et al., 2012).

CHAPTER III: TRAUMA-INFORMED ACT

Introduction

ACT perceives that underlying psychopathology is related to experiential avoidance and cognitive fusion, meaning that an individual continues to struggle when avoiding the discomfort and is tied to their thoughts related to their experiences (Hayes, 2004). There is some research on the effectiveness of ACT with many mental health diagnoses, including addictions (Azkhosh et al., 2016; Batten & Hayes, 2005; Bowen et al., 2014; Chiesa & Serretti, 2014; Lanza et al., 2014; Lee et al., 2015; Stotts et al., 2012), PTSD (Bowen et al., 2009), depression (Kyllönen et al., 2018), social anxiety disorder (García & Valdivia-Salas, 2018), chronic pain (McCracken, 1998), personality, and other comorbid disorders (Hayes, 2004). Although there is a strong amount of research on ACT with many different mental health disorders, there is a need for more research on ACT with trauma. Similar to the treatment of ACT with substance abuse, there is no specific protocol for treating trauma with ACT. However, some research has shown some effectiveness of combining exposure with third-wave approaches such as dialectical behavioral therapy (DBT) and ACT (Batten & Hayes, 2005). This chapter highlights the current research and proposes the possible use of other ACT techniques that could target the symptomology related to trauma.

ACT for PTSD

ACT conceptualizes trauma specifically from a behavioral lens in the sense that experiential avoidance can lead to more prolonged distress (Blackledge, 2004; Walser & Westrup, 2007). Individuals who have been through traumatic experiences avoid the negative thoughts and emotions that come with them. When people fail to acknowledge the unwanted emotions associated with trauma, they may participate in avoidance behaviors (Orsillo & Batten, 2005; Walser & Westrup, 2007). These individuals are avoiding not only internal trauma cues

but also external cues such as people, locations, and objects that remind them of the trauma. Avoidance is a central mechanism in developing and maintaining PTSD (Walser & Westrup, 2007).

ACT processes are specifically designed to address avoidance behaviors related to trauma and PTSD, especially for those individuals who have been unable or unwilling to undergo exposure therapy (Orsillo & Batten, 2005). Aversive emotions and cognitions arise from the traumatic event (Blackledge, 2004). Individuals struggling with PTSD spend an enormous amount of time attempting to avoid and/or control the unwanted emotional, physical, and cognitive occurrences associated with the disorder (Orsillo & Batten, 2005).

Creative Hopelessness

One of the ways to address PTSD with a client is to demonstrate creative hopelessness (Batten & Hayes, 2005). For example, the client can start by listing all the things they are currently struggling with related to their trauma, whether thoughts, feelings, or behaviors. Then the client would be asked to list all the things they have done in an attempt the rid themselves of these experiences. Like motivational interviewing, assisting the client in understanding their failed previous attempts allows the client to be willing to try something new (Batten & Hayes, 2005).

Values

What is most important to the client during their course of treatment can be discussed by using the values card sort (Orsillo & Batten, 2005). As the clinician lays out all the values cards before the client, the client can begin to identify which values are most important, somewhat important, and least important. This exercise may take a whole session since there are many values to go through, and it can be difficult for the client to narrow down. The clinician helps the

client by discussing the importance behind each value and seeing how these values are being upheld in their own life. This process can also spark conversations regarding goals the client has and barriers they can identify that keep them from achieving their goals (Orsillo & Batten, 2005). Some individuals with PTSD often have a lack of trust in themselves after experiencing such trauma that has made them question their own self-worth (Batten & Hayes, 2005). It is important for the clinician to validate and normalize that experience and help the client to understand they can have their own values without have to rationalize the reasons why. The client may need that extra validation in order to feel comfortable making changes in their behaviors (Batten & Hayes, 2005).

Mindfulness

Individuals who struggle with PTSD often label their experiences as bad and negative, and mindfulness practices can be a way of recognizing the experiences for what they are and allowing a shift in perspective (Batten & Hayes, 2005). At first, the therapist and client start with more basic mindfulness and grounding techniques and then may be able to work their way into the more painful and personal experiences (Hayes, 2004). For example, in the beginning phases of treatment the client and therapist can listen to a brief segment of music together or eat a Hershey kiss and slowly start noticing the ways in which we attend to our senses (Walser & Westrup, 2007). After there has been some exposure to basic mindfulness techniques, then the clinician can slowly move into more personal experiences the client has been avoiding. For individuals with trauma who have felt number and struggle to identify emotions during mindfulness exercises it may also be useful for the clinician to provide a list of feeling words to help guide the exercises (Batten & Hayes, 2005; Walser & Westrup, 2007). Mindfulness may be able to help the client struggling with trauma-related symptoms to be more present in situations

rather than living in the past or concerned about the future events. Individuals with PTSD may be able to take a new perspective on their thoughts and feelings related to the trauma and create new, healthy ways of behaving and acting mindfully (Batten & Hayes, 2005).

Dissociation is particularly concerning when working with individuals with trauma (Boyd et al., 2018; Zerubavel & Messman-Moore, 2013). Research on mindfulness exercises for dissociation have shown positive effects. Findings suggest that being able to foster skills of mindfulness and present moment awareness to the self and the sensations in the body have led to a decrease in dissociation symptoms. Mindfulness has also been shown to decrease detachment, which is a core component of dissociation and trauma (Boyd et al., 2018; Zerubavel & Messman-Moore, 2013).

Acceptance

A general theme with PTSD clients is a loss of control over their lives, and their hope is that the therapist will help them gain back control (Batten & Hayes, 2005). However, a primary theme of acceptance work is the willingness to let go of control or the desire to have control. During this aspect of treatment, the clinician can focus on the "swamp" or "quicksand" metaphors, which allows the client to see the constant struggle of fighting to avoid the uncomfortable feelings and experiences related to their trauma. The therapist can discuss in depth with the client what they have tried and what has worked or not worked. As stated previously with the "crying baby on the plane," acceptance is not willingness (Batten & Hayes, 2005).

Cognitive Fusion

In relation to trauma, the more unhelpful thoughts that the individual uses to construct a world without the trauma experienced, the more severe and prolonged the posttraumatic

symptoms can be (Blackledge & Hayes, 2001). By doing this, the individual's thoughts are fused to the content of their trauma, and they can begin engaging in experiential avoidance (Blackledge & Hayes, 2001). The individual starts to view their thoughts as facts about the trauma instead of mental constructs that have been created from relational thinking (Hayes et al., 2001). Clients can also engage in a process called mental undoing, where they create new cognitive content that aligns with their new beliefs of the trauma not occurring or the trauma occurring differently (Blackledge, 2004). Mental undoing is the process of working to eliminate the memory of the trauma even happening. Mental undoing is related to experiential avoidance and cognitive fusion in that it is the thoughts and behaviors that the individual engages in in order to alleviate the distress from the trauma. The individual can then become fused to these thoughts and lead to more avoidance of the aspects related to the trauma (Blackledge, 2004).

Cognitive defusion has been shown to be a key mechanism in treating post-traumatic stress (PTS) symptoms related to the maladaptive cognitions (Benfer, 2020). Maladaptive posttraumatic cognitions that an individual has related to their self and the world around them has been linked to more severe PTS symptoms and could in turn delay recovery (Shahar et al., 2013). Shahar and his colleagues (2013) looked at PTSD symptom severity among 145 individuals following a traumatic event. The study examined the participants cognitions related to their self and to the world using The Post-Traumatic Stress Cognitions Inventory (PTCI; Foa et al., 1999). The study also assessed the PTSD symptoms using The Post-Traumatic Diagnostic Scale (PDS; Foa et al., 1997). The participants were assessed after experiencing a traumatic event at 2-weeks, 4-weeks, and 12-weeks. The results suggested an increase in PTSD symptoms in participants who also scored higher on the PTCI indicating that individuals struggling with their view of their self and their view of the world tend to have more severe PTSD symptoms

that persist over time. The study suggests using cognitive defusion techniques as a way of targeting the maladaptive cognitions and assisting the client to interpret new meaning to their trauma (Shahar et al., 2013).

Benfer and his colleagues (2020) recruited 812 participants to assess whether or not cognitive fusion could serve as a moderator in the relationship between PTS symptoms and the maladaptive cognitions. This study had a larger sample, and the findings were significant showing that individuals who had experienced a traumatic event also experienced high scores on the Cognitive Fusion Questionnaire (CFQ; Gillanders et al., 2014; Benefer, 2020). This study also used a brief version of The Post-Traumatic Stress Cognitions Inventory (PTCI; Foa et al., 1999; Wells et al., 2019) that broke down the individuals view of the world, their self, and self-blame. This study shows the significant need to target maladaptive cognitive processing when it comes to PTS symptoms. Negative cognitions can be targeted by a variety of different defusion techniques including the lemon exercise (Stoddard & Afari, 2014). For PTS cognitions it may be useful to use terms consistent with the trauma (Benfer, 2020). After the lemon exercise is complete, the word lemon can be changed with “guilty” or other words that the client is fused to (Benfer, 2020).

The meaning that the clients tie to their trauma is as important as the trauma itself (Blackledge, 2004). The individual starts to develop negative evaluations of themselves, their environment, and even society. The clinician must work with the client to deliteralize these engrained thoughts and to emphasize to the client that the verbal rules do not need to dictate the behavior. Helping the client see their mind and self as separate is another important aspect of defusion. When the client starts to recognize that they are not their thoughts and that the mind is not always accurate, they can start to undermine the dominance of language that acts as a barrier

to behavior change (Blackledge, 2004). When a client is struggling with anger related to the trauma and dealing with thoughts being black and white or one way or the other, one exercise that could be good for the therapist to do is the "right and wrong card game" (Orsillo & Batten, 2005). During this game, the clinician uses a set of three-by-five index cards and writes "right" on half of all the cards and "wrong" on the other half. Throughout the session, the therapist hands the client the "right" or "wrong" cards depending on the client's language regarding their story. The point of this exercise is to have the client see that even when they are "right" or "wrong," the problems they are experiencing are still unsolved. The goal is to deliteralize the "right" and "wrong" statements the client is fused to (Orsillo & Batten, 2005).

Self-as-Context

The literature has suggested that as it relates to trauma, an individual may have had their experiences denied, ignored, or invalidated leading them to have a distorted self-awareness (Courtois, 2004; Ford & Courtois, 2020; Forman-Hoffman et al., 2016; Hayes et al., 2012). Therefore, self-as-context work is very important in working with clients with PTSD (Orsillo & Batten, 2005). Individuals who have been victimized begin to believe what they have been told, and they often have recurrent flashbacks, nightmares, and even auditory hallucinations related to the trauma. This aspect of PTSD is congruent with the self-as-context where the individual has a hard time validating their own experiences and falls into the inherent victimization role. The individual may be relying on others for their own thoughts, feelings, and values. PTSD clients may also over-identify with certain content of their story, making them less open to relating to other aspects of their lives. One goal during this phase is to have the client re-establish who they are and how they observe themselves in relation to their thoughts, feelings, and behaviors. One exercise could be having the client envision previous memories where they observe themselves

engaging in everyday tasks and notice the constant of themselves being present in all these moments (Orsillo & Batten, 2005).

Committed Action

In the final phase of the TTM, the client has identified their goals and starts making progress toward change in their life (Orsillo & Batten, 2005). These changes are related to the client's values and their sense of self. After differentiating the mind from the self and creating more space for the uncomfortable thoughts and feelings the client experiences related to their trauma, the therapist works with the client to engage in behaviors consistent with what is most important to them.

Conclusion

There are many different ways of incorporating the ACT core processes into trauma treatment for a client (Orsillo & Batten, 2005; Walser & Westrup, 2007). The flexibility of the theory allows the clinician to formulate different parts that they believe best fit the client's presentation. From the metaphors to the different experiential exercises that ACT provides, the client can work more toward psychological flexibility and away from feeling trapped within their own trauma experiences (Batten & Hayes, 2005). However, it is important to be cautious of re-traumatization and the risk of relapse in this vulnerable population (Courtois, 2004; Covington et al., 2008). Overall, more research should be conducted on how the aspects of ACT work to alleviate trauma symptoms, but this is a start to more availability of trauma-informed care for patients.

CHAPTER IV: PROPOSED MODEL OF TRAUMA-INFORMED ACT FOR SUBSTANCE ABUSE

Introduction

A phased-based approach like the TTM has been shown to be the staple for trauma-informed care (Cloitre et al., 2011; Courtois, 2004; Herman, 1992; Van Vliet et al., 2018). The six core processes have also been shown to be effective in the treatment of substance abuse and preliminary in the treatment of trauma (Azkhosh et al., 2016; Batten & Hayes, 2005; Bowen et al., 2014; Chiesa & Serretti, 2014; Lanza et al., 2014; Lee et al., 2015; Orsillo & Batten, 2005; Stotts et al., 2012). The hope is that combining these two approaches will increase the effectiveness of treatment for the members of the substance abuse population who also suffer from trauma. First, it is important to address the available research about using ACT to treat PTSD and SUD. Then, each of the ACT core processes is outlined, and the suggested use of these processes within the phases is described below. It is important to acknowledge that this is a preliminary idea of how these two approaches can be combined. Further research will need to be conducted to establish more particular guidelines on how to deliver this treatment or a manualized treatment in the future.

ACT for Comorbid PTSD and SUD

Since there is high comorbidity with PTSD and SUD, research has been conducted examining the effectiveness of ACT with these diagnoses. One case study completed showed drastic improvement in a woman with co-occurring PTSD and SUD following ACT interventions (Batten & Hayes, 2005). Follow-ups were scheduled at 3, 6, and 12 months posttreatment. The client showed decreased depressive symptomology, psychological distress, and overall avoidance (Batten & Hayes, 2005). This study provided clinicians the ability to see

the comorbidity of PTSD and SUD and treat them concurrently through a functional conceptualization (Batten & Hayes, 2005).

A pilot study was conducted with 29 veterans diagnosed with PTSD and alcohol use disorder (AUD) utilizing an ACT protocol for 10-12 sessions (Meyer et al., 2018). The findings of this study suggest a reduction in alcohol consumption, a decrease in self-reported symptoms of PSTD, and an increased quality of life at posttreatment and follow-up (Meyer et al., 2018). It was also concluded that mindfulness practices and values-based assignments were deemed effective throughout the study (Meyer et al., 2018).

Specifics of the ACT treatment interventions are outlined as follows. The 29 veterans went through 12 individual therapy sessions that focused on the specific content of ACT (Meyer et al., 2018). During the first session, the clinician gave an overview of ACT and introduced values work by discussing with the client what behaviors they would have done differently if they were not struggling with trauma and substance abuse. The second session focused on values clarification by utilizing values card sort. This exercise was utilized to help the client to prioritize what values are most important to their current life and elicit conversation for treatment goals (Meyer et al., 2018).

During the third session, the primary theme was creative hopelessness, which assisted in the examination of strategies the client has taken previously and evaluated whether they have worked (Meyer et al., 2018). During this session, it was important to examine what the client has gained or lost because of these behaviors so that they could increase their readiness for change. During the fourth session, the clinician focused on the state of control that the client had. They used metaphors such as the polygraph and holding a heavy object, which allowed the client to see what their efforts have been in their attempts to control the symptoms and behaviors of their

addiction (Meyer et al., 2018; Stoddard & Afari, 2014).

For session five, the theme was acceptance/willingness, demonstrated through the previously described metaphors of quicksand and tug-of-war (Meyer et al., 2018). The goal was to practice becoming more aware of the struggle and effort to avoid unwanted emotions versus becoming mindfully aware and making a place for those emotions in their lives. During session six, the clinician focused on defusion by using the lemon exercise (Stoddard & Afari, 2014). The lemon exercise works as an example of deliteralizing language. It asks the client to say the word lemon and then think about what comes to mind related to that word. After discussing lemon for a few minutes, the clinician asks the client to repeat the word lemon as fast as they can for one minute. The goal is to notice all the thoughts and feelings surrounding the word lemon but once said quickly for a minute straight, the word tends to lose its meaning and the associations attached with it. This exercise was then connected to the thoughts and language related to the trauma and alcohol (Meyer et al., 2018).

During session seven, the clinician practiced willingness by using the “take your mind for a walk” exercise (Meyer et al., 2018; Stoddard & Afari, 2014). This exercise asks the client to walk around the room while the clinician follows the client and plays the part of their mind by commenting, judging, worrying, predicting, and everything the mind is set up to do. This allows the client to experience cognitive defusion in real-time by noticing the thoughts as they are occurring but making different decisions based on independent choices and not what the mind is telling them to do. In session eight, the clinician focused on self-as-context and used the previously described chessboard metaphor to illustrate the struggles individuals experience against their own thoughts and feelings. The ongoing battle of the chess game was explained to the client as their own ongoing battle with their positive and negative thoughts. The clinician

worked to teach the client how to notice their thoughts and feelings and not fight against them (Meyer et al., 2018).

During session nine, the values were revisited by using the gardening metaphor, which describes making a decision based on your value and waiting to see what happens instead of having the mentality of "the grass is greener on the other side" (Meyer et al., 2018; Stoddard & Afari, 2014). It also discusses the feelings of overcoming those internal barriers and the need for instant gratification to commit to change. During the 10th session, the clinician focused on committed action and reiterated some previous metaphors. One metaphor used was the swamp. This metaphor discusses how one can either abandon one's journey or stay stuck in the swamp. The clinician relates this to therapy and how the swamp is between them and where they are trying to go (Meyer et al., 2018; Stoddard & Afari, 2014).

For session 11, committed action was continued and the metaphor used was the unwanted neighbor Ned (Meyer et al., 2018); Stoddard & Afari, 2014). This metaphor discussed how people constantly have thoughts that enter their mind like an unwanted party guest, which distracts them from experiencing things in the moment. Instead of just accepting the thoughts (or person), they spend so much of their time fighting and trying to get rid of the thoughts and feelings. The clinician helped the client to notice that when they are not trying to get rid of these unwanted emotions related to their trauma, they can start to enjoy more experiences in the present moment (Meyer et al., 2018; Stoddard & Afari, 2014).

Finally, during the 12th session, the clinician reviewed the progress made and developed a plan for continuing these practices in daily life (Meyer et al., 2018). The "passengers on the bus" metaphor asks the client to picture their life like a bus, and they are the driver on the bus (Stoddard & Afari, 2014). However, passengers from all different walks of life come on this bus,

and some may not affect them very much, but some may have a very strong impact on them. Certain people can elicit certain emotions from them, leading to decisions that may take them off track from their values. Using this exercise, the clinician works to help the client decipher the facts and then behave in a way that leads them more toward their goals (Meyer et al., 2018; Stoddard & Afari, 2014).

Trauma-Informed ACT

The TTM is transtheoretical, meaning it can be integrated into any treatment approach. The TTM is a phase-based treatment and works best when completed in the order in which it was designed to be utilized (Herman, 1992). ACT has six core processes, but they can be utilized simultaneously throughout treatment and do not need to be used in a particular order (Harris, 2009). The ACT processes can be readily integrated into the stages of the TTM to attempt to increase the effectiveness of treatment for individuals with co-occurring substance abuse and trauma. Below are examples of how each of the ACT processes can be integrated into the three TTM phases.

Phase I (safety and stabilization)

The primary goal during phase one of the TTM would be contact with the present moment, which would allow the client to feel more grounded and to develop the skills needed to handle the processing of the trauma. When a client feels unsafe related to their trauma, it becomes more difficult for them to handle the uncomfortable emotions they will experience when discussing the trauma (Courtois, 2004). The therapist can work with the client in identifying the pain they are feeling and where exactly they are experiencing it in their body. One important aspect for body sensations for trauma survivors specifically individuals that have survived physical or sexual assault is that the clinician should be more aware of the risk of re-

traumatization. When needed the therapist can walk the client through a mindfulness exercise to identify where the pain feels most significant to them and teach them how to utilize deep breathing and grounding techniques to bring awareness to those uncomfortable sensations they are experiencing.

According to Harris (2009), contact with the present moment is the idea of not spending too much mental energy worrying about things that have occurred in the past or things that have yet to occur. People frequently forget what they are doing when they spend their lives on autopilot. They get into routines and forget to shift their attention to what is happening in the here and now. When working on contact with the present moment with the client, it would be helpful to begin with grounding techniques. The therapist should help the client increase their awareness of the feelings and emotions occurring in their body during this time (Harris, 2009).

As the therapist works on present moment awareness, they can also move into defusion (Harris, 2009). During phase one of the TTM, it is important to work on the thoughts impacting the client from sharing more information related to their trauma. Often, clients feel that if they open the wound of their trauma, they will not be able to control all the thoughts, feelings, and emotions that have been pushed down for so long (Blackledge, 2015; Harris, 2009). Working on defusion with the client during this stage could allow the client to become more comfortable sharing their fears of opening up during stage two of treatment. One way to work on cognitive defusion during the first stage is to teach the client the difference between their thoughts and themselves. The mind and body are treated as independent entities in ACT, which work together to align through psychological flexibility. One way to do this is to utilize the “taking your mind for a walk” exercise discussed previously (Meyer et al., 2018; Stoddard & Afari, 2014). When someone’s thoughts are “fused” to them, they take them literally and act accordingly

(Blackledge, 2015). It might be difficult to teach clients to defuse their thoughts, yet it is one of the most crucial parts of building psychological flexibility (Blackledge, 2015).

During phase one, self-as-context can be introduced by explaining to the client how to take perspective on their own "self." While working with cognitive defusion, the clinician can explain how one's mind is different from themselves, just as their thoughts can differ from their values. When the client links themselves to their thoughts, it can lead to experiential avoidance. The clinician can look for what the client is attached to when it comes to their conceptualized self and how that limits their psychological flexibility. The goal is to implement perspective-taking and experiment with the idea of observing their own thoughts as themselves (Blackledge, 2015; Harris, 2009).

Values are a big part of ACT in the sense that they guide the course for treatment because they guide the direction that the individual wants to go in their life (Harris, 2009). Values clarification can be a good start to phase one of the TTM. Values card sort is a popular exercise utilized when the client has very few or too many values. The clinician uses value cards with the client to develop what is most important to the client and to narrow and prioritize these values. Phase one would also be a good time to discuss what values the client grew up with versus what values are more significant to the client as an adult. Self-as-context and defusion processes come into values work due to the contextual foundation of which people develop values through society and family (Hayes, 2004). Defining values versus goals that the client may have would also be important during phase one.

Acceptance in phase one can be utilized to facilitate openness to processing the thoughts, feelings, and emotions that will arise in phase two. The clinician can discuss with the client what it would be like to sit with the emotions that may arise in phase two as opposed to the alternative

of turning away or avoiding. The clinician should work to build acceptance of the uncomfortableness that occurs during phase two and prepare the client for varied possible outcomes. During phase one, the clinician can also use the quicksand metaphor in relation to creative hopelessness (Batten, 2011). The clinician can explain how the first instinct when a person is caught in quicksand would be to work hard to get themselves out, but what we know about quicksand is that the more you try to get out of it, the more you struggle. This metaphor can be used in relation to the client's presenting issue. The goal is to ask certain questions that lead the client to reevaluate their ineffective coping methods and create a willingness to try something new. The goal is for the client to move from control and avoidance to more willingness and acceptance (Batten, 2011).

Committed action during the first phase, the client is in preparation, and their primary goal is to work toward being ready to process the trauma. The clinician and client work closely during this phase to increase motivation and decrease avoidance. The client and therapist set goals during each phase that lead to committed actions. Most ACT therapy focuses on committed action after the individual clarifies their values (Batten, 2011).

Phase II (remembrance and mourning)

During phase two the therapist can utilize the skills learned from phase one to integrate more present-moment awareness during the processing of the traumatic event(s). The grounding techniques are needed, especially during phase two, to bring the client back to awareness of how they are feeling and grieving the trauma. As the client tells the story of their trauma, they can also name the sensations they are feeling in their body (Harris, 2009; Herman, 1992). Since the client was able to practice these mindfulness techniques during phase one, it will be easier to reference back to them during phases two and three. As discussed earlier, mindfulness

techniques have been shown to activate parts of the brain that contribute to higher cognitive functioning and the more practice the client is able to get during phase one, the easier these exercises will be able to be achieved during phase two and three (Fox, 2016).

During phase two the therapist can work with the client on taking a non-judgmental stance on their trauma and substance use experiences (Shorey et al., 2017). Many individuals who struggle with addiction experience shame and guilt related to their experiences. Mindfulness-based exercises work to alleviate some of that judgmental by allowing the client to not avoid the unpleasant experiences but rather to bring those experiences to light and "fostering a curiosity and non-judgment of experiences" (Shorey et al., 2017, p. 1). One example would be if the client is processing part of their trauma and they feel shame, the clinician can have the client identify where they feel the shame in their body and have them discuss what the shame looks like if they could give it a name, shape, or color. This brief exercise is intended to shift the client's perspective of the shame being outside of them instead of attached to them. Defusion, mindfulness, acceptance, and self-as-context processes can all be used within this exercise.

Cognitive defusion is having the ability to see our thoughts as just thoughts and not placing so much emphasis on them (Harris, 2009). Often, people become so attached to their thoughts that they forget that they are just words or language that is being thought or spoken. With defusion, individuals learn to watch their thoughts occur and begin to release their strong hold they have on the thoughts (Harris, 2009). Self-as-context is incorporated with a few other ACT processes. The most common is cognitive defusion and present moment awareness. One exercise described previously, a clinician can utilize during phase two, is leaves on a stream. The idea of this exercise is to teach the client not to hold on to their thoughts so tightly. Buying into thoughts is not always a problem, but when a client's behavior deviates from their values

because of the thoughts they're holding on to, it can become a problem. Helping the client create space from their thoughts allows them to recognize that the thoughts are just language created by our minds rather than mirror representations of reality (Blackledge, 2015).

Acceptance and cognitive defusion can also be integrated during this phase. The client would process the unwanted emotions related to the trauma and see their thoughts for what they are. This phase allows clients to make meaning of their trauma and could be combined with accepting this meaning (Courtois, 2004). When phase two becomes difficult, the clinician can use the "pushing away paper" exercise as a metaphor for acceptance. The clinician generates a script that shows the client that avoiding or trying to get rid of their problems is only making the problems worse and, as a result, more difficult than allowing the thoughts, feelings, and emotions to be present (Harris, 2009). Another exercise using acceptance, defusion, and mindfulness would be the "right and wrong card game" discussed earlier (Orsillo & Batten, 2005). The clinician can work towards increasing awareness around the client's black and white thinking when processing their trauma and lean more towards willingness of the unpleasantness that comes from feeling unsafe (Orsillo & Batten, 2005).

Values clarification and committed action is also important during phase two of the TTM as the client begins to process the trauma, reminding the client of their values and how their behaviors are moving them either toward or away from those values. Values work can also be used as a good motivating tool during phase two to help reduce dropout rates. Discussing what the client values in regard to processing the trauma and reminding the client of their original goals they set during phase one can be a useful part of phase two. During phase two, the committed action may be to process trauma history and restructure the story.

Phase III (reconnection and integration)

During phase three the client and therapist can continue practicing present-moment awareness outside the therapeutic setting. The client can integrate the grounding techniques they have learned into their everyday life. The client can become more aware of the uncomfortable feelings they experience instead of avoiding them. One example would be if the client's trauma is related to driving a car. The client can practice the grounding exercises while in the car and work toward developing more awareness of the sensations they are experiencing while being put in a vulnerable place again. The client will not successfully practice mindfulness only once a week during their therapy session. The client must work to engage in these activities outside of therapy as encouraged by their therapist (Batten, 2011).

Cognitive defusion can be used as a tool to create a new narrative during phase three. Once the client has processed their trauma, phase three focuses on re-integrating and making connections to the client's values. Having the client create a new narrative allows them to reflect on their experiences and the impact on their lives. The clinician can work with the client on creating the narrative and seeing alternative outcomes of their own story (Blackledge, 2015). What did they learn from the trauma? What changes have been made since surviving the trauma? What thoughts are still linked to the trauma? What new thoughts have been developed from the trauma? The goal is for the client to become less fused to their thoughts and to hold the thoughts regarding their trauma more loosely (Batten, 2011).

For self-as-context in phase three one exercise that is most prevalent for is the "observer self," where a clinician guides the client through a mindfulness exercise to elicit different perspective-taking from the "thinking self" to the "observer self" (Hayes et al., 2003). For example, if you are looking at a sunset, you are your "observer self," but when the thoughts start

entering the mind about the sunset, that is the "thinking self." This can be a useful technique to use during phase three when discuss different factors and dynamics the client is facing outside of session. This exercise can target the mindfulness and self-as-context processes together (Hayes et al., 2003).

Values work during phase three can drive the client toward behavior change that is consistent with their values. The obituary exercise is used a lot during values work to identify who the client wants to be remembered and how the client wants to be remembered. The clinician can work with the client to identify what behaviors the client wants to exhibit now during the reconnection and integration phase that align with what is most important to them. Some client's values may have changed after going through phase two and it is important for the clinician to normalize and validate that experience and help guide the client towards behavior change that is more in line with their current values.

Acceptance can also be integrated with values and committed action work and can allow the client to practice in real-life situations. The clinician and client can create role-plays and exposure exercises to elicit willingness of thoughts and emotions in the context of the client's everyday life. Engaging in more acceptance work leads to more psychological flexibility and allows clients to perform behaviors more aligned with their values (Batten, 2011). During this phase, the clinician allows the client to make new connections and meaning in life and to not allow their trauma to define who they are as a person (Courtois, 2004).

Harris (2009) discussed four steps to committed action: pick one area of the person's life that they want to change, select the values they want to explore in this area, define goals that guide the values, and commit to act mindfully. The clinician and therapist can work through these steps together during phase three to identify the behavior change needed to achieve values-

based living. Setting values-based goals is very important in developing committed action behaviors (Harris, 2009).

Measuring Outcomes

To evaluate the effectiveness of this protocol, it is important to also integrate outcome measures that would assess the progress of each client receiving treatment. The outcome measures could be used to evaluate treatment effectiveness and utilized to modify the protocol as needed. The goal would be to see a decrease in symptoms related to trauma and substance abuse as there is increased engagement with treatment.

To assess the client's progress within their addiction, the use of the 18-item Acceptance and Action Questionnaire for Substance Abuse (AAQ-SA; Luoma et al., 2011) could be used. This questionnaire could assess how the skills learned through the protocol of the TTM and ACT are impacting the behaviors related to substance abuse (Luoma et al., 2011). This questionnaire may be given after each phase to collect data for how each phase has affected substance abuse behaviors.

In order to have more effective data regarding substance abuse it would be important to have some objective data to examine. The Substance Abuse Subtle Screening Inventory, Third Edition (SASSI-3; Lazowski et al., 1998) is an objective screening tool for clinicians to use to evaluate whether a client has a substance use disorder. The SASSI-3 includes items that are straightforward regarding substance abuse and some items that are more subtle, which works to increase the validity of the measure (Lazowski et al., 1998). This measure could be used pre and post treatment to assess the criteria of SUDs.

In order to assess the comfortability of each session for the client's, the Session Rating Scale (SRS; Duncan et al., 2003) may be used. This 4-item questionnaire evaluates the

therapeutic relationships, goals for treatment, approach being used in treatment, and overall satisfaction with treatment (Duncan et al., 2003). This rating scale may be administered after every session and the data could be used to assess the readiness for each phase of treatment.

To evaluate the effectiveness of this protocol for trauma-related symptoms, the Trauma Symptom Inventory, Second Edition (TSI-2; Briere, 2011) may be used. This 136-item form is used to assess posttraumatic stress and other psychological factors related to trauma (Briere, 2011). Since the TSI-2 is more extensive, it may be used pre and post treatment to assess the potential progress the client has made throughout the three phases of treatment.

Conclusion

The flexibility of the core processes and the abundant number of options for interventions and experiential work used in ACT allow for smooth integration into the three phases of the TTM. The idea is for these approaches to be combined in a way that allows for interpretation by the clinician utilizing these models together and then molding them in a way that fits and addresses their client's needs. Evaluating the effectiveness of this protocol could determine the recommendations for future research and seeing if the combination of the two approaches is actually producing the expected outcomes.

CHAPTER V: CLINICAL IMPLICATIONS AND FUTURE DIRECTIONS

Clinicians are aware that the treatment for posttraumatic stress is constantly evolving, which requires professionals to continually build their competence through an ongoing process of research and practice (Forman-Hoffman et al., 2016). Previously, therapists recommended treating trauma and substance misuse separately; however, childhood trauma (i.e., sexual, emotional, physical, or verbal) is often linked to lifetime substance abuse or alcohol abuse (Forman-Hoffman et al., 2016; Mandavia et al., 2016). Therefore, the most effective form of treatment could be to treat these co-occurring disorders simultaneously, despite previous opinions to the contrary. Also, the majority of the population who suffer from trauma and SUD do not have the resources to be able to receive long-term care from multiple providers (Mandavia et al., 2016). Combining two evidence-based approaches can increase client adherence and overall effectiveness in treating these disorders.

The purpose of ACT is to acquire psychological flexibility that allows an individual to implement more actions that are aligned with their values, even if it means experiencing the uncomfortable emotions that come with these activities (Shorey et al., 2017). Mindfulness is only one key aspect of ACT but overall, ACT has shown to be effective in treating many mental health conditions, including substance use disorders (Bowen et al., 2009; Bowen et al., 2014; Batten et al., 2005; Chiesa & Serretti, 2014; Garca & Valdivia-Salas, 2018; Kyllönen et al., 2018; McCracken, 1998; Zemestani & Ottaviani, 2016). ACT has also shown some research effectiveness in the treatment of PTSD (Batten & Hayes, 2005; Blackledge, 2004; Orsillo & Batten, 2005; Walser & Westrup, 2007). Integrating the TTM and ACT is likely to only strengthen the effectiveness of treating substance abuse and trauma.

Limitations

Treating substance abuse and trauma together has its risks and can be a limitation (Peterson & Zettle, 2009). Doing in depth trauma processing could lead to a higher risk of relapse and focusing on PTSD symptoms could hinder the process of recovery (Covington et al., 2008). These beliefs have led to a lack of available treatments for this population with co-occurring disorders. Re-traumatization is always a risk and should be closely monitored during trauma treatment by the clinician (Covington et al., 2008).

The lack of research surrounding the combination of the TTM and ACT is a limitation regarding the proposed model. It is likely that the model will have to be tested and revised as more research is conducted. However, there are numerous studies deeming ACT an appropriate form of treatment for substance use disorders (Azkhosh et al., 2016; Bahrami & Asghari, 2017; Bowen et al., 2014; Chiesa & Serretti, 2014; Lanza et al., 2014; Lee et al., 2015; Shorey et al., 2017), and an abundance of research related to the importance of using a phase-based approach for the treatment of trauma-related disorders (Cloitre et al., 2011; Courtois, 2004; Herman, 1992; Van Vliet et al., 2018). There may be a lack of research integrating these two treatment approaches, but the fundamental aspects of these approaches have been integrated into evidence-based treatments for many years. There are also many research studies related to the comorbidity of substance abuse and trauma.

Another limitation would be the broad range of substance use disorders and the different types of treatments for each. Many different treatment approaches are utilized for different substance use disorders. For instance, the way a clinician treats alcohol use disorder could be different from the way a clinician treats opioid use disorder. Some of the frameworks for

treatment are very similar but have a protocol used to address substance use disorders, in general, which may be more difficult given the complexities of the various substance use disorders.

The lack of guided protocols for ACT with substance abuse and trauma could be another limitation due to the unclear steps the therapist needs to take when utilizing this treatment approach with the substance abuse population. The absence of a manual or protocol leaves some inconsistency in the literature because each study used different techniques taken from ACT. While ACT is extremely versatile with its processes, it may be difficult to ever have a standardized manual for clinicians unfamiliar with ACT to follow. However, more research may be able to be done to narrow down a decision tree that guides clinicians to which specific ACT interventions or exercises could be used for specific types of substance use and/or trauma. Also, since there were limited assessments found for measuring effectiveness of this suggested protocol, more research could be done on specific measures and their validity in relation to substance abuse and trauma.

Recommendations

Integrating the transtheoretical approach of the TTM with ACT could strengthen the treatment for individuals struggling with comorbid substance abuse and trauma. More research needs to be conducted concerning integrating these approaches, which could lead mental health clinicians to utilize more integrated care techniques for co-occurring disorders. Mental health providers would not need to refer their clients to other clinicians who specialize in trauma or substance abuse if there is a protocol deemed to be evidence-based for treating these disorders simultaneously. Also, clients would not need to seek out multiple evidence-based treatments to see progress.

For future research on this topic, it is crucial to have a well-documented transtheoretical

model that can be formulated into the protocol needed to be used to conduct an empirical study. The goal would be to measure the effectiveness of the combined TTM and ACT protocol used for substance abuse and trauma. Future research should examine whether this protocol reduces trauma and substance abuse symptoms. This protocol could also be useful in creating a pilot study intended to introduce more trauma-informed care within the substance abuse population. Within the pilot study therapists can be trained on the protocol and engage participants using the combination of both approaches. The effectiveness can be measured with the assessment tools discussed above.

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