

The Chronic Traumatic Stress Treatment (CTS-T): A resilience-focused, culturally responsive intervention for refugees and survivors of torture - including a mobile mental health application

Karen M. Fondacaro¹, Emily C. Mazzulla² and Holly T. Weldon¹

Abstract

This manuscript introduces the Chronic Traumatic Stress-Treatment for refugees and survivors of torture (CTS-Treatment; Mazzulla & Fondacaro, 2018). CTS-Treatment aligns with the Chronic Traumatic Stress model (CTS; Fondacaro & Mazulla, 2018), a biopsychosocial-spiritual and culturally responsive theoretical framework designed to guide empirical investigation and intervention for refugees and survivors of torture. CTS-Treatment is intended for use by mental health clinicians working within an individual or group format. The ten modules of CTS-Treatment are in sequence; however, flexibility and cultural adaptations in implementation are strongly encouraged. The ten intervention modules include: 1) Mental Health Discussion, 2) Safety, 3) Values, 4) Behavioral Activation, 5) Coping Skills, 6) Sleep Hygiene, 7) Working with Thoughts, 8) Acceptance and Tolerance of Emotions, 9) Life-Path Exercise and Narrative Exposure, and 10) Celebration of Life. Empirical principles underlying the treatment, along with supporting research, are presented for each module. The final sections of modules one through nine explain a component of a language-free mobile mental health application for refugees. The tenth

module is a celebration and does not include an affiliated mHealth component. Clients are encouraged to practice the mHealth app skills at the end of each session and between sessions.

Over three million refugees resettled in the United States since 1980 when Congress passed the Refugee Act under President Carter (Refugee Processing Center, 2020). Between 20% and 60% of refugees arrive in the U.S. with a history of torture (Steel et al., 2009). Although the majority of refugees and survivors of torture exhibit resilience and strength, they also experience mental health concerns at a higher rate than the general U.S. population, including symptoms related to trauma, anxiety, depression, and somatization (de C Williams & van der Merwe, 2013; Steel et al., 2009). Given that re-settled refugees are increasingly accessing traditional mental health services, a culturally relevant model addressing strengths and challenges is critical to providing effective mental health services to refugees and survivors of torture and trauma.

The Chronic Traumatic Stress model (CTS; Fondacaro & Mazulla, 2018) is a biopsychosocial-spiritual model representing a unifying framework to guide empirical investigation and intervention for refugees and survivors of torture. Chronic Traumatic Stress Treatment (CTS-Treatment; Mazzulla & Fondacaro, 2018), corresponds with the CTS

1) University of Vermont. New England Survivors of Torture and Trauma

2) Marquette University

model and utilizes empirically based principles addressing the impact of refugee traumatic and stressful events, including pre and post-migration stressors (e.g., trauma experiences, loss of country and family members, and fear of deportation). Additionally, this intervention provides a broad, holistic, multimodal, resilience-focused alternative to an exclusive treatment focus on symptom reduction. In addition to symptom reduction, CTS-Treatment emphasizes culturally responsive skill-building, behavioral activation (Jacobson et al., 1996), sleep hygiene (Lies et al., 2019), coping skills such as relaxation (Borkovec & Sides, 1979), mindfulness (Hinton et al., 2013), grounding (Najavits, 2002), and a culturally sensitive form of exposure (Schauer et al., 2011). Finally, CTS-Treatment addresses acceptance strategies and valued living to enhance well-being and enrich one's existence despite horrific past traumatic experiences and ongoing stress.

Torture is the dehumanizing and systematic destruction of a person's identity through intentional physical or psychological pain and suffering (see formal definition in module 1 footnote). In their review of 40 survivor of torture interventions, McFarlane and Kaplan (2012) articulate the need for innovative treatments utilizing a human rights lens and transdiagnostic approaches across a range of mental health challenges. Any human being subjected to torture or rampant violence in war-torn areas may react in ways consistent with post-traumatic stress symptoms. We believe associated behaviors, thoughts, and emotions are not "disordered" but rather normative under extreme stress. We communicate this sentiment throughout CTS-Treatment by validating client reactions to trauma and torture experiences while offering assistance with managing symptoms. Further, we place importance on addressing simultaneous post-migration stressors through a holistic approach such as coordination of care

with social workers, community centers, attorneys, medical practitioners, and physical therapists.

Individual and group intervention includes ten modules: 1) Mental Health Discussion, 2) Safety, 3) Values, 4) Behavioral Activation, 5) Coping Skills, 6) Sleep Hygiene, 7) Working with Thoughts, 8) Acceptance and Tolerance of Emotions, 9) Life-Path Exercise and Narrative Exposure, and 10) Celebration of Life. Topics are sequential and build upon one another. Each module has theoretical underpinnings, rooted in evidence-based principles from Cognitive Behavioral Therapy (CBT; Beck et al., 2005), Acceptance and Commitment Therapy (ACT; Harris, 2019), or Narrative Exposure Therapy (NET; Schauer et al., 2011). Each module is one to three sessions in practice; however, the individual therapist or group facilitator(s) determines the necessary time in the therapeutic setting to cover each topic.

In addition to in-person services, a United-States torture treatment program, New England Survivors of Torture and Trauma (NESTT),¹ created a language-free mobile mental health application that parallels the CTS-Treatment content. A pilot study assessing the app's utilization by Somali-Bantu and Nepali-Bhutanese refugees found that a brief intervention (a condensed version of CTS-Treatment) decreased symptoms of anxiety and depression and increased coping (Mazzulla et al., 2021).² The app components are specific to CTS-Treatment content (e.g., values, safety, life-path exercise) and intro-

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- 1 New England Survivors of Torture and Trauma (NESTT) is one of over thirty programs currently providing services to survivors of torture. The United Nations Fund for Victims of Torture has funded torture treatment centers since 1981
 - 2 This app is available for free download on any Apple iPhone or iPad device. To download, go to the apple app store and enter NESTT

duced with the accompanying module. Described below is the purpose of each module, the empirically-based principles, and the session content. The final section for each module includes a description of practice to be utilized with the NESTT mobile mental health application (Annex A). Clients are encouraged to use the app to practice skills learned in treatment. Accompanying each module, clients can choose an activity to close each session. In our experience, clients often choose prayer or expression of gratitude. If a closing exercise is not chosen by the client, the facilitator can select from myriad mindfulness activities, breathing exercises, or coping strategies previously practiced in treatment. Closing activities are not described in the current article and are left to the discretion of the facilitators.

Additionally, we encourage programs that utilize this intervention to assess clients' pre-and post-intervention outcomes, including strength-based assessment (e.g., well-being, daily functioning) and symptom reduction as described in the CTS model (Fondacaro & Mazzulla, 2018). CTS-Treatment is implemented flexibly with a broad range of survivors. However, cultural adaptations may be necessary depending on the client's country of origin or religion. For example, individuals who embrace Islam may need to take scheduled prayer breaks.

Finally, it is essential to address facilitators' and interpreters' traumatic reactions to implementing trauma treatment (Pearlman & Ian, 1995). In addition to planning for self-care and support, understanding vicarious trauma, trauma stewardship, and resilience are critical throughout the implementation of trauma interventions (see van Dernoot Lipsky & Burk, 2009). We recommend ongoing supervision for providers and interpreters to support the delivery of intervention and management of the impact of trauma-related work.

Chronic Traumatic Stress Treatment (CTS-Treatment)

Module One: Introductions and Discussion of Mental Health

Treatment begins with a discussion of the meaning of mental health in different cultures. The diagnosis of post-traumatic stress disorder (PTSD) alone does not adequately reflect the potential consequences of long-term and multiple trauma exposures endured by refugees and survivors of torture (e.g., McFarlane & Kaplan, 2012). Further, mental health diagnoses are inconsistent with many cultural beliefs (Kohrt & Hruschka, 2010). For example, Nepali-Bhutanese refugees report that trauma impacts the heart-mind connection, and many believe past life sins are responsible for traumatic events (Kohrt & Hruschka, 2010). In cases of differing beliefs about the etiology of mental health conditions such as anxiety, depression, traumatic responses, and somatic complaints, clinicians must seek to understand the clients' views. When clients explain mental health concerns, clinicians demonstrate appreciation for these alternate interpretations (Lewis-Fernández et al., 2015). Therefore, module one aims to discuss the meaning of mental health, incorporating a respectful discussion of resilience and mental health concerns, and providing an overview of CTS-Treatment in a culturally responsive manner, demonstrating respect for different cultural views.

Content

The facilitator first uses accessible terminology to describe therapy (e.g., "We will be talking about feelings, thoughts, and the things that are important to you in life") and introduces the CTS-Treatment with a "getting to know you" exercise. The facilitator emphasizes that resettling and rebuilding life in a new country

is a display of resilience. When discussing the range of outcomes associated with traumatic experiences (resilience, strength, and impairing symptoms), the facilitator validates human suffering that often occurs in these contexts. Next, the facilitator begins a non-judgmental discussion regarding Western and culture-specific views of mental health and illness. Facilitators ask clients about potential stigma and the meaning of mental health and illness from their culture and country of origin. It is conveyed to clients that a primary goal of torture is to systematically devalue individuals based on their race, ethnicity, religion, political opinion, or affiliation with a social group.³ During the mental health discussion and explanation of PTSD, clients are explicitly told that they are not “disordered” but may be experiencing some of the expected physiological and psychological responses to ongoing traumatic stress. The formal definition states that “CTS is not a disorder but rather the experience of persistent traumatic event(s), both past and continued, that occur at any point across the lifespan, with sequelae that are perceived by the individual as impairing, regardless of symptom constellation or thresholds,” (Fondacaro & Mazzulla, 2018). Facilitators provide this definition in understandable terms.

In a light-hearted manner, the facilitator and client(s) share the numbers one through

ten in their native language. This activity sets the stage for using the concept of Subjective Units of Distress (SUDS) in future modules. Clients rate their SUDS throughout treatment (e.g., during exposures to trauma stories). Facilitators may also choose to learn some words from the client’s native language as this can build rapport and mutual respect.

NESTT Mobile Application

The facilitator introduces the NESTT mHealth application (Mazzulla et al., 2021). The NESTT app, developed by mental health experts, a software development team, and cultural consultants, is language-free and incorporates culturally validated visual cues to guide users through specific therapeutic techniques. Clients begin by creating an avatar representing themselves. Next, the breathing component of the app guides clients through a deep breathing exercise. This function shows clients a colored orb, which starts very small and expands to fill a larger circle. They can inhale and exhale, along with the expanding and contracting orb. Clients are always given a choice to complete exercises provided in CTS-Treatment. Traumatic experiences, including systematic torture, strip survivors of their sense of control. Frequently reminding clients of their choice regarding participation in any activity may assist in rebuilding their perception of control.

Module Two: Safety and Support

A sense of safety within relationships may be compromised for refugee clients, as fellow human beings perpetrate trauma and torture experiences. For example, a Somali-Bantu woman sexually and physically assaulted by a former neighbor in the militia has difficulty feeling safe and trusting others. Establishing trust and safety in the therapeutic environment is foundational and has become a

3 Article 1 of the 1984 United Nations Commission Against Torture states that torture is “any act by which severe pain or suffering, whether physical or mental, is intentionally inflicted on a person for such purposes as: obtaining from him or a third person information or a confession, punishing him for an act that he or a third person has committed or is suspected of having committed, or intimidating or coercing him or a third person, or for any reason based on discrimination of any kind, when such pain or suffering is inflicted by or at the instigation of a public official acting in an official capacity” (United Nations, 1988).

standard component of many evidence-based treatments shown to reduce trauma symptoms, increase social support, and improve daily functioning (Bunn et al., 2018). Moreover, programs that employ a stage-oriented trauma recovery model include safety as the first intervention phase (Herman, 2015). Discussions of safety occur throughout subsequent modules in the CTS-Treatment. After discussing safety, mindfulness is introduced and incorporated throughout other treatment modules (e.g., closing activities, coping skills). Mindfulness practices may increase joy, establish trust of facilitators and other group members, and may assist with identifying post-traumatic growth and meaning. Mindfulness can also be an effective intervention for reducing traumatic stress and depression symptoms in refugees, as evidenced by Bernstein and colleagues' recent randomized controlled trial. Over half (52%) of participants who received Mindfulness-Based Trauma-Recovery for Refugees recovered from PTSD by the end of treatment compared to only nine percent recovery in the control group (Bernstein, 2019). In addition to the empirical support in favor of conducting mindfulness exercises with refugees, clinicians must be aware of possible dissociation by trauma survivors when participating in mindfulness exercises. Therefore, module two aims to establish safety and cautiously introduces mindfulness skills, while facilitators and clients carefully attend to clients' responses. If dissociation occurs, facilitators may gently stop the mindfulness activity or modify the technique. The facilitator may also engage the client in a grounding strategy (see grounding in Module 5: Coping Skills).

Content

Safety in the therapeutic environment is built over treatment sessions and described explicitly in this module. Clients reflect on individual perceptions of safety through several

in-vivo activities. First, facilitators review the concept of SUDS, and clients assess their current distress levels from zero-ten. Clients imagine a place that feels safe for them (e.g., with their children, in a familiar location), and clients may share descriptions of this place. Next, clients are encouraged to draw a picture of something that makes them feel safe. This picture may be a place (e.g., a river, a home, the therapy room) or an object (e.g., a telephone used to call a friend; a photograph of a loved one; a prayer object). As some refugees do not have experience with creating artwork or drawing, facilitators remain non-judgmental and acknowledge the novelty of the activity. Clients are asked to reassess their SUDS levels after these safety exercises.

At session close, the clients engage in a facilitator guided mindfulness exercise. Mindfulness may include clients and facilitators sitting with eyes opened or closed while quietly noticing the breath or imagining a special place in detail (e.g., colors, smells, taste, and sounds). Alternatively, mindfulness may include non-judgmentally imagining leaves on a stream or clouds in the sky, then simply placing thoughts on the leaves or clouds (Harris, 2019). For mindfulness examples specific to refugee clients, see Hinton, Pich, Hofmann & Otto (2013). Facilitators describe mindfulness as "paying attention on purpose, without judgment." Finally, clients look at or imagine their depictions of safety and recall the images, scents, sounds, and emotions associated with it.

NESTT Mobile Application

The safety exercise within the app requires clients to select or upload an image that represents safety to them. Clients reflect on safety while tapping on different locations on the screen to gradually reveal their chosen picture.

Module Three: Values

The purpose of module three is to identify values that are meaningful or important to clients. The identification of values is a primary focus of intervention, as torture and trauma experiences can present challenges that may interfere with living in ways that align with identified values. For example, the physical consequences of torture may prevent someone from engaging in the workforce, limiting their ability to pursue financial independence and stability. Values are not attainable goals (e.g., getting married; buying a house) but instead represent how an individual strives to live life (e.g., being loving; being independent). The identification of values can guide one's actions in a deliberate way (Harris, 2019). Acceptance and Commitment Therapy (ACT), a third-wave, strength-based behavior therapy (ACT; Harris, 2019; Hayes et al., 2016), heavily influences the concept of values. A meta-analysis of acceptance-based treatments with clients from non-dominant cultural and marginalized backgrounds showed pre-post treatment improvement, albeit with small effect sizes, when clients received acceptance- or mindfulness-based treatment compared to treatment as usual (Fuchs et al., 2013). Symptom reduction is not the primary outcome of ACT; however, increased engagement in valued living may reduce distressing mental health symptoms. For example, ACT studies have found significant decreases in human suffering and increases in quality of life concerning symptoms of depression (Forman et al., 2007) and anxiety (Roemer et al., 2008).

Content

In this module, clients are encouraged to reflect upon the degree to which trauma interrupts living a life guided by identified values, either through avoiding distressing memories

and emotions or focusing heavily on them. Clients identify values through in-session activities. If clients have difficulty grasping the abstract concept of values, therapists encourage clients to list what is important to them to guide active and deliberate decision-making. Facilitators utilize culturally relevant images (e.g., people praying, families dining together, communities gathering, or landmarks from the client's country of origin) for this activity. Clients expand upon aspects of the images that resonate and engage with the therapist to discuss the importance of identified values. Refugee clients often choose family connection as a value (e.g., being a loving mother; being a dependable father). When family members have been killed in war or have been left behind in a refugee camp, the parameters of identified values are expanded upon. For example, it may be effective to assist in strengthening spiritual connections to family members or identifying ways to be loving or dependable without being in close physical proximity to loved ones.

NESTT Mobile Application

A symbol of a tree depicts the app exercise for values. When pressed, the tree has a series of three camera graphics. Clients can use the app to take three pictures of objects that represent their values.

Module Four: Behavioral Activation

Module four assists client(s) in identifying behavioral activities or pleasant events related to their values. For example, a Congolese man who misses his daughter and values family closeness may engage in soothing activities that remind him of his daughter (e.g., listening to songs they sang together or making an overseas phone call to speak with her). If self-reflection is a value, then associated activities may be to prioritize time alone or to take a walk.

Behavioral activation (similar to *committed action* in ACT, (Hayes et al., 2012)) has been effective in the treatment of PTSD and depression (e.g., Ekers et al., 2014). Numerous studies, including meta-analyses, demonstrate positive outcomes (e.g., Cuijpers et al., 2007). CTS-T facilitators may note that some refugee clients fear engagement in activities that remind them of their traumatic experiences. Some may fear re-experiencing symptoms or intrusive memories. Others may be afraid of losing emotional control outside the safety of their homes. Still, others may report feeling guilty for enjoying their lives when loved ones may still be in danger or have died (survivor's guilt). In CTS-T, facilitators validate these feelings and follow the client's preferred pace with these activities. However, substantial avoidance of meaningful or enjoyable activities can maintain or exacerbate mental health symptoms (Hershenberg et al., 2015). Thus, the CTS-Treatment emphasizes resilience-focused functioning, such as increased behavioral activation in which clients engage in more deliberate actions toward living a valued life. Reincorporating these activities into daily life may also reduce symptoms associated with traumatic stress, depression, and anxiety. When necessary, coping skills learned throughout treatment (see module five) may be implemented during valued living activities (e.g., to manage survivor's guilt, to calm the nervous system when a traumatic response is triggered).

Content

The facilitator describes how painful life experiences can get in the way of engaging in meaningful, pleasant activities (e.g., avoiding activities that might remind a client of a traumatic event). The facilitator also explains that although challenging at times, engaging in positive activities can improve one's mood.

The facilitator returns to values identified in module three and collaborates with the client to identify behaviors to engage in that align with those values. These behavioral goals may start extremely small. For example, a Nepali-Bhutanese man sad about his parents remaining in a refugee camp may have difficulty getting out of bed. He may identify spiritual connection as a value and take the action of sitting for a short time and praying immediately after getting up in the morning. Facilitators also discuss pleasurable activities in which clients would like to participate (e.g., taking a relaxing bath, talking to friends, listening to music). This discussion can take the form of a brainstorming session, playful dialogue, or looking through photos or magazines to identify activities. The facilitator and client then schedule daily and weekly activities that align with the client's values. Facilitators help clients identify barriers to engaging in behavioral activation (e.g., motivation, finances, time) and engage in problem-solving to address these barriers.

NESTT Mobile Application

Behavioral activation within the app is a subset of the values component, as mentioned above. Under each larger graphic representing values are four more graphics that are populated by pictures of ways to engage in those values (behavioral activation). For example, if the first picture is of the client's family, the four sub-pictures are of specific valued living activities in which the client can engage as they relate to the family (e.g., playing with children; going to work to earn money; watching a moving together).

Module Five: Coping Skills

Module five introduces coping skills to manage chronic traumatic stress. Refugees face chronic stressors such as fear of deporta-

tion, acute grief of losing a loved one, and the nightly occurrence of waking up distressed from nightmares. Building coping skills may increase resilience such that clients can cope more effectively with both acute and chronic stressful events over time. Studies have shown that learning coping skills can reduce distress in refugees with traumatic experiences (Hinton et al., 2013).

Content

Facilitators first discuss and support clients' current coping resources. Then they introduce and contextualize the following coping activities. Clients carefully test and practice these skills to determine which are the most helpful. Clients choose the coping skills to try, as some strategies may exacerbate client distress.

- **Grounding Skills.** Grounding skills require clients to focus their awareness on any of their five senses (Najavits, 2002). Clients may name everything in the room that is a particular color (sight), hold ice in their hand or drink a cup of cold water (touch), slowly eat a favorite food (taste), light a candle with a pleasant odor or cook a fragrant food (smell), or identify noises occurring in their environment, such as a fan blowing, cars driving on the street, or birds chirping (sound).
- **Breathing Skills.** Breathing skills focus the mind on the natural inhalation and exhalation of the breath. Paced breathing (e.g., four counts in, hold for four counts, exhale for eight counts) teaches clients breath control, which with practice, can slow the parasympathetic nervous system and calm the body.
- **Progressive Muscle Relaxation.** Clients are encouraged to identify and control the degree of muscle tension experienced, gradually focusing awareness on the lower leg,

upper leg, pelvis, torso, upper chest, arms, hands, and face, tensing and releasing the muscle groups in each area.

- **Emotion Regulation.** Clients are encouraged to brainstorm and practice ways to increase or decrease the intensity of emotions. For example, clients may choose to call a friend or go on a walk to reduce the intensity of sadness. They may choose to listen to upbeat music or cook with their family to increase feelings of joy.
- **Seated Yoga.** Seated yoga is a low-impact variation on traditional yoga practiced in a chair with simple upper body movements.
- **Distraction.** Distraction is described as actively giving oneself a break from intense thoughts and emotions by focusing on something engaging, neutral, or pleasurable.

NESTT Mobile Application

Five different app components (grounding, progressive muscle relaxation, deep breathing, seated yoga images, and a distraction) provide practice with these coping skills. Deep breathing was previously described in module one. For grounding, clients can review a series of images representing the senses. For progressive muscle relaxation, clients can select the length of time, whether they would like to be seated or stand, and whether they would like to move from head to foot or foot to head. The image guides clients to focus on the body's highlighted sections, tensing and releasing muscles as they move their attention throughout the body. Seated yoga can be practiced by imitating the positions in the series of images. For distraction, gamification provides an increasingly more challenging and engaging memory game.

Module Six: Sleep Hygiene

In addition to trauma symptoms and general mental health concerns, the CTS-Treatment

emphasizes quality sleep for physical and emotional health. Inadequate sleep is associated with impaired learning and memory (Havekes et al., 2012), depression (Wirz-Justice & Van den Hoofdakker, 1999), and suicide (Porras-Segovia et al., 2019). Similarly, physical concerns can include high blood pressure, heart disease, kidney disease, stroke, diabetes (U.S. Department of Health & Human Services, n.d.). Many refugees experience sleep disturbances (Sandahl et al., 2017). For example, an Iraqi man reported nightmares of bombings and torture, and a Sudanese woman reported dreaming of a witnessed murder scene. Despite findings that the vast majority of refugees report difficulty sleeping (99.1%; Sandahl et al., 2017), research on the treatment of sleep disturbances in refugee populations remains limited (Sandahl et al., 2017). However, sleep hygiene education can be an effective part of multidimensional interventions for sleep problems in the general population (Vgontzas & Kales, 1999). Module six addresses sleep concerns and the relationship between trauma and sleep.

Content

Facilitators lead a non-judgmental discussion of standard sleep hygiene guidelines. For example, engaging in quiet, relaxing activities as bedtime approaches; setting a sleep and wake schedule; avoiding caffeine after noon or alcohol before bed; limiting screen time and activating pastimes (e.g., watching an action movie, reading an exciting book) at night; daily exercising during the day and not close to bedtime; maintaining an orderly sleep room. These guidelines may be depicted pictorially through magazine cutouts or drawings of sleep hygiene examples. Clients create an evening routine that would work for them. Facilitators and clients discuss potential barriers to adhering to these routines.

NESTT Mobile Application

The seven animated cards of this app exercise include images of the sleep hygiene steps described above. The client can change pictures by sliding their finger across the screen.

Module Seven: Working with Thoughts (Cognitive Restructuring and Defusion)

Survivors of traumatic events, including refugees, often express traumatic and challenging thoughts that interfere with daily existence (e.g., self-blame, survivors' guilt). Assisting clients with altering their thoughts (Beck et al., 2005), or their relationship to thoughts (cognitive defusion; Harris, 2019) may play a mediating protective role between chronic stress, and adverse psychological outcomes. Facilitators should have experience with these techniques prior to utilizing them (see Harris, 2019; and Beck et al., 2005 for detailed manuals of each treatment, respectively).

Cognitive restructuring and cognitive defusion are similar in that both involve working with challenging thoughts. However, during restructuring, the clinician assists the client in changing thoughts by pointing out evidence for, and against, the thoughts. For example, a very loving Syrian father left his home country with the intention of bringing his family to safety, and during the journey his wife was murdered. He reported having intrusive thoughts that he ruined his children's lives and that he *is a terrible father*. Cognitive restructuring techniques involve assisting him to see the evidence for and against these thoughts and, when appropriate, create more accurate statements about himself.

Cognitive defusion is relied upon in CTS-Treatment as this approach can be useful for trauma survivors when thoughts are judgmental and not likely to change (Harris, 2019). Further, attempting to suppress distressing thoughts can paradoxically increase

their frequency and intensity (Abramowitz et al., 2001). For example, after experiencing sexual assault and forced separation from her child, who was ultimately shot and killed, a survivor of torture from Rwanda reported having persistent thoughts that she is *a horrible mother who does not deserve to live*. Her thoughts impacted her ability to engage with her remaining children. She unsuccessfully tried to ignore these distressing thoughts or restructure them, and they continued to increase. Clients can learn to notice and label these cognitions as thoughts, learn that thoughts may be hard to change, and understand that distressing thoughts may re-surface at times. Importantly, clients learn that they can continue to engage in valued living even with distressing thoughts.

In module seven, clients engage in “thought work” to reduce the impact of distressing thoughts by either changing the unhelpful thoughts or changing their relationship to the thoughts.

Content

To promote cognitive defusion, we use an experiential exercise (Hand Exercise), a slightly modified version of the ACT hand exercise (Harris, 2019). First, the facilitator places one hand fully covering her face to represent fused trauma/torture experiences and associated thoughts, and the other hand out straight in front of her to represent values. The facilitator then struggles to view her outstretched hand while one hand is covering her face. The clinician discusses how trauma experiences and thoughts get in the way of focusing on what matters (values). Next, the facilitator places her hand in the back of her head, representing avoidance. Here, the facilitator may demonstrate how traumatic memories and thoughts can sneak up on the observer, without warning. The facilitator reiterates that avoidance can paradoxically increase chal-

lenging thoughts. Lastly, the facilitator gradually moves her hand until it is at the head’s side, representing a different relationship with thoughts. Specifically, clients may choose to focus on their values while living with traumatic thoughts and memories. Clients are asked about their thoughts and given a chance to respond in as little or as much detail as they feel comfortable. Facilitators emphasize the usefulness of practicing thought exercises.

NESTT Mobile Application

On the app, an image of a tree with different birds symbolizes working with thoughts. The birds make various noises representing pleasurable and challenging thoughts. The user touches the birds, and the birds get louder and slowly quiet down. Clients can imagine sitting under the tree and listening to the associated thoughts. Clients are encouraged to practice tolerating or diffusing from unhelpful thoughts. If clients have any negative associations with birds due to their torture or traumatic experiences, this exercise may be modified.

Module Eight: Acceptance and Tolerance of Emotions

Given the numerous traumatic experiences refugees endure, it is unsurprising that they often report intense emotional reactions, including extreme anxious and depressed feelings. Thus, the purpose of this module is to practice tolerating these emotions.

Efforts made to avoid or *not* accept emotions are associated with seemingly contradictory increases in challenging emotions (Clifton et al., 2019). Additionally, the negative impact of avoidance or attempts to reject one’s emotions can activate a cycle in which further avoidance occurs, ultimately leading to higher distress (Campbell-Sills et al., 2006). For example, a mother who survived the war

and physical assault in Iraq experiences nightly nightmares. As a result, she loses sleep and often avoids going to bed. Subsequently, she is tired, anxious, and feeling sad. She starts to disengage from her family and friends because her sadness is very intense. Her sadness increases over time as she increasingly withdraws.

Content

Facilitators discuss the paradoxical nature of non-acceptance or avoidance and encourage acknowledging difficult feelings without trying to change their feelings or make them go away. Clients learn to approach feelings with curiosity, allowing the feeling to intensify or dissipate naturally. Facilitators can use songs from clients' cultures for this exercise to induce a specific emotion (e.g., sadness, anxiety, joy). Clients' responses to musical mood induction range from dancing to crying, depending upon the song (Geethanjali et al., 2018). SUDS levels are assessed before and after the exercise. Facilitators ask members to recall when they felt sad, anxious, or worried in the last week. Facilitators discuss the fact that feelings come and go like waves in an ocean or clouds in the sky and emphasize that "no feeling is final" (Najavits, 2002). Neither pleasurable nor challenging feelings last forever. Clients are carefully encouraged to engage in valued living activities even if they experience a challenging emotion (e.g., taking a walk even though you are lonely, calling a friend even though you feel unlovable).

NESTT Mobile Application

On the app, the image of a tree with different birds can symbolize tolerance of emotions. Clients can imagine sitting under the tree and feeling the associated emotions (the birds' calls). Clients are encouraged to practice tolerating these emotions. The app component of leaves floating on a stream can allow

the client to practice having thoughts and emotions move along the stream gradually as a form of mindfully noticing and tolerating those emotions without trying to change them. It is important to first assess if birds or water are triggering for clients (e.g., vultures looming over dead bodies or loved ones drowning) and adapt or choose to discard this app component.

Module Nine: Narrative Exposure and Life-Path Exercise

This module is similar to the lifeline activity from Narrative Exposure Therapy (Schauer et al., 2011) and utilizes timelines to contextualize past life events. Numerous studies have shown the effectiveness of narrative exposure techniques when treating refugee trauma (e.g., Neuner et al., 2004). Meta-analyses have demonstrated that Narrative Exposure Therapy effectively treats trauma in refugees from diverse countries of origin (Gwozdziwycs, 2013; Tribe et al., 2019). CTS-Treatment emphasizes client control over the degree of detail narrated (exposure technique) and the disclosure timing.

Content

The facilitator provides large pieces of paper, and materials such as yarn, stickers, markers, and glue. Group members have the opportunity to create a visual representation of their life-paths beginning with birth and ending with a coiled string representing the future. Stickers of different sized smiling faces and images of the sun represent memorable or pleasurable events (e.g., marriage, the birth of a child, religious celebration, reunification with family members). In contrast, stickers of different sized sad faces and storm clouds represent difficult or challenging events (e.g., war, death of a child or family member, sexual assault). In our experience, clients have

gained significant personal insight as a result of this activity. For example, a client remarked that due to the overwhelming impact of the war events, he forgot he had sunshine in his life. Clients have also stated that smiling and sad faces can sometimes occur at the same time. For example, one woman stated that although it was hard to leave her best friend in the refugee camp, the opportunity to resettle in the U.S. and provide her children with an American education was ultimately a happy one. The creation of the life-path is a form of non-verbal, visual exposure. After creating the life path, clients are given the option to verbally expand upon identified pleasurable and challenging events. As systematic torture deliberately strips individuals of their sense of safety and control, clinicians frequently check in with clients and display empathy while assessing clients' level of comfort with the timing and content of the exercise. Clients may choose to opt-out of the narrative exposure component or, if in a group setting, review individually with a facilitator. The clinician may return to the client at a later session to gauge readiness for narrative exposure.

In a group setting, many group members share similar torture/trauma stories, which may trigger others' memories of past traumas and subsequent re-experiencing symptoms. In advance, clients in groups are aware that they do not have to listen to other stories and are given alternatives during the session (e.g., to practice a mindfulness activity in another room). According to many of our clients, sharing of their story with others in a safe, non-judgmental space is a valuable component of therapy.

NESTT Mobile Application

Clients can replicate their life stories on their app if they so choose. The sun and clouds symbols represent the life path component

and allow clients to place suns and clouds along a lifeline.

Module Ten: Celebration of Life

Celebration and support within communities is a protective factor for refugees (Schweitzer et al., 2006). Module ten celebrates the lives of refugees and survivors of torture, the work they have completed, and the supportive connections made during treatment. Social support has been shown to improve mental health outcomes in refugee populations (e.g., Schweitzer et al., 2006), increase refugees' reports of life fulfillment and sense of belonging (Stewart et al., 2011), as well as to decrease refugees' sense of isolation and loneliness (Stewart et al., 2011). The final session aims to foster social support through celebration and reflection as a cohesive group.

Content

The client(s) and facilitators develop a celebratory experience that may include food, dance, and prayer. With the client's consent, a celebration may also be conducted at the end of individual therapy. Although there is no application component, clients may review app components and prepare to use the skills learned post-treatment.

Conclusion

The treatment described in this manuscript is based on the holistic and culturally responsive CTS model, in which past and current stressors, as well as risk and protective factors, contribute to a diverse array of outcomes for refugees. It integrates empirically supported techniques previously demonstrated to increase refugee resilience and decrease trauma symptoms. These discussions are conducted with cultural humility and intended to be mutually informative for the facilitator and clients. Cultural humility is a life-long com-

mitment to self-reflection and examination of one's own biases while gaining knowledge of other cultures.

CTS-Treatment begins with discussions of mental health, safety, and values. CTS-T includes education about, and exploration of, behavioral activation, coping skills, sleep hygiene, and cognitive restructuring and defusion. These skill-based modules provide clients with a multitude of techniques they may employ to manage symptoms and increase resilience. Following skill-based modules, the narrative exposure exercise and acceptance and tolerance modules provide opportunities to increase tolerance of thoughts and emotions. Lastly, a celebration allows clients to reflect on their experience in therapy and share a joyful moment with others.

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Annex A



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