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Research paper

Effects of traumatic experiences on obsessive-compulsive and internalizing symptoms: The role of avoidance and mindfulness

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ABSTRACT

Background: Trauma exposure is associated with adverse psychological outcomes including anxiety, depression, and obsessive-compulsive (OC) symptoms. Adolescence is increasingly recognized as a period of vulnerability for the onset of these types of psychological symptoms. The current study explored the mediating roles of experiential avoidance and mindfulness processes in the association between retrospective reports of childhood trauma and current internalizing and OC symptoms in adolescents.

Method: A group of at-risk adolescents (*N = 51)* and a group of college students (*N = 400)* reported on childhood trauma, experiential avoidance, mindfulness, anxiety, depressive, and OC symptoms. Mediation analyses were performed to examine the mechanistic roles of avoidance and mindfulness in the association between trauma and internalizing and OC-specific symptoms.

Results: In the group of at-risk adolescents, experiential avoidance and mindfulness both significantly mediated the association between childhood trauma and OC symptoms. In the college student sample, experiential avoidance mediated the association between trauma and OC symptoms. Experiential avoidance, as well as the *observe, act with awareness,* and *nonjudgmental* facets of mindfulness all significantly mediated the association between trauma and internalizing symptoms.

Limitations: The group of at-risk adolescents was small, and the college student group was demographically homogeneous. All data was self-report and cross-sectional.

Conclusion: The current study demonstrated that experiential avoidance and mindfulness processes may be the mechanisms through which the association between trauma and obsessive-compulsive and trauma and internalizing symptoms exist in adolescents. These findings provide potential targets for clinical intervention to improve outcomes for adolescents who have experienced trauma.

1. Introduction

Exposure to trauma before the age of eighteen is *not* a rare occurrence, and its ramifications can be significant (Elzy et al., 2013). *Trauma exposure* is defined as the experience of an event that involves an actual or perceived threat to the physical integrity of self or others (American Psychiatric Association, 2000). Events that fall into this category most commonly include either interpersonal events (i.e., sexual, emotional, or physical abuse or neglect; interpersonal violence; school or community violence) or non-interpersonal events (life-threatening illness; natural disaster; motor vehicle or other serious accident).

According to the most recent data by the U.S. Department of Health & Human Services, over 700,000 children were maltreated in 2014, with 75% of victims experiencing neglect; 17% physical abuse; and 8% sexual abuse (USDHHS, 2016). During adolescence, witnessing violence or surviving any type of assault appears to be a widespread occurrence. Kilpatrick et al. (2000) examined the prevalence of victimization in a representative sample of over 4000 adolescents aged 12–17, finding that 8% of adolescents reported experiencing sexual assault; 23%, physical assault; and 41%, witnessing violence. In total, 50% of adolescents endorsed witnessing violence or experiencing at least one trauma, with many reporting multiple traumas (Kilpatrick et al., 2000).

Early life stress or trauma is a major risk factor for the development of psychiatric symptoms later in life (Ford, 2013; Heim and Nemeroff, 2001). Trauma-related disorders, such as posttraumatic stress disorder (PTSD), are the psychiatric conditions most often associated with trauma exposure (Kendall-Tackett et al., 1993). However, there is also a robust association between significant childhood adversities and the development of other adult internalizing disorders, such as depression and anxiety (Chapman et al., 2004; Cougle et al., 2010; Edwards et al., 2003; Fierman et al., 1993; Ford et al., 2010). Further, adolescence is a

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time of increased vulnerability to develop anxiety or depressive symptoms (Paus et al., 2008), especially after experiencing a childhood interpersonal trauma or witnessing violence as a child (Brown et al., 1999; Russell et al., 2010). In addition to trauma-related disorders, there is emerging research examining a unique relation between trauma exposure and obsessive-compulsive (OC) symptoms (Fontenelle et al., 2012).

Empirical and case studies have demonstrated an association between a history of trauma and increased severity of OC symptoms (for review, see Miller and Brock, 2017). For example, individuals with a diagnosis of obsessive-compulsive disorder (OCD) reported significantly more childhood trauma compared to healthy controls (Lochner et al., 2002). Further, in a large clinical sample of individuals diagnosed with OCD, severity of OC symptoms was significantly associated with a history of traumatic events (Cromer et al., 2007).

Onset of OC symptoms often appears in two developmental periods, with one peak around puberty (10–13 years) and another in early adulthood (21–29 years) (De Luca et al., 2011; Zohar, 1999). OCD has been identified as one of the most common psychiatric conditions affecting youth (Stewart et al., 2004; Valleni-Basile et al., 1994), with early-onset symptoms being particularly detrimental (do Rosario-Campos et al., 2001; Wang et al., 2012). Little is known, however, about how exposure to trauma could affect OC symptoms in adolescents. The few studies that have examined trauma history and OC symptoms in adolescents have focused on comorbid OCD and PTSD symptoms rather than history of trauma specifically (Essau et al., 2000; Lafleur et al., 2011). In order to provide appropriate and early intervention for children and adolescents experiencing OC symptoms, it is important to better understand OC symptoms, along with internalizing symptoms, in adolescents with a history of trauma.

Although trauma exposure increases risk for developing psychiatric symptoms, not every young adult who has experienced trauma develops symptoms; individual differences lead to differing outcomes (Kessler et al., 1995). One mechanism that may help explain the role that trauma exposure plays in the development or exacerbation of psychiatric symptoms is *experiential avoidance*, which can be characterized as an unwillingness or inability to remain in contact with internal experiences (thoughts, memories, emotions, and/or bodily sensations) or any attempt to alter or escape the experiences (Hayes et al., 1996). Importantly, individuals who have experienced trauma often engage in experiential avoidance (Follette et al., 2006; Orsillo and Batten, 2005).

The employment of avoidant coping strategies in response to trauma is associated with potentially problematic behaviors, such as less social engagement or high-risk sexual behavior, as well as with psychological difficulties, such as PTSD symptoms (Batten et al., 2002; Brockman et al., 2016; Orcutt et al., 2005). Experiential avoidance has been identified as an important mechanism which may partially explain the association between trauma exposure and the manifestation of psychopathology in populations of adolescents (Venta et al., 2012) and young adults (Land, 2010). Briggs and Price (2009) examined the interplay of adverse childhood experiences (including neglect and abuse), anxiety and depressive symptoms, OC symptoms, and experiential avoidance in a community sample of young adults and undergraduates (mean age of 28). Experiential avoidance mediated the relation between adverse childhood experiences and OC symptoms, even when controlling for anxiety and depression. Given this finding, the associations between trauma exposure, experiential avoidance, and psychopathology need to be further elucidated, especially in the particularly vulnerable time period of adolescence.

Mindfulness- and acceptance-based therapies, such as Acceptance and Commitment Therapy (Hayes et al., 1999) and Mindfulness-Based Stress Reduction (Kabat-Zinn, 2003), have increasingly been utilized to target and address experiential avoidance. These therapies aim to decrease avoidance while increasing *acceptance*, the willingness to remain in contact with all current internal and external sensations, even if the internal sensations are aversive, in order to pursue valued living (Cordova, 2001; Kabat-Zinn, 2003). Similarly, these therapies aim to cultivate mindfulness, or a nonjudgmental awareness of the present moment (Kabat-Zinn, 2003). Mindfulness is often characterized in the literature as a multifaceted construct consisting of five distinct yet interrelated facets: 1) *observing* or noticing present moment experience, 2) the ability to *describe* or put present-moment experience into words, 3) *acting with awareness* or concentrating on behavior rather than acting on "automatic pilot" 4) *nonjudgment of experience* such as thoughts or emotions and 5) *nonreactivity* to inner experience, or the ability to be aware of inner experiences without immediately reacting to them (Baer et al., 2006). Acceptance- and mindfulness-based therapies have been shown to be effective in addressing symptoms of trauma-related disorders (Orsillo and Batten, 2005; Vujanovic et al., 2013), internalizing disorders (Forman et al., 2007; Swain et al., 2013), and OC symptoms (Bluett et al., 2014; Twohig et al., 2010). There is less information on how interventions based on principles of mindfulness and acceptance may mitigate psychiatric symptoms in adolescents. Considering the high rates of trauma exposure, internalizing disorder symptoms, and OC symptoms in adolescents, basic research needs to clarify how acceptance and mindfulness processes could be incorporated into treatment for young adults.

The current study examined the mediating roles of experiential avoidance and the five facets of mindfulness in linking childhood trauma exposure and OC-specific and internalizing symptomology in young adults. Current age ranges utilized to define adolescence vary, but neuroimaging studies have shown that the brain continues to develop well into a person's twenties, prompting discussions surrounding the most appropriate way to characterize this important developmental time period (Curtis, 2015; Johnson et al., 2009). Therefore, two populations of adolescents were utilized: 1) at-risk adolescents attending an alternative high school and 2) undergraduate students at a large Midwestern university. The authors hypothesized that experiential avoidance would mediate the relation between trauma exposure and elevated internalizing and OC symptoms in both at-risk adolescents and undergraduate students. Additionally, because recent work has suggested that mindfulness processes build upon one another and therefore may be targeted individually in clinical work (Strosahl et al., 2015), multiple mediation analyses were conducted with mindfulness facets in examining the association between trauma exposure and internalizing and OC symptoms in an attempt to understand which specific aspects of mindfulness may be important targets for intervention.

2. Method—Study 1

2.1. Participants

Participants were recruited from a Midwestern alternative high school, where students are referred for academic failure, substance abuse, risk for dropout, or psychosocial difficulties. Of the 120 students at the school, 53 chose to participate. Sample characteristics are in Table 1.

Table 1
Descriptive statistics of the adolescent sample, N = 51.

	N (%)
Gender	

Note. ETI = Early Trauma Inventory. AFQ-Y = Avoidance and Fusion Questionnaire – Youth. CAMM = Child and Adolescent Mindfulness Measure.