

## Summary

# The Role of Mindfulness between Childhood Abuse and Trait Anxiety

Gizem Cesur

Istanbul Ticaret University

Neslihan Sayraç

Medipol University

Ece Korkmaz

Düzce T Type Closed and Open  
Penal Execution Institution

Childhood abuse and neglect is a multifaceted problem which has long lasting and negative effects on individuals. Studies showed that early childhood traumatic experiences are frequently encountered (Stoltenborgh et al., 2015) and they constitute risk factors for various psychological problems, specifically for depression and anxiety in adulthood (Herrenkohl et al., 2013; Mancini et al., 1995; Spinhoven et al., 2010).

Anxiety is defined as a hyperarousal state in response to perceived (real or imaginary) threat (Barlow, 2002). Spielberger (1966) conceptualized anxiety as having two types which are trait and state anxiety. While state anxiety is a temporary emotion that comes up depending on the context; trait anxiety is a predisposition of perceiving most situations as stressful which increases the frequency of state anxiety (Öner & LeCompte, 1985; Spielberger, 1966, 1972). Researchers argued that trait anxiety can be studied on the basis of gene-environment interaction (e.g., Chen et al., 2015; Garcia et al., 2013). Studies also indicated that early traumatic childhood experiences constitute risk for trait anxiety (Scher & Stein, 2003; Stein et al., 2008).

On the other side, some researchers argued that childhood abuse and neglect have also indirect effects on psychological problems through disrupting certain processes (Barlow, 2002; Wright et al., 2009). These variables, which mediate the relationship between childhood traumatic experiences and psychological problems, are emotion regulation difficulties (Gratz et al., 2007; Soenke et al., 2010), dissociation (Michal et al., 2007), cognitive distortions (Gibb et al., 2001; Wright et al., 2009) and experiential avoidance that can be conceptualized as unwillingness to experience emotions, and finally thoughts and body sensations (Polusny et al., 2004; Tull et al., 2004).

These mediators are also related to mindfulness which has recently caught the attention of many researchers (Baer et al., 2006; Desrosiers et al., 2013; Roemer et al., 2009). Mindfulness is conceptualized

as sustained attention which includes being aware of the present moment, accepting the experiences without judgement, and the capacity of self-regulation (Bishop et al., 2004; Kabat-Zinn, 1994).

Recent research showed that mindfulness and anxiety symptoms are negatively related with each other (Gratz et al., 2005; Woodruff et al., 2014) and that psychological interventions including mindfulness-based techniques can reduce anxiety symptoms (Hofmann et al., 2010; Roemer & Orsillo, 2002).

As a result, childhood neglect and abuse experiences affect anxiety level, which is a trait associated with a number of maladaptive processes such as experiential avoidance and difficulties in emotion regulation. Thus, we hypothesized that childhood traumatic experiences have an indirect effect on trait anxiety through mediation of mindfulness.

To summarize, previous research showed that mindfulness is closely related with psychological, emotional and neurobiological processes. To the best of our knowledge, this is the first study that investigates the mediator role of mindfulness between childhood traumatic experiences and trait anxiety level, which makes a novel contribution to the literature.

## Method

### Participants

The sample consisted of 264 females and 203 males, in total 467 participants. The age of the participants ranged between 18 and 35, and the average age was 22.89 ( $SD = 3.34$ ). Most of the participants (69%) were college students and belonged to middle socio-economic status (54.6%).

### Measures

**Demographic Information Form.** This form was generated by the researchers of the current study to ob-

tain socio-demographic information about the participants (e.g., age, gender, socio-economic status).

**Mindful Attention Awareness Scale (MAAS).** MAAS was developed by Brown and Ryan (2003) to assess mindful awareness in daily experiences as well as internal experiences. The scale was adapted to Turkish by Özyeşil et al. in 2011. The internal consistency coefficient of the MAAS was .80 and retest reliability was .86. In the present study, Cronbach's alpha internal consistency coefficient was found as .85.

**State-Trait Anxiety Inventory (STAI).** STAI was developed by Spielberger, Gorsuch and Lushene (1970) to evaluate state and trait anxiety levels. In this study we used only trait anxiety form. STAI was adapted to Turkish by Öner and Le Compte (1985). Internal consistency coefficient for the trait anxiety form was between .83 and .87; test-retest reliability was between .71 and .86 for healthy and patient population, respectively. The Cronbach's alpha coefficient of trait anxiety form was found as .84 for the present study.

**Childhood Trauma Questionnaire (CTQ).** The scale was developed by Bernstein et al. (1994) to assess childhood abuse and neglect experiences retrospectively. The scale was adapted to Turkish by Aslan and Alparslan (1999). Internal consistency coefficient for the total scale was .96 and for the subscales it was between .94 and .96. For the present study, the Cronbach's alpha coefficients of emotional abuse and neglect subscale was .93, physical abuse was .86 and sexual abuse was .79.

### Procedure

The participants were selected through simple random sampling. The scales were administered to participants in paper pencil and online formats. The scales were only carried out with volunteers who signed the informed consent form and who were over 18 years old.

## Results

### Correlation Analysis

The results of the correlation analyses showed that there were significant positive correlations between trait anxiety scores and the three subscales of the childhood trauma questionnaire: emotional abuse and neglect ( $r = .28, p < .01$ ), physical abuse ( $r = .19, p < .01$ ) and sexual abuse ( $r = .16, p < .01$ ). It is also noted that there was a significant negative correlation between trait anxiety and mindfulness ( $r = -.43, p < .01$ ). Finally there were seen negative and significant correlations between mindfulness and the three subscales of childhood trauma questionnaire: emotional abuse and neglect ( $r = -.34, p < .01$ ), physical abuse ( $r = -.28, p < .01$ ) and sexual abuse ( $r = -.25, p < .01$ ).

### Mediator Role of Mindfulness in the Relationship between Childhood Traumatic Experiences and Trait Anxiety

To determine the mediator role of mindfulness between childhood trauma experiences (emotional abuse and neglect, physical abuse and sexual abuse) and trait anxiety, bootstrapping procedure was carried out by using PROCESS macro for SPSS (Hayes, 2013).

First, the role of mindfulness between sexual abuse and trait anxiety was examined with bootstrapping method (Hayes, 2013). Accordingly, sexual abuse was significant negative predictor of mindfulness ( $B = -1.18, SE = .21, 95\% \text{ CI} [-1.5965, -.7665], p < .001$ ). Mindfulness was significant negative predictor of trait anxiety ( $B = -.28, SE = .03, 95\% \text{ CI} [-.3432, -.2265], p < .001$ ). Also, total effect of sexual abuse on trait anxiety was significant ( $B = .50, SE = .15, 95\% \text{ CI} [.2124, .7936], p < .01$ ). However, with the mediation effect of mindfulness, the effect of sexual abuse on trait anxiety disappeared ( $B = .17, SE = .14, 95\% \text{ CI} [-.1081, .4410], p = .23$ ). The bias-corrected bootstrap 95% CI indicated that the indirect effect of sexual abuse on trait anxiety through mindfulness was significant ( $B = .34, SE = .06, 95\% \text{ CI} [.2173, .4784]$ ). Thus, it can be concluded that mindfulness has played a mediating role between sexual abuse and trait anxiety.

Second, to examine the mediation effect of mindfulness between "emotional abuse and neglect" and "trait anxiety" the same method was used. Accordingly, "emotional abuse and neglect" was significant negative predictor of mindfulness ( $B = -.30, SE = .04, 95\% \text{ CI} [-.3729, -.2230], p < .001$ ). Mindfulness was significant negative predictor of trait anxiety ( $B = -.26, SE = .03, 95\% \text{ CI} [-.3170, -.1982], p < .001$ ). In addition, total effect of "emotional abuse and neglect" on trait anxiety was significant ( $B = .17, SE = .03, 95\% \text{ CI} [.1170, .2219], p < .001$ ). However, with the mediation effect of mindfulness, the effect of "emotional abuse and neglect" on trait anxiety decreased ( $B = .09, SE = .03, 95\% \text{ CI} [.0408, .1147], p < .01$ ). The bias-corrected bootstrap 95% CI indicated that the indirect effect of "emotional abuse and neglect" on trait anxiety through mindfulness was significant ( $B = .08, SE = .01, 95\% \text{ CI} [.0537, .1065]$ ). Thus, it can be concluded that mindfulness has played a mediating role between "emotional abuse and neglect" and trait anxiety.

Finally, to examine the mediation effect of mindfulness between physical abuse and "trait anxiety", the same method was used. Accordingly, physical abuse was significant negative predictor of mindfulness ( $B = -.42, SE = .07, 95\% \text{ CI} [-.5564, -.2872], p < .001$ ). Mindfulness was significant negative predictor of trait anxiety ( $B = -.28, SE = -.03, 95\% \text{ CI} [-.3368, -.2195], p < .001$ ). In addition, total effect of physical abuse on trait anxiety

ety was significant ( $B = .20$ ,  $SE = .05$ , 95% CI [.1103, .2988],  $p < .001$ ). However, with the mediation effect of mindfulness, the effect of physical abuse on trait anxiety disappeared ( $B = .09$ ,  $SE = .05$ , 95% CI [-.0029, .1772],  $p = .06$ ). The bias-corrected bootstrap 95% CI indicated that the indirect effect of physical abuse on trait anxiety through mindfulness was significant ( $B = .12$ ,  $SE = .02$ , 95% CI [.0801, .1580]). Thus, it can be concluded that mindfulness has played a mediating role between physical abuse and trait anxiety.

### Discussion

The aim of this study was to examine the mediating role of mindfulness between childhood abuse experiences and trait anxiety. The findings indicated that mindfulness plays a mediating role between childhood abuse and neglect experiences and trait anxiety.

The first finding of the present study was that childhood neglect and abuse experiences were related to the level of trait anxiety in adulthood. The negative and long-term effects of childhood abuse and neglect, which have known to be widely experienced, seem also persist during the adulthood (Norman et al., 2012). Our results are in parallel with those of previous studies which have focused on anxiety symptoms and disorders caused by childhood traumatic experiences (Gibb et al., 2007). In addition to this, childhood abuse and neglect have neurobiological, emotional and cognitive effects on child development (Gibb & Abela, 2008; Heim & Nemeroff, 1999; Kim & Cicchetti, 2010). These adverse experiences affect the brain development and neurobiological systems which regulate the stress response (Heim et al. 2003; Perry et al. 1995). The structural and the functional changes in different brain areas (McEwen, Eiland, Hunter, & Miller, 2012) and neurobiological systems make the stress responses and anxiety permanent rather than situational (Perry et al., 1995). Together, the above findings suggested that childhood traumatic experiences posed a risk for trait anxiety and this study provided additional evidence in this field.

The second and main finding of the present study was that mindfulness had a mediating role between childhood traumatic experiences and trait anxiety. Research showed that mindfulness and anxiety symptoms were related to each other (Hisli-Şahin & Yeniçeri, 2015; Vøllestad, Sivertsen, & Nielsen, 2011). There are also studies that have examined the effectiveness of mindfulness-based interventions on anxiety symptoms (e.g., Brown & Biegel, 2007). Our findings indicating the role of mindfulness as a mediator between childhood traumatic experiences and trait anxiety are consistent with the above-mentioned results.

In addition, some studies showed that mindfulness-based interventions were effective on psychological symptoms originating from adverse childhood experiences (Kimbrough et al., 2010). To the best of our knowledge, present study is the first study which examines the mediator role of mindfulness between childhood traumatic experiences and trait anxiety. The findings of our study proposed a novel contribution to the existing literature by showing the role of mindfulness as a mediator factor. Our findings suggested that childhood traumatic experiences disrupted processes related to awareness.

Our findings also have implications in the clinical field. For instance, the results of this study suggested that the mindfulness-based interventions may possibly reduce the symptoms of trait anxiety in the presence of abuse history. Kabat-Zinn (2003) and Brown et al. (2007) suggested that mindfulness has an inherent capacity that can be improved. Mindfulness-based interventions help people be more flexible, increase emotion regulation skills and prevent avoiding inner experiences of thoughts and feelings (Hazlett-Stevens, 2012; Shapiro et al., 2006). Thus, mindfulness guides individuals and helps them to focus on the present moment instead of being engaged in anxiety related thoughts (Kabat-Zinn, 1990; Salmon et al., 2004). In this regard, the improvement of mindfulness skills plays a significant role in preventing and reducing possible negative consequences of early abuse experiences.

To conclude, studies focusing on mindfulness-based interventions, which are mostly discussed as components of “third wave” therapies (Hofmann & Asmundson, 2008), showed that the scientific base of such interventions have gradually been strengthening and they have become promising intervention techniques (Arch & Craske, 2010; Hölzel et al., 2011). For this reason, clinical interventions on anxiety within the scope of mindfulness can offer a new dimension to the psychological treatment process.