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Adaptation of Transdiagnostic CBT for Turkish Adolescents: Examples From Culturally Adapted Multiplex CBT

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The present article illustrates how cognitive-behavioral therapy (CBT) was adapted for an adolescent Turkish population with mood and anxiety disorders. The resulting 10-session treatment—based on multiplex CBT—was efficacious in a treatment trial, showing large effect sizes (Acarturk et al., 2018). This paper discusses the cultural grounding of CBT, which increases effectiveness by such means as increasing acceptability and positive expectancy. We describe a culturally sensitive assessment measure of somatic complaints and cultural syndromes, the Turkish Symptom and Syndrome Addendum. We discuss how, in a culturally sensitive way, we normalized symptoms, conducted interoceptive exposure, and created positive reassociations to sensations. We describe how we used Turkish metaphors and religious ideas to teach CBT principles. We show how we adapted mindfulness and "loving kindness" for a Turkish population, and how we utilized transition "rituals" at the end of the treatment to give a sense of closure and a positive feeling of transformation. Two case examples are provided to further illustrate how we adapted multiplex CBT to a Turkish adolescent population.

Studies have failed to show the effectiveness of traditional (Western) cognitive-behavioral therapy (CBT) for a Turkish population (Renner & Berry, 2011; Sleptsova, Wössmer, Grossman, & Langewitz, 2013). Research indicates that there are numerous challenges when adapting standard CBT treatments to non-Western cultural groups. Challenges include marked somatic symptoms, differing cultural traditions (e.g., local conceptualizations of the workings of the mind and body, and local meaning of symptoms), and considerable stigma about mental health and mental health service use. Culturally adapted (CA) multiplex CBT was developed to address these challenges, and has been found to be effective for posttraumatic stress disorder (PTSD) for several cultural groups (Hinton, Pham, et al., 2004, 2005; Hinton, Hofmann, Rivera, Otto, & Pollack, 2011; Jalal, Kruger, & Hinton, 2018). CA multiplex CBT takes a transdiagnostic approach and emphasizes sensorial processing and emotion regulation.

Keywords: anxiety disorders; mood disorders; multiplex CBT; transdiagnostic treatment

The treatment is based on the multiplex model of anxious-depressive psychopathology (Figure 1), which identifies key treatment targets. Almost every session has a certain structure—namely, homework review, emotion elicitation with practice of an emotion regulation protocol (e.g., asking about anxiety during the previous week, what was done to treat it, and then practicing emotion regulation techniques), a core lesson, a stretching lesson, homework assignment (which focuses on practicing stretching and mindfulness), and the mindfulness lesson for the week (which is practiced upon leaving the session). Table 1 describes the core lessons of each session for the 10-session version of the manual used in the current study.

In this paper, we describe our cultural adaptation of a transdiagnostic version of CA multiplex CBT as delivered in a group format for a Turkish adolescent population with selective serotonin reuptake inhibitor (SSRI)-resistant anxiety and mood disorders. The treatment was effective in an open trial, with 13 participants who had a mean age of 14.9 years (Acarturk et al., 2018). There were no dropouts and there were within-group effect sizes of 1.10 posttest for anxiety symptoms, 0.93 post-test for depressive symptoms, and 1.59 for a measure of locally salient symptoms and syndromes, the Turkish Symptoms and Syndrome Addendum (TSSA). Table 2 summarizes some of the key aspects of treatment and the adaptations—

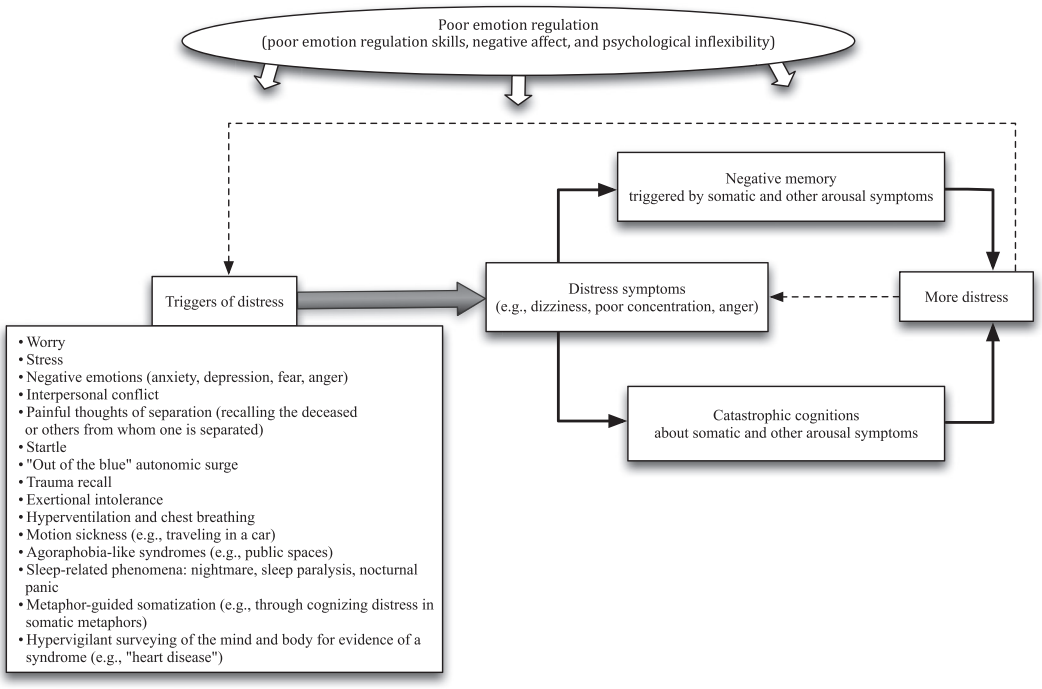

Figure 1. The Multiplex Model of the Generation of Anxious-Depressive Distress

what might be called the cultural grounding of our CBT. Below we describe our adaptation of CBT for the Turkish adolescent population—the process of cultural grounding. Two case examples are also provided to illustrate treatment adaptation.

Culturally Sensitive Assessment: The Turkish Symptoms and Syndrome Addendum (Turkish SSA - TSSA)

To engage the patient in treatment and for the patient to have positive expectancy, it is important to frame the treatment as addressing complaints of key concern (Hinton & Jalal, 2014a, 2014b). The TSSA was devised to provide a culturally sensitive means of profiling psychological distress among Turkish individuals (see Table 3). The aim is to identify key somatic and other complaints, as well as cultural syndromes that are salient for the group in question. The items of the TSSA were obtained based on a review of both Turkish and English literature (Borra, 2011; Sayar, Kirmayer, & Taillefer, 2003; Yeşilbaş, 2008), clinical experience, two focus groups in Istanbul Sehir University and Istanbul Medical School (Istanbul University), and consultation with five key informants, including two psychiatry professors and three clinical psychologists. The degree of being bothered in the last month by each symptom of the TSSA was rated on a 5-point Likert scale, from 1 (*not at all*) to 5 (*extremely*).

Table 1
Outline of the Core Focus for Each Session

Session 1	Education about anxious-depressive distress and the treatment and introduction of emotion regulation techniques
Session 2	Applied stretching and the toe-to-head muscle relaxation with visualization
Session 3	Review of toe-to-head muscle relaxation with visualization and the introduction of the dysphoria (anxiety/depression) protocol, education about anxious-depressive distress, and teaching the bad memory protocol
Session 4	Education about anxious-depressive distress, modifying catastrophic cognitions, and teaching emotional distancing
Session 5	Interoceptive exposure I: Head rotation
Session 6	Interoceptive exposure II: Hyperventilation
Session 7	Worry and distress
Session 8	Anger and anger protocol, and education about breathing and its use for relaxation
Session 9	Somatic complaints and sleep disturbance
Session 10	Cultural syndromes and ethnophysiology related to distress; closing

Table 2
Key Therapeutic Aspects of Multiplex CBT and Their Adaptation for Turkish Adolescents

CBT principle	Examples of adaptation
Normalize the disorder and address stigma	*Refer to mental illness in a nonstigmatizing way, such as *ruh hastalığı* (soul illness), rather than as *akıl hastalığı* (brain illness) *Focus on symptoms and cultural syndromes that the treatment aims to relieve (e.g., TSSA items)
Promote patience and educate about the multistep nature of CBT	*Analogy of cooking a traditional Turkish food (e.g., Turkish dumplings) that takes many steps to make *Analogy of computer game of many levels *Analogy of learning how to ride a bike, and how to walk or talk, all of which are done one step at a time
Promote acceptability and positive expectancy	*Analogies: that of cooking traditional Turkish food (e.g., Turkish dumplings), of a computer game of many levels; of learning how to ride a bike *Frame the treatment as addressing key concerns, such as the TSSA items *Transitional ritual at the end of treatment: taking a long bath (*kırklanmak*); buying a new notebook and pen and starting a new page *Cultural grounding of treatment: assessing and addressing local complaints (TSSA), using local positive associations to dizziness techniques (e.g., traditional games), using therapeutic proverbs from the culture, using local positive self-imagery, and using local therapeutic practices that may have efficacy according to CBT principles (e.g., meditation)
Positive self-image	*Self-images of flexibility: "flexible tree" (e.g., the palm and plane tree), cat's tail, rising-and-dancing steam from tea, hot cocoa, soup, such as up-breathing upon (*hohlamak*) one of them *An inner-child exercise that involves imagining an inner-guiding positive character from popular culture (e.g., *Muhittin*) *Light illumination technique (bathed in a bright cooling light) *Mood regenerator through identification with the *Deadpool* character (see image transformation below) *Triumpher through humor (see image transformation below) *Conveyer of loving kindness (see loving kindness below) *Conveyer of gratitude (see attention control below) * Self-image as a nurturing empathic one through an inner child analogy of being the one who soothes the wounded inner self *Hopeful self through asking about future hopes *Telling the participants to appreciate themselves for their effort in school even though they might not get "good grades," and having all members clap their hands to congratulate themselves *Carry things that make one feel better, like a pen, paper, or favorite book, which shifts self-image: I, the reader; I,the writer *Transitional ritual at the end of treatment to change self-imagery: taking a long bath (*kırklanmak*) and buying a new notebook and pen and starting a new page
Psychological flexibility	*Self-images of flexibility: "flexible tree" (e.g., palm or plane tree), cat's tail, rising-and-dancing steam from tea, hot cocoa, or soup *Breathe upon (i.e., *hohlamak*) tea, hot cocoa, and soup, to create an image of flexibility *Techniques that promote learning other mood states (e.g., gratitude and loving kindness) *Techniques that promote distancing (see below) *Techniques that promote attentional control (see below) *Teach to have more than one mood, and then explain that painting requires more than one color while pointing to an actual painting *Teach to have more than one mood, by referring to the movie *Inside Out* *Reassociation to dizziness, which promotes interpretive flexibility (see below) *Image transformation to treat nightmare, which is practicing switch ability (see below)
Address catastrophic cognitions	*Inform that TSSA items will get better with treatment *Specifically ask about catastrophic cognitions about symptoms *Emphasize that symptoms are caused by emotions and not by black magic or spirit assault *Educate about nightmares and sleep paralysis, including addressing related cultural fears *Explain that palpitations exercise the heart just like when one plays games—here we mention games popular in the Turkish adolescent group, such as *yakartop* (dodgeball), jumping rope, and basketball—the heart beats fast

(continued on next page)

Table 2 (*continued*)

CBT principle	Examples of adaptation
	*Inform the group members about cases where the somatic symptoms might be necessary (such as running from danger) to emphasize that the aim of therapy is not getting rid of the somatic symptoms but finding the correct balance
Image transformation to treat nightmare	*Harry Potter example of the Boggart: triumph through humor—that is, by adding a funny element to a feared entity *The *Deadpool* character that recovers physically and emotionally from any attack
Educate about the role of attention on mood	*Mood when watching only news reports on violence versus mood when watching soap opera (e.g., *Rental Love*), or soccer game, or watching a loved movie, like *Up* *Proverb: "What you repeat 40 times will come true"
Attention control to address rumination	*Mindfulness techniques (see below) *Talk to a friend *Practice gratitude (Rumi says, "Wear gratitude like a cloak and it will feed every corner of your life")
Teach distancing	*Use the inner-child analogy and then refer to the inner child as various known characters (Aunt Vasfiye) *Ask "What if one's friend was the one who was remembering those past memories?" *Imagine what one would say if a friend presented to one that same concern (perspective shift)
Interoceptive exposure and positive reassociation to dizziness	*Reassociate dizziness to the Ring Around the Rosie game *Reassociate dizziness to whirling dervishes that spin the whole body
Mindfulness	*Teach the role of attention on mood *Pay attention when having tea to steam dancing up from the pot or tea cup or to this when having hot cocoa or soup *Ask about the favorite food and drinks before teaching multisensorial mindfulness *Ask the date, the time, and the place *Use the example of the smiley emoji when teaching facial expression mindfulness
Loving kindness	*Use imagery of water (proverb: "sprinkle water on one's heart") and a bright cooling light *Feel compassion to dogs and cats on street
Anger regulation	*Proverb from culture: "Who gets up in anger, sits down with loss" *Proverb from culture: "Sharp vinegar only damages its container" *Pray to calm down (for those who are religious) *Provide example that if angry when walking, one may not see a red light and might be distracted and be hit *When angry, washing the face, taking sips of water, or drinking a relaxing herbal tea (in Turkish culture, anger is configured as a heat)
Mood regulation	See the sections above on self-image, distancing, mindfulness, attention, loving kindness, and anger

Note. CBT = cognitive-behavioral therapy, TSSA = Turkish Symptoms and Syndrome Addendum.

The somatic symptoms of the TSSA are typical somatic symptoms in the population, and most are arousal-type symptoms (see Table 3). Previous research suggests that many non-Western groups have prominent somatic complaints (Hinton & Lewis-Fernández, 2011). Studies conducted with dysphoric Turkish patients likewise show a great somatic emphasis, first presenting to general physicians with somatic complaints (Bäärnhielm & Ekblad, 2000; Yeşilbaş, 2008): one study of Turkish patients with depression found that 70% had first consulted a medical doctor with somatic complaints (Birsöz, 1997).

The cultural syndromes in the TSSA are as follows: One item assesses fear of fainting; of note, fear of fainting is often related to the complaint of orthostatic dizziness—that is, dizziness upon standing up, which is common in this context (also common in other cultural contexts; see Hinton et al., 2010). Another item is fear of heart attack, which is related to a fear of *hafırgan*. *Hafırgan* (also called *afakan* or *hafirgan*) was described as early as the Ottoman Era (1299–1923). It includes palpitations in the abdominal area, fatigue, hypersomnia, and loss of appetite (Atnur, 2011; Yanık, 2003). Often, patients with the syndrome state that it started after a fearful event, and during the actual course, the main symptoms are somatic, particularly palpitations in the abdominal area accompanied with a feeling of fatigue. Resembling panic and somatization more generally, the symptoms are chronic. Another culturally salient syndrome is "thinking a lot" (*vesvese*), which is a rumination-type syndrome. It mainly includes worrying about the future and depressive thoughts related to the past; in the presence of a traumatic history, thinking a lot might include trauma cognitions. Moreover, in a Turkish Muslim population, thinking a lot may include rumination on religious and blasphemous

thoughts, such as "fear of cursing God" (see Jalal & Hinton, 2015, for a comparison with an Egyptian Islamic population; of note, thinking a lot-type syndromes have been found to be a key presentation of distress in many cultural contexts [Hinton, Reis, & de Jong, 2015]).

Several assessed cultural syndromes relate to supernatural concerns. As described above, thinking a lot may involve religious concerns. An important supernatural syndrome in the Turkish context is "fear of the evil eye" (*nazar değmesi*). It is believed that maliciously envious people transmit negative energy to the individual that causes physical heaviness (or drowsiness), distress, and bad luck. Another supernatural syndrome is fear of jinn attacks ("I am afraid of jinn attacks and I am scared that jinns may haunt me"), with jinn being a supernatural creature rooted in Islamic faith (Jalal, Simons-Rudolph, Jalal, & Hinton, 2014; Jalal & Hinton, 2013, 2015). It is believed that jinns are evil spirits and they are shape-shifters—therefore, they can transform their appearances as they like. They may transform into a horrifying creature, a human who is known by the attacked person (a friend, family member, or acquaintance), or can be a total stranger. One may be struck and made ill by a jinn, or even possessed by a jinn.

Another supernatural syndrome is *Karabasan*. *Karabasan* is the Turkish term for sleep paralysis, and constitutes a syndrome because of the elaborate ideas about this phenomenon (Jalal, Eskici, Acarturk, and Hinton, in press). Sleep paralysis is characterized by the inability to move or speak while falling asleep or upon awakening (Jalal & Hinton, 2016), and is common around the world and given culturally specific interpretations (Jalal, 2016; Jalal & Hinton, 2013; Jalal & Ramachandran, 2014; Paradis & Friedman, 2005). In Turkish, *kara* means black and *basan* comes from the word *basmak* that means to press, to overwhelm. *Karabasan* is the name of a supernatural creature that is part of Turkish cultural tradition, a kind of jinn, and *Karabasan* is thought to cause sleep paralysis. Another cultural syndrome is having hypnopompic and hypnagogic hallucinations, which are common in this group, again associated with jinn fears—these hallucinations may occur in sleep paralysis. To assess this, the person is asked about seeing shadows, dark figures, or silhouettes from time to time upon just falling asleep or upon awakening.

Normalizing the Disorder and Decreasing Stigma

We start by explaining how common mental health problems are in general, with the aim of minimizing reluctance to receiving treatment. In Turkey, attitudes toward mental illnesses tend to be highly negative (Karancı & Kokdemir, 1995; Ozmen et al., 2004). A study with 707 participants found highly negative attitudes toward depression, with almost half of the participants considering people with depression as aggressive and dangerous (Ozmen et al., 2004). The same study also indicated an attitude difference toward two terms that indicate mental illness: *akıl hastalığı* and *ruhsal hastalık* (*hastalığı* and *hastalık* both mean illness). *Akıl hastalığı* (*akıl* means brain, so literally, brain illness) is found to be related to more negative attitudes and has a meaning similar to insanity (*delilik*). By way of contrast, participants who used the term *ruhsal hastalık* (*ruhsal* means spirit, so literally, soul illness) had less stigma. Thus, the therapist should not use the stigmatizing term *akıl hastalığı* or as an approach to decrease stigma. The therapist should also highlight the symptoms and distress associated with the disorder, such as somatic symptoms.

Creating Positive Expectancy About Treatment

Both in pharmacology and psychological studies, positive expectancy about treatment has been shown to be one of the best predictors of positive outcome (see Price, Finniss, & Benedetti, 2008, for a review on the placebo effect). One way to do this is through the TSSA. By assessing the TSSA items and by informing the patient that the symptoms will improve, the patient knows the treatment will address key areas of concern, which increases positive expectancy. To promote positive expectancy, we also use analogies of CBT processes to local practices, a form of explanatory model bridging (Hinton & Jalal, 2014a; Hinton, Lewis-Fernández, Kirmayer, & Weiss, 2016; cf. Hwang, Wood, Lin, & Cheung, 2006, proposed as *cultural bridging*; Jalal, Samir, & Hinton, 2016).

As one example of using such bridging analogies, in multiplex CBT, treatment is compared to the making of a special local dish that involves multiple culinary steps in order to promote positive expectancy and to teach patience about the time frame of improvement. For the Turkish population, we use the food analogy of *mantı* (a famous Turkish dish, Turkish dumpling) that requires multiple steps to prepare. First, one kneads the flour, egg, salt, and water until one gets a firm and smooth dough. Then, with a rolling pin, flatten the dough as thin as one can and cut small square pieces and fill them with the filling ingredients one prepared before and close them. Then one boils them and prepares the sauce that includes oil, spice, and yogurt. This dish-preparation metaphor teaches the patient that the treatment process takes multiple steps that are all important to complete and require patience. Using a special local dish metaphor may increase credibility, positive expectancy, and adherence.

As another example of an analogy to local practice, with adolescent patients an analogy of a computer game in which the person moves ahead and progresses step by step through levels to treatment is provided. In this regard, one could mention a particular computer game

Table 3
Turkish Symptom and Syndrome Addendum

Symptoms
1. I have a headache all the time.
2. I often feel dizzy.
3. I feel suffocated; I cannot get rid of this squeezing feeling.
4. I often have tachycardia; my heart beats too fast.
5. I have stomach disorders lately; I have heartburn, pain, ache, and acid indigestion from time to time.
6. I often have hot flushes lately.
7. I feel heaviness on my shoulders; I feel like I carry the whole world by myself.
8. I sweat too much lately; I break out into a sweat.
9. My appetite has increased or decreased a lot lately.
10. I don't want to get up from bed; I wish to stay in bed all day long.
11. I feel exhausted; I cannot get rid of these feelings of tiredness and weakness.
12. I do things that waste my time at all times, such as watching television or playing computer games; I spend most of my time in this manner.
13. I feel really agitated and uneasy lately.
14. Sometimes I want to scream and shout at the top of my voice, but I abandon this thought because people may think ill of me.

Cultural syndromes
15. I think a lot (*vesvese*).
16. I am afraid of fainting.
17. I am afraid of having heart diseases or a problem about my heart.
18. Sometimes, during falling asleep or awakening, I see silhouettes, shadows, or things that are not present in the room normally.
19. I often experience *karabasan* (i.e., sleep paralysis).
20. I am afraid of jinn attacks and I am scared that jinns may haunt me.
21. I often experience *hafirgan*.
22. I am afraid of being hurt by the evil eye.

popular in Turkey that fits with the patient group's age and interests, to get the patient more involved.

Culturally Appropriate Education About Emotions and Practice in Distancing: The Example of the "Inner Child"

As part of the education about emotion, we use a metaphor of the "inner child," which is a metaphor that allows the labeling of mood states that promotes distancing—that is, decentering, a kind of mood mindfulness (Bradshaw, 2013; Capacchione, 1991; Chopich & Paul, 1990; Hinton, Ojserkis, Jalal, Peou, & Hofmann, 2013); such distancing promotes psychological flexibility. For Turkish adolescent patients, it was decided that the inner child analogy should be expanded to the negative inner self (or negative inner personality), with a broader set of examples given. To introduce the inner child metaphor, we used a popular TV character named "Aunt Vasfiye," a pessimistic person who always remembers negative events with a sad and angry mood. We named it "our inner Vasfiye" and suggested that this inner Vasfiye needs to be soothed. One participant in our pilot study named his "anxious voice" as his "annoying self" (*gıak ben*), and the group accepted this and continued to use the expression, the "annoying self."

Some patients considered this inner child model to be an adaptive stance. For example, one of the participants named his inner child "Muhittin," who is a Turkish comedy-show character. The fictitious character Muhittin is known to make fun of bad situations and focus on positive events and situations. In this way, a positive and adaptive self-image was cultivated to counteract the negative inner self. This might be called the "positive inner self."

Positive Self-Imagery to Promote Positive Affect, Emotion Regulation, and Psychological Flexibility

The superiority of CBT over antidepressants in reducing depression among adolescents has been shown (Butler, Chapman, Forman, & Beck, 2006), and though the mechanisms are still under debate, some posit that this might be through modifying cognitions that CBT may contribute to developing positive self-esteem (Taylor & Montgomery, 2007). Multiplex CBT uses a number of specific techniques to improve self-esteem through creating positive self-imagery, and further types of positive self-imagery were added for the Turkish adolescent group.

As indicated above, the inner self exercise gave rise to culturally specific positive imagery—that of the character Muhittin. As another example of a self-imagery technique, after introducing the inner Vasfiye or annoying self metaphor, we suggested that this inner self needed to be soothed. In this way, what was a negative self-image is transformed to that of the soother, or nurturer, which may be depicted as follows: self-as-childish → self-as-having-inner-child → self-as-soother-of-inner-child—that is, self as a nurturer. In this way, the metaphor of the inner self allowed not only a distancing from mood or way of cognizing but also a changing of self-image to that of positive agency.

As an example of positive self-imagery, multiplex CBT includes loving-kindness meditation. This creates a positive image of self—namely, that of the sender of love to others and oneself. In addition, for Turkey, the technique included imagining light moving through the body to bring inner peace (see below for further discussion)—another type of positive self imagery.

CA multiplex CBT tries to create self-imagery of flexibility in multiple ways, and increased flexibility of cognitions and related responses was presented as a key goal. One kind of imagery used to enhance the flexibility

of the self involved attending to the vapor of tea or coffee that moves flexibly (in Turkey, drinking black tea starting from breakfast is very common)—what might be considered self-imagery that acts as a flexibility primer. Another metaphor used to enhance flexibility was the "flexible tree"; plane trees are a common part of the landscape of Turkey—they are strongly rooted trees with flexible branches that move without being broken. In Turkey, among different ethnic and religious groups, we have observed that the tree metaphor has positive associations. In ancient Turkish culture, some of the trees, including palm trees, were accepted as numinous/sainted, and the flexibility of the trees was one key attribute (Bars, 2014). Moreover, to show the relationship between the flexibility of the body and mind and creating positive self-imagery, we presented stretching exercises each session, and made stretching a part of the distress protocol. Through stretching the body paired to imagery of flexible adjustment and saying during stretching, "May I be flexible in my thoughts and emotions as I am now in my body," we change the self-imagery to that of flexibility. The person recalls this self-imagery whenever doing stretching—for example, when distressed, the patient does applied stretching with self-statements of flexibility, which changes self-imagery in times of distress.

Teaching Attentional Control and Mindfulness to a Turkish Population

In multiplex CBT, we teach the importance of attentional focus and how it determines mood. The main aim is to improve the individual's attentional-shift ability (e.g., shifting the mind from rumination to a better attentional object) through a number of culturally appropriate strategies. When teaching how an attentional object could affect the mood of the person, we used "channel surfing" as a metaphor. In Turkey, TV series are common, and Turkish soap operas are also popular throughout the Middle East. Thus, using examples of culturally salient TV series would be appropriate in this cultural context. When discussing negative moods, we mention the example of a news channel showing TV clips of civilian casualties (which has been an issue in Turkey in recent years) or the tragedies of Syrian refugees. On the other hand, when mentioning a TV channel that will make the individual feel good, we mention soap operas, such as *Rental Love* (*Kiralık Aşk*). Beside soap operas, especially when working with male patients, using examples related to soccer would be highly appropriate. Soccer is very popular in Turkey and one could ask the patient to imagine or think about a game in which his or her favorite soccer team is winning. While explaining the importance of mood regulation through attentional shifting, we also used the Turkish saying "What you repeat 40 times will come true." Through this saying we asked patients to focus their attention on positive aspects in life instead of their fears.

In multiplex CBT, mindfulness is considered to be a type of attentional control, an education of the effect of the attentional object on mood, and training in volitional employment of attention. In a broad sense, we consider mindfulness as the adaptive choosing of an attentional frame and object (Hinton, Pich, Hofmann, & Otto, 2013). The present-moment sensorial experiencing of the environment is used as a mindfulness technique in multiplex CBT, much like awareness of the visual surround, such as mindful drinking of tea/coffee. In Turkish culture, drinking tea is very common regardless of age or social class. One can ask the patient to carefully think about how the steam that comes out of a teapot or a tea cup dances in the air. As most people drink tea or other hot beverages (such as Turkish coffee) multiple times a day, this training could be done regularly. Moreover, since this analogy uses an object (tea, coffee) very familiar to them, patients easily understood and accepted it.

We also introduced facial-expression mindfulness, which is a part of multiplex CBT, in which the person is taught to be aware of his or her facial expression and tries to maintain a slight smile. After discussing the importance of social relationships in Turkish culture (a highly collectivist society), we emphasized that smiling is highly valued in Turkish culture. The famous saying "*Tatlı dil yılanı deliğinden çıkarır*," which can best be translated as "You can catch more flies with honey than with vinegar" (literal translation: "Sweet talk lures a snake out of its nest") was mentioned. With adolescents we also mentioned the smiley emoji on smartphones, as an example. We noted that when we use the smiley emoji in mobile phone messages, even seemingly harsh sentences become less harsh, and using them generally creates a more relaxed and cheery atmosphere. We asked patients to think about how it may affect their social life if they also engaged in smiling during face-to-face interaction.

We consider that producing a state of gratitude is the way to change the attentional focus—in fact, there is a literature that gratitude is an adaptive emotional state and that its promotion is beneficial (Krentzman et al., 2015). We use a quote from Rumi, who is a well-known 13th-century Sufi poet in Turkey and indeed the world: "Wear gratitude like a cloak and it will feed every corner of your life" (Sobehart, 2015). Instead of focusing on sadness or worry, the patient is reminded to pay attention to the things he or she already has and be grateful for the present moment (gratitude is called *şükür* in Turkish). This may even be the beauty of things in the sensorial surround.

Teaching Loving Kindness and Adding a Light Visualization

In multiplex CBT, loving kindness is another meditation technique to promote positive emotion, which is paired with a visualization (Hinton, Ojserkis, et al., 2013; Hinton, Pich, et al., 2013). In the visualization for the Turkish group, we used a cooling metaphor because of the positive associations in Turkish culture, as in the saying "Water sprinkled on one's heart," which means to become relieved. It was considered better to start with the person being bathed in light, and then projecting this light, or water, because in the Turkish culture, light is often associated with a blessing. So the person first imagined loving kindness coming from the sky like a light (and for religious patients we named this "a healing light coming from *heaven*," instead of the sky), and to imagine the light is coming from the sky/heaven and moving through his or her body from head to toe and so bringing inner peace (*huzur*). We also had the person imagine this light of loving kindness radiating from him or her to all beings: "Imagine that love is flowing from one's heart like a bright light."

Modifying Catastrophic Cognition

In many points of treatment, catastrophic cognitions are elicited and addressed. We specifically state that somatic symptoms are generated by mental distress but that those symptoms caused by mental distress are not dangerous. The TSSA helps to identify the catastrophic cognitions of the group of interest, including somatic symptoms of concern and feared syndromes. For Turkish people, dizziness is a common anxiety-related symptom that gives rise to fears: that of losing control and that of fainting (e.g., becoming dizzy upon standing). It is important to educate patients about dizziness and provide them with new positive reassociations (see the next section on positive reassociations).

Interoceptive Exposure to Sensations

We use interoceptive exposure as an opportunity to create positive associations to sensations. As part of doing interoceptive exposure for dizziness in a culturally sensitive way, we try to have the patient think of the traditional Turkish game *kutu kutu pense* (in English, Ring Around the Rosie) while rotating his or her head. In the traditional game, a group of two or more children hold hands in a circle and sing a song while rotating, naming one person from the group to turn his or her back and hold hands again. The group holds hands until everyone in the group faces backward. During this time the therapist asks patients to recall when they were playing *kutu kutu pense* as a child. We ask them to remember how happy and excited and dizzy they were. Another cultural example we use during head rotations is that of whirling dervishes (i.e., Sufis), an ancient tradition that comes from the Turkish city of Konya. Sufis, followers of Rumi, practiced meditation while whirling.

Treating Nightmares With Image Transformation

To treat nightmares, multiplex CBT uses a transformational technique in which that which is feared is transformed into something innocuous: the attacker is dissolved by water. For Turkish adolescents, we use the "making fun of" technique, introducing a "Boggart" example. The Boggart is an evil magical creature in the Harry Potter book series. This creature does not have a specific shape normally, but when it encounters a person, the Boggart transforms itself into the worst fear of the person who it encountered—for example, the Boggart may become a mummy or the dead body of a loved one. In order to defeat this creature, magical words are not enough by themselves but rather, humor is required. The person who encounters the Boggart should make fun of it by adding absurd, funny elements to its current feared form and simply laugh. Through forming a connection between this Boggart example and our clients' nightmares, we encourage them to make fun of the person/situation that scares them in their nightmare by adding funny elements. For instance, the patient may think of the scary person as wearing a huge, funny hat and a Hawaiian skirt.

We also suggest to patients that they transform their dreams into an action movie in which they are the hero. This can also promote positive self-imagery. A popular movie among Turkish adolescents, *Deadpool*, appeared among suggestions from the group about how this might be done (see Case 1). Deadpool is a comic book superhero (an antihero actually) that was adapted to cinema recently. Deadpool's real name is Wade Wilson and he is a mercenary; he finds the love of his life, yet after a short time following this, he learns that he has Stage 4 cancer. In order to recover, he accepts a controversial treatment but finds himself deceived and betrayed by some "bad guys." During recovery he is transformed into a mutant that has superpowers, such as superhuman strength, but at the end of the treatment, he finds himself as disfigured, ugly, and scary—he thinks that he had turned into a monster and so covers his face with a mask. His most important new ability is accelerated healing, so no matter how serious his wound is, he recovers in minutes. And no matter how sad he is, he just pulls himself together and never loses his humor and joy—this witty and funny man uses humor as a coping mechanism and makes fun of the challenging situations and even himself.

Addressing Worry and Generalized Anxiety Disorder

Among Turkish patients with anxiety disorders, uncontrollable worry is a common symptom. Common worry

topics range from financial stressors, housing, and health, to well-being of loved ones. During multiplex CBT, we elicit worry themes to enhance the therapeutic alliance and to work on the triggers of the distress. Assessing worry also reveals local specific concerns and may allow public health interventions. (In addition, a key distress syndrome across many cultures is "thinking a lot," and the treatment for worry and rumination more generally helps to address this syndrome [Hinton et al., 2015].) To educate about the effects of worry, we describe the multiplex model—we mention how worry may lead to bodily symptoms that are harmless. We use many techniques to address worry, such as teaching about the role of attention in producing distress, attentional techniques (see the section on attention above), applied muscle stretching (which gives a new attentional object), and mindfulness (which gives a new attentional object). Moreover, Turkish culture is a collectivist one, and social support is particularly emphasized. Along these lines, we suggest that patients turn to a close person (friend or family member) for support whenever they are worried. Moreover, we ask them to address the worry as if their best friend or someone they care about is worried, instead of themselves. Through this technique, we aim to distance them from their own worries and teach them an emotion regulation technique. In order to increase cultural acceptability, we also use traditional practices to reduce worry. Research after the 1999 earthquake in Turkey indicated that both problem-solving coping and religious coping are associated with posttraumatic growth among victims of an earthquake besides problem-solving coping (Karancı & Acarturk, 2005). Thus, religious patients may benefit from *dua* (supplication), visiting a church or synagogue or performing other religious rituals when worried. Among other effects, it is a form of attentional shift

Teaching Anger Management

CA multiplex CBT encourages the use of proverbs in a culture to teach CBT principles. To make a more culturally appropriate framing of anger we used traditional Turkish sayings, such as "Who gets up (starts up) in anger, sits down with a loss," and "Sharp vinegar only damages its container." In Turkish culture, anger is commonly described as a fire inside and to control anger is compared to putting out a fire—thus, water is associated with controlling anger. Accordingly, we gave as anger management techniques such methods as washing the face, taking sips of water, or drinking a relaxing herbal tea (e.g., Amer & Jalal, 2011). We also suggest other techniques, such as leaving the place in which a person was angered or calling a friend who is calming or supportive.

The Turkish adolescents in our sample had many symptoms during anger, such as tachycardia (increased heartbeat), blushing, shortness of breath, numbness in hands and feet, and a feeling like there is a fire in the stomach and upper body (analogous to a "volcano that erupts lava," according to one patient). Not uncommonly, a patient had panic triggered by catastrophic cognitions about the symptoms induced by anger (see Hinton, Hsia, Um, & Otto, 2003, on the prominence of anger-induced somatic symptoms and catastrophic cognitions about those symptoms in certain populations). As per the multiplex CBT protocol, we modified the patient's catastrophic cognitions about the anger-related symptoms. For instance, we mention "a pounding heart almost always does not result from a problem with the heart; your heart also pounds when you exercise; and the pounding of the heart when angry just exercises the heart."

Culturally Indicated Transitional Rituals

To give a sense of closure and a new positive start, multiplex CBT encourages using a cultural transitional ritual at the end of treatment. Of note, this also promotes positive self-imagery. For the Turkish population, there is a special term, *kırklanmak*, to indicate having a very long bath. *Kırklanmak* originated from ancient times when people would go to *hamams* (Turkish baths) and wash their whole body with 40 bowls of water in order to purify themselves from bad evil gazes, feelings, and sins. Nowadays, *kırklanmak* is used in daily jargon to refer to a long bath. In addition, for the adolescent group, we have the patient buy a new notebook and pen and start a new page to symbolically represent the first day of their new life. Moreover, in order to indicate the importance of a new way of looking at life, acting, and using his or her body (such as through stretching moves), we end with a famous saying of Rumi's: "Yesterday I was clever, so I wanted to change the world. Today I am wise, so I am changing myself."

Case Examples

Case Example 1

Ali is a 14-year-old male. He is the youngest member of a religious family that highly supports his involvement in extracurricular activities. He started the treatment with the diagnoses of social anxiety disorder and acute stress disorder. He witnessed his friend commit suicide. Ali shared this traumatic event with the therapists and the group members in the third and fourth sessions.

At the beginning of the process, Ali had symptoms of avoidance. He refused to talk with the psychologist who was assessing his PTSD symptoms (CAPS), and in the sessions, he repeatedly claimed that he was not affected by any negative event. During the assessment and first three sessions Ali continually distanced himself from the therapist and the group; he put a table between the

assessor and himself, and in the group he chose the corner seat and did not talk with others even when he was sitting in the waiting room. Later on, he shared with the group that he was involved in risk-taking behaviors such as secretly riding in the back of a stranger's car not knowing where it was going.

The first session was a meeting session and introduction to the coming sessions. The therapist explained the possible symptoms and gave each group member a paper to write down his or her own bodily symptoms. Ali remained silent during the whole session, and did not appear like he was listening to the therapist or the other group members at all. He used the paper to draw caricatures. In the second session, he again remained silent but this time he seemed like he was listening to the therapist and the other group members. He started to join the conversation in the third session when they were talking about how playing video games can cause some neck pain, and his participation increased gradually. We were able to observe his social improvement as he became one of the most talkative members of the group.

One of the metaphors used in therapy was the flexibility of the self, like the steam rising from tea or coffee. Group members were advised to observe the vapor to associate the self with it and feel more flexible. Ali came up with the metaphor of a cat's tail. He suggested that they could also watch the tails of cats on the streets as a reminder to be more flexible. This was a creative example that continued to be used in the next sessions. Another example he gave was the elasticity of the brush he used when he was doing *Hat sanatı*, which is a traditional Ottoman calligraphy that requires the use of different kinds of brushes. The second theme of the same session (third session) was to show compassion to all living beings; the example of helping old people crossing the street was given, to illustrate the idea. He continued with the cat example and suggested that we can also show compassion to animals living on the streets and feed the cats. This was a culturally appropriate example as there are a high number of street cats and street dogs in Istanbul and other major Turkish cities.

In later sessions, a highlighted skill was turning the negative associations between the bodily symptoms of stress and the triggered memory to a positive association. Two types of spinning (head rotation and full-body rotation) were mentioned. The example of how a person's head can feel dizzy in an amusement park was given. Ali came up with the example of *mevlevilik töreni*, which is a religious ritual where the dervishes of the Sufi order perform a type of meditation where they spin around themselves (full-body rotation) to reach all the sources of perfection.

The analogy of the "inner child" as the "annoying self" was one of the most commonly used techniques during therapy, intending to educate group members about the part of the self that keeps reminding them about their unpleasant memories of the past and worries of the future. Ali named his inner child "Muhittin," which is also the name of a Turkish comedy show character. The fact that he chose that character's name, who is known for his ability to make fun of a bad situation and turn it to a positive one, shows that he made a self-identification with a positive role model as a coping mechanism against bad situations.

Each session started with the sharing of the members. In one of the sessions, everyone shared their losses in life, and this was the first time that Ali shared his traumatic experience with the group members. He reenacted the event of his friend's suicide by pointing his fingers at his own head as if it were a gun and shot himself. In order to move the group from the negative mood, the therapist asked them if there is anything they usually do when they feel down (in the treatment, patients are asked how they cope with distress). Ali said that he likes to sing. The therapist asked him if he would like to sing for the group. At first, he hesitated but then he started to sing one of the famous Turkish folk songs named *Uzun İnce Bir Yoldayım* ("I Am Walking in a Thin, Long Road"). The lyrics of the song uses the road as a metaphor of life, saying that, though it is a long road that,you do not know where you are going, you still keep going day and night. All of the group members joined him and it ended with a pleasant experience for everyone. At the end of the session, Ali said that this life and all the difficulties we face is a test of our faith, therefore, we should accept and overcome them. Before the beginning of the next session, Ali's father told the therapist that he had mentioned that he was feeling much better after the experience of sharing and singing during therapy.

The last two sessions discussed nightmares and the techniques one can use to make fun of the scary elements of the nightmare and normalize them. Ali used the movie *Deadpool*, which was in theaters at the time of the session, as an example of how we can accomplish turning scary moments into joyful ones. He added many other superheroes from *The Avengers* as possible characters we can add to our interpretation of nightmares to make it more interesting and less scary.

Ali demonstrated improvement on scores across treatment, particularly at follow-up. His Beck Depression Inventory (BDI; Beck et al., 1961), Screen for Childhood Child Anxiety Related Disorders (SCARED; Birmaher et al., 1999), TSSA (Acarturk et al., 2018) and Anxiety Sensitivity Index (ASI; Reiss, Peterson, Gursky, & McNally, 1986) scores at baseline were, respectively, 6, 15, 23, and 5. His scores at posttest were 5 (BDI), 14 (SCARED),

19 (TSSA), and 7 (ASI). Finally, his follow-up scores were 3 (BDI), 9 (SCARED), 15 (TSSA), and 4 (ASI).

Case Example 2

Oya is 13 years old, and has one younger sister. She started the treatment with the diagnosis of generalized anxiety disorder and had a previous diagnosis of PTSD that was in remission at the time of treatment. She was also dyslexic. After the first few weeks of the therapy, she shared with the therapist and the group members that she experienced a long-term event during primary school. She said that it continued for a while until she was able to tell someone about what was happening and she blames herself for being weak. She did not share exactly what happened but the therapists were suspecting that she might have been sexually abused.

From the beginning of the process, Oya was one of the most talkative and cheerful members of the group. She freely shared her experiences and how she used the techniques that were introduced at the treatment with the group members. She also commented on stories that the other group members shared. She did not miss any meeting. In one of the sessions, the therapist used the metaphor of the "inner child" to refer to the part of ourselves that always remembers negative events. The next week Oya referred to the inner child as "annoying me" (*gıak ben*). She also mentioned during the sessions that she started to teach the skills to her classmates.

In the session in which the group members shared negative events that they had experienced, Oya said she had experienced something while in primary school and she feels guilty for it. The main skill in that session was to be able to have an outsider look at one's own problems (distancing) and show compassion to the self. The therapist asked her what she would tell her friend if her friend was the one who experienced that event and was blaming herself for it. She said that she would have told her friend that she should not blame herself. The therapist pointed to her friend's compassion and noted how she should show the same compassion to herself as well. During the session, Oya reported that being able to see the situation from another person's perspective made her feel much lighter.

In the session in which the therapist was using the analogy of DVDs to explain that the inner child keeps the DVDs of negative events to play it again and advising that the inner child should change the DVD to a positive one, Oya came up with a new metaphor. She said that one could also "recycle" the negative DVD and make it into a positive one rather than changing it. She gave an example from her life by sharing with the group that the day the therapy had first started, her grandmother, who meant a lot to her, had passed away. However, after learning all the new skills, which made her life better, that day became a good day rather than a depressing one.

At the part where the therapist was advising the group to work with various emotions in Session 8, Oya gave the example of the movie named *Inside Out*. She said that we can imagine the emotions and how they are all important to us as a whole, similar to the way they are portrayed in the movie. Considering the popularity of the movie and the ages of the patients, this metaphor worked very well. All of the group members used it in the coming sessions as well. During the follow-up assessment, Oya's mother reported that she benefited greatly from the therapy and that she would like her sister to learn the same skills.

Oya demonstrated improvement on scores across treatment. Her BDI, SCARED, TSSA, and ASI scores at baseline were, respectively, 16, 48, 107, and 21. Her scores at posttest were 9 (BDI), 21 (SCARED), 75 (TSSA), and 11 (ASI). Finally, her follow-up scores were 6 (BDI), 22 (SCARED), 38 (TSSA), and 8 (ASI).

Conclusion

In this paper, we have attempted to explain how CBT can be adapted to a Turkish adolescent population, taking the example of transdiagnositic CA CBT. We demonstrated the cultural grounding of CBT for this group (see Table 2 for a summary), which increases adherence and positive expectancy. As we have tried to demonstrate, cultural adaptation to promote cultural grounding involves many aspects. It entails determining key local conceptions of distress, how to remedy distress, and how to use these during assessment and treatment. It also entails explanatory model bridging in which there is a framing of mental health problems and treatment in terms of the local conceptualization of mind, body, and treatment—that is, the local ethnopsychology and ethnophysiology. In addition, it entails using culturally appropriate analogies (metaphors and cultural practices) and proverbs to teach CBT techniques, another aspect of explanatory model bridging. Using these principles, we successfully adapted transdiagnostic multiplex CBT for a medication-resistant Turkish adolescent population: there were no dropouts and large effect sizes (Acarturk et al., 2018). But future research needs to explore the applicability of the current adaptation model to other cultural groups.

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