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Conceptualizing Mindfulness and Acceptance as Components of Psychological Resilience to Trauma

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Abstract

Mindfulness- and acceptance-based conceptualizations of PTSD implicate experiential avoidance and non-mindful behavior in the etiology and maintenance of the disorder. If experiential avoidance is associated with vulnerability to PTSD, then a mindful and accepting orientation toward experience may confer psychological resilience following exposure to trauma. This article examines how mindfulness- and acceptance-based theories of psychopathology relate to risk of and resilience to PTSD. Research is reviewed dealing with the impact of experiential avoidance, avoidant coping, dissociation, acceptance, and mindfulness on PTSD symptom severity and posttraumatic functioning. This review suggests that trait mindfulness and acceptance are associated with greater psychological adjustment following exposure to trauma, while experiential avoidance, persistent dissociation, and coping strategies involving emotional disengagement are associated with greater PTSD symptom severity and related psychopathology. Methodological challenges are explored and suggestions for future research and PTSD prevention programs are discussed.

Keywords

PTSD, mental health and violence, violence exposure

Epidemiological studies such as the National Comorbidity Survey (NCS) report that more than 50% of surveyed adults have experienced at least one traumatic event during their lifetime (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995). Several different experiences qualified as traumatic events in the NCS, including direct exposure to combat, natural disasters, life-threatening accidents, rape, sexual molestation, childhood physical abuse, and childhood neglect. Participants were also considered to have experienced a trauma if they were physically attacked, threatened with a weapon, held captive, or kidnapped. Witnessing any of these events happen to another person also qualified as a traumatic experience in the NCS (Kessler et al., 1995). Despite the relatively high frequency of exposure to such events in the general population, the lifetime prevalence of posttraumatic stress disorder (PTSD) is estimated to be 6.8% (Kessler, Berglund, Demler, Jin, & Walters, 2005), suggesting that the vast majority of trauma-exposed individuals do not go on to develop PTSD. As currently defined in the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR), a diagnosis of PTSD consists of the following core symptom clusters: persistent reexperiencing of the traumatic event, avoidance of trauma-related stimuli and numbing of general responsiveness, and chronic physiological arousal (American Psychiatric Association, 2000).

The last decade has witnessed growing interest in factors that are associated with psychological resilience following exposure to trauma (Cooper, Feder, Southwick, & Charney, 2007; Morland, Butler, & Leskin, 2008). The empirical study of resilience has spanned the fields of psychology and neurobiology, and challenges the notion that exposure to trauma is sufficient for the development of PTSD (Yehuda & Flory, 2007). Instead, the resilience literature focuses on the environmental and individual difference factors that are associated with either resilience or vulnerability to PTSD (see reviews by Agaibi & Wilson, 2005; Bonanno, 2004; Hoge, Austin, & Pollack, 2007). A number of variables have been found to be associated with resilient outcomes, including hardiness, internal locus of control, social support, cognitive flexibility, religious beliefs and altruism, and positive emotionality (e.g., Cooper et al., 2007; Hoge et al., 2007; D. W. King, King, Foy, Keane, & Fairbank, 1999; L. A. King, King, Fairbank, Keane, & Adams, 1998). Conversely, greater severity of the traumatic event, a history of previous traumatic experiences, psychiatric problems prior to the index trauma, and being a member of the female gender are among a variety of factors that are associated

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with an increased risk for PTSD (Brewin, Andrews, & Valentine, 2000; Ozer, Best, Lipsey, & Weiss, 2003).

In addition, the past decade has been marked by expanding attention to mindfulness- and acceptance-based approaches to the conceptualization and treatment of psychological disorders, often integrated with cognitive-behavior therapy (Baer, 2003; Hayes, 2004; Hayes, Masuda, Bissett, Luoma, & Guerrero, 2004). Mindfulness- and acceptance-based interventions have been successfully incorporated into the treatment of many different psychological disorders and medical conditions, including generalized anxiety disorder (Roemer & Orsillo, 2002), borderline personality disorder (Linehan, 1993), recurrent depression (Segal, Williams, & Teasdale, 2002), and chronic pain (e.g., Kabat-Zinn, 1982). Recently, mindfulness- and acceptance-based approaches have also been increasingly applied to the treatment of PTSD. Although a number of published articles and book chapters describe case studies in which mindfulness- and acceptance-based treatments such as acceptance and commitment therapy (ACT; Hayes, Strosahl, & Wilson, 1999) have been provided to trauma survivors (e.g., Orsillo & Batten, 2005; Twohig, 2009), no controlled outcome studies have been published on the efficacy of such approaches with this population. However, one recent uncontrolled study reported that adult survivors of childhood sexual abuse who received mindfulness-based stress reduction (MBSR; Kabat-Zinn, 1982) exhibited significant reductions in symptoms of depression and PTSD at posttreatment (Kimbrough, Magyari, Langenberg, Chesney, & Berman, 2010).

The rationale for the application of mindfulness- and acceptance-based approaches to the treatment of PTSD rests on the notion that posttraumatic symptoms are developed and maintained by experiential avoidance (e.g., Orsillo & Batten, 2005; Walser & Hayes, 2006), defined as an unwillingness to experience unwanted internal events (Hayes, Wilson, Gifford, Follette, & Strosahl, 1996). This model posits that habitual attempts to avoid trauma-related thoughts, emotions, and memories lead to the core symptoms of PTSD, including avoidance of trauma-related stimuli and emotional numbing (Batten, Orsillo, & Walser, 2005; Follette, Palm, & Pearson, 2006). This chronic avoidance is conceptualized as the antithesis of mindful behavior (Follette et al., 2006) and is hypothesized to increase the frequency and saliency of the trauma-related experiences that the individual wishes to avoid (Batten et al., 2005).

If experiential avoidance and nonmindful behavior are involved in the etiology of PTSD, then it seems possible that mindful, accepting attitudes and behavior may improve psychological adjustment and reduce the risk of PTSD after a potentially traumatic event. The purpose of this review is to examine the theoretical and empirical evidence supporting mindfulness and acceptance as components of psychological resilience to trauma.

Defining Psychological Resilience to Trauma

At present, there is no consistent definition of resilience in the psychological literature (Agaibi & Wilson, 2005). Some authors conceptualize resilience as an outcome, while others view resilience as a process (Lepore & Revenson, 2006). Bonanno (2004) argues for a strict definition of resilience consisting of no more than fleeting psychological symptoms following exposure to trauma. Bonanno differentiates the stable trajectory of the resilience construct from the construct of recovery, which he defines as psychological dysfunction that resolves itself no less than several months after the initial trauma.

Lepore and Revenson (2006) assert that recovery, resistance, and reconfiguration can all be subsumed under the resilience construct, with recovery defined as trauma-related psychological disruption that is eventually resolved. Similar to Bonanno's (2004) definition of resilience, the authors conceptualize resistance as normal functioning that is undisturbed by trauma exposure. Finally, reconfiguration is thought to occur when changes in behavior, thoughts, and emotions facilitate adaptation and adjustment to trauma. They compare reconfiguration to the phenomenon of posttraumatic growth (Lepore & Revenson, 2006).

For the purpose of the present article, psychological resilience will be defined as the tendency to overcome factors that place one at risk for psychological dysfunction and to adjust positively in the aftermath of a potentially traumatic event (Lepore & Revenson, 2006; Werner, 1995). This broad definition encompasses Bonanno's (2004) conceptualization of resilience and Lepore and Revenson's (2006) descriptions of recovery, resistance, and reconfiguration. Further research is needed to arrive at an empirically based definition of resilience and to elucidate the connections between resilience, vulnerability, and psychopathology (Yehuda & Flory, 2007). Future research should also examine whether resilience reflects a trait- or state-like property of the individual (Lepore & Revenson, 2006; Yehuda & Flory, 2007), as well as whether resilience can be taught to populations at risk for exposure to trauma and adversity (Bonanno, 2004, 2005).

Mindfulness and Acceptance

Multiple pathways to resilience have been shown (Bonanno, 2004), with a variety of individual difference variables promoting positive functioning following exposure to trauma. This article examines evidence suggesting that trait mindfulness and acceptance may be an overlooked pathway to resilience. The following section will provide an initial introduction to the constructs of mindfulness and acceptance.

Mindfulness

Although mindfulness originated as a Buddhist meditation practice, it is the secular adaptations of mindfulness that have received attention in the Western psychological literature (Baer, 2003). Mindfulness is typically cultivated through meditation exercises that emphasize moment-to-moment awareness of bodily sensations, emotions, or activities (Baer, Smith, & Allen, 2004), while intentionally observing and letting go of

any distracting thoughts that enter into awareness (Kabat-Zinn, 1990).

Despite increasing interest in mindfulness and its applications to psychological disorders, researchers have only recently attempted to develop an operational definition of mindfulness (Bishop et al., 2004). Kabat-Zinn (2003) initially proposed a working definition of mindfulness as an awareness that develops from intentional, nonjudgmental attention toward experience in the present moment. Bishop and colleagues (2004) presented an operational definition of mindfulness consisting of two components: self-regulation of attention and a curious, accepting orientation toward experience. The first component of this definition reflects the attentional processes involved in mindfulness meditation, including sustained attention to present experience and the switching of attention from distracting thoughts and emotions. The second component of the definition emphasizes the importance of letting go of judgments of one's experience (Kabat-Zinn, 1990). Bishop and colleagues also hypothesize that mindfulness changes people's relationship to their thoughts, such that thoughts are viewed as subjective and short-lived, rather than accurate reflections of an unchanging reality. This change in relation to one's thoughts is also called decentering or defusion.

Acceptance

Mindfulness and acceptance appear to be overlapping constructs. Mindfulness meditation emphasizes a nonjudgmental, accepting attitude toward present experience (Bishop et al., 2004; Kabat-Zinn, 1990) and is believed to facilitate acceptance. Further, acceptance-based interventions emphasize the importance of being fully present with one's experience (Hayes et al., 1999). Although these constructs are highly interrelated, mindfulness originated as a spiritual practice, while the construct of acceptance is rooted in empiricism (Orsillo, Roemer, Lerner, & Tull, 2004).

Follette, Palm, and Hall (2004) conceptualize acceptance as involving three processes: the observation of psychological events, letting go of the desire to alter the form or frequency of these events, and differentiating actual events from the psychological experiences that are evoked by outside events. In other words, acceptance includes viewing psychological events as understandable and transient reactions to external events, rather than viewing private events as unbearable psychological states that must be avoided or fixed (Orsillo et al., 2004; Robins, Schmidt, & Linehan, 2004). Consequently, acceptance is thought to facilitate decentering (Orsillo et al., 2004). Other definitions of acceptance include openly embracing experience in the here and now and acknowledging reality in a nonjudgmental manner (Hayes, 2004). The psychological construct of acceptance is different from everyday definitions of acceptance, which typically equate acceptance with positive evaluation (Robins et al., 2004). Similar to mindfulness, acceptance involves attending to and describing both internal and external events, while deliberately withholding the tendency to positively or negatively evaluate these events.

Mindfulness, Acceptance, and Resilience to Trauma

The majority of the empirical literature on mindfulness and acceptance has focused on the theoretical and clinical application of these constructs to the treatment of psychological disorders. Practice and instruction in mindfulness- and acceptance-based skills are integral components of several empirically supported psychological interventions, including MBSR (Kabat-Zinn, 1990), mindfulness-based cognitive therapy (MBCT; Segal et al., 2002), acceptance and commitment therapy (ACT; Hayes et al., 1999), and dialectical behavior therapy (Linehan, 1993). If mindfulness and acceptance do indeed promote resilience to trauma, it is possible that existing Mindfulness- and acceptance-based interventions may reduce rates of PTSD and other negative psychological outcomes, when provided to individuals who have recently experienced a traumatic event, as well as to those who have a high probability of experiencing a potentially traumatic event.

Although the study of mindfulness, acceptance, and resilience is in its infancy, researchers have recently begun to incorporate mindfulness- and acceptance-based constructs in the study of posttraumatic functioning (e.g., Marx & Sloan, 2002; Thompson & Waltz, 2010). As described in detail below, current evidence suggests that trait mindfulness and acceptance are associated with fewer psychological symptoms and more positive outcomes after exposure to trauma.

Theories of Mindfulness and Acceptance and Implications for PTSD

Acceptance- and mindfulness-based theories of PTSD posit that experiential avoidance and other forms of nonmindful behavior lead to the core symptoms of PTSD. As a result, mindfulness and acceptance skills have been used to foster emotion regulation, the viewing of trauma-related thoughts and feelings from a nonjudgmental perspective, and acceptance that efforts to control internal experience are largely responsible for the individual's current distress (Follette et al., 2006; Orsillo & Batten, 2005; Walser & Hayes, 2006). Theories explaining the importance of mindfulness and acceptance in the treatment of PTSD and other psychological disorders may suggest a formulation of how mindfulness/acceptance might confer resilience in the aftermath of trauma.

ACT and PTSD. Acceptance and commitment therapy (Hayes et al., 1999) is one of the most popular and well-researched acceptance-based interventions in the current psychological literature (see Hayes, Barnes-Holmes, & Roche, 2001, for information on relational frame theory, the theory of language and cognition underlying ACT). ACT suggests that verbal and cognitive processes are responsible for cognitive fusion, positive and negative judgments of oneself and the world, and avoidance (Hayes et al., 1999). Deliberate attempts to change unpleasant internal events (i.e., experiential avoidance) are hypothesized to contribute to the development of

psychopathology (e.g., Hayes, 2004; Hayes, Luoma, Bond, Masuda, & Lillis, 2006; Hayes et al., 1999). ACT utilizes experiential exercises, metaphors, and paradox to challenge the effectiveness of experiential avoidance, increase openness to present experience, and reorient people toward their values (Hayes et al., 1999). Specifically, trauma survivors are taught to increase their contact with the present moment, become willing to experience both internal and external events without judgment, recognize the subjective and transient nature of their thoughts, and commit to action in the service of their values. The ultimate goal of these interventions is to increase trauma survivors' psychological flexibility (Follette et al., 2006; Orsillo & Batten, 2005).

Implications for resilience to trauma. ACT conceptualizations of PTSD primarily focus on the development and treatment of the disorder, rather than on those factors that promote resilience to trauma. However, the theory states that experiential avoidance and nonmindful behavior produce posttraumatic symptoms, while mindfulness and acceptance promote healing. If mindfulness and acceptance skills are effective in the treatment of PTSD, it seems reasonable that individuals with high pretrauma levels of mindfulness and acceptance would be less likely to exhibit posttraumatic symptoms following trauma exposure. Specifically, a mindful focus on the present may prevent trauma survivors from ruminating about the past and the future (Follette et al., 2006), both of which are likely to increase distress and estimations of threat. In addition, efforts to maintain contact with present experience and view trauma-related stimuli nonjudgmentally would likely help survivors to interpret any posttraumatic symptoms as transient, expectable reactions to an extremely stressful event. In turn, this attitude may protect survivors from engaging in the chronic emotional and behavioral avoidance that serves to exacerbate symptoms and worsen psychosocial impairment.

Theories of mindfulness and relapse prevention. Mindfulness has also been proposed to play an integral role in the prevention of relapse in two other psychological disorders that may develop after exposure to a traumatic event, and which are frequently comorbid with PTSD: substance use disorders (Witkiewitz, Marlatt, & Walker, 2005) and major depressive disorder (Segal et al., 2002). Substance use disorders may develop or worsen after a traumatic event as a result of individuals' attempts to reduce distressing reexperiencing symptoms and/or excessive physiological reactivity. Similarly, trauma survivors' frequent avoidance of activities and interpersonal interactions often contributes to the development of clinical depression.

Breslin, Zack, and McMain (2002) developed an information-processing model to explain how mindfulness might be effective in preventing relapse among individuals with substance use disorders. This theory suggests that mindfulness, through its emphasis on nonjudgmental attention to present experience, may help people become more aware of their automatic responses to symptom triggers. From a behavioral standpoint, mindfulness may serve to uncouple the stimulus–response associations that maintain maladaptive symptoms and behaviors.

Mindfulness has also been thought to play an important role in the prevention of recurrent major depression. In fact, mindfulness-based cognitive therapy (Segal et al., 2002) is rooted in the notion that the associations between negative, pessimistic thinking and major depressive episodes create a vulnerability to depressive relapse (Teasdale, Segal, & Williams, 1995; Teasdale et al., 2000). In individuals with previous episodes of major depression, the experience of even a temporary dysphoric mood state is thought to activate thinking patterns similar to those present during past depressive episodes. The activation of these depressogenic thinking patterns frequently leads to the "depressive interlock," or a type of ruminative thinking that serves to further increase the risk of depressive relapse (Teasdale et al., 1995). In the MBCT model, mindfulness skills prevent depressive relapse by increasing awareness to present thoughts and feelings, thereby elevating the chances that people will recognize early signs of depressive relapse. In addition, mindfulness skills are used to adopt a decentered perspective toward depressogenic cognitions and an accepting attitude toward negative affect (Teasdale et al., 1995, 2000).

Implications for resilience to trauma. Although Breslin et al.'s (2002) information-processing model was developed to explain the usefulness of mindfulness in preventing drug and alcohol relapse, it also sheds light on how trait mindfulness might prevent the development of PTSD. It seems probable that individuals with pretrauma tendencies toward mindfulness would exhibit increased awareness and acceptance of their responses to threatening stimuli in the aftermath of a trauma. This increased awareness and contact with the present moment may reduce the extent to which trauma-exposed individuals develop classically conditioned avoidance, reexperiencing, or hyperarousal reactions to trauma-relevant stimuli, thereby preventing the development of the core symptoms of PTSD. From a cognitive-behavioral viewpoint, the tendency to remain engaged in present-moment experience may promote exposure to feared, trauma-related stimuli shortly after the traumatic event (Walser & Hayes, 2006), thereby facilitating emotional processing of the event and averting the development of pathological fear structures (e.g., Foa & Kozak, 1986). Similarly, a nonjudgmental approach toward experience may assist in habituation to heightened posttraumatic physiological reactivity (Low, Stanton, & Bower, 2008), which is a core aspect of the PTSD diagnosis (APA, 2000). A mindful and accepting orientation toward experience may help trauma survivors tolerate upsetting reexperiencing and arousal symptoms without resorting to avoidance, including substance abuse.

Although classified as an anxiety disorder, many of the associated features of PTSD overlap with common symptoms of depression. PTSD frequently cooccurs with major depressive disorder (APA, 2000), and the proposed Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-V)

includes negative mood symptoms among the diagnostic criteria for PTSD (APA, 2010). Just as high levels of pretrauma trait mindfulness may help people maintain a decentered attitude toward symptoms of anxiety following trauma exposure, trait mindfulness may also help trauma survivors to view feelings of guilt, shame, or hopelessness as thoughts that pass through awareness, rather than accurate reflections of the self in the aftermath of trauma. Consequently, high levels of trait mindfulness may prevent the initiation of ruminative, depressogenic thinking, thereby preventing the development of a major depressive episode or the worsening of posttraumatic symptoms.

Avoidance and Posttraumatic Symptoms

Just as theories of mindfulness and relapse prevention have been influential in the conceptualization and treatment of substance use disorders and recurrent major depressive disorder, acceptance-based theories offer an important approach to understanding PTSD. Continued attempts to avoid both internal and external trauma-related experiences are thought to lead to clinically significant distress and dysfunction, and to contribute to the etiology of such comorbid disorders as major depression (Walser & Hayes, 2006). A number of studies have investigated this hypothesis using the Acceptance and Action Questionnaire (AAQ; Hayes, Strosahl, et al., 2004), a self-report measure designed to assess experiential avoidance. The AAQ was constructed using a sample of adults seeking services from a university counseling center and was cross-validated on a variety of samples, including women with a history of sexual trauma (Hayes, Strosahl, et al., 2004). There are two validated versions of the AAQ, including a 16-item version and a 9-item version of the measure. The 16-item version consists of two factors assessing mindfulness/acceptance and values-based action, while the 9-item version consists of a single factor assessing psychological flexibility (Hayes et al., 2006). The AAQ includes several items that reflect unwillingness to experience unpleasant internal events, including "If I could magically remove all the painful experiences I've had in my life, I would do so" and "Anxiety is bad" (Hayes, Strosahl, et al., 2004). The AAQ exhibits adequate internal consistency and good convergent validity (Hayes, Strosahl, et al., 2004), and has been found to be reliably associated with quality of life and psychological outcomes in a large number of studies investigating a range of psychopathology (Hayes et al., 2006).

Correlational studies using the AAQ (see Table 1) have demonstrated that greater experiential avoidance is associated with more severe PTSD symptoms among civilian survivors of the Kosovo War (Morina, 2007; Morina, Stangier, & Risch, 2008) and gay male and lesbian survivors of sexual assault (Gold, Dickstein, Marx, & Lexington, 2009; Gold, Marx, & Lexington, 2007). One study found that individuals with current PTSD reported greater experiential avoidance than did individuals who recovered from PTSD or never received a diagnosis of PTSD, suggesting that experiential avoidance may play a central role in the maintenance of the disorder (Morina et al., 2008).

Numerous studies have found experiential avoidance, as measured by the AAQ, to be both a significant predictor and a significant mediator of psychological symptoms following exposure to trauma (see Table 1). In both undergraduate and combat-exposed samples, experiential avoidance was found to be a stronger predictor of current psychological distress than was the severity of the index trauma and previous psychological distress (Plumb, Orsillo, & Luterek, 2004). Similarly, Marx and Sloan (2005) reported that at the end of an 8-week follow-up interval, experiential avoidance predicted PTSD symptom severity over and above ratings of PTSD symptom severity obtained at baseline. Experiential avoidance has also been shown to partially mediate the relationship between PTSD and quality of life in civilian survivors of the Kosovo War (Kashdan, Morina, & Priebe, 2009), and to partially mediate the association between interpersonal trauma exposure and symptoms of PTSD (Orcutt, Pickett, & Pope, 2005). In addition, a number of investigations have found that experiential avoidance acts as a mediator between the experience of childhood and adolescent sexual abuse and psychological symptom variables in adulthood (Marx & Sloan, 2002; Polusny, Rosenthal, Aban, & Follette, 2004; Rosenthal, Hall, Palm, Batten, & Follette, 2005).

In sum, there is accumulating evidence to support the notion that experiential avoidance is elevated in individuals with PTSD, and may play a significant role in the onset and maintenance of the disorder. An examination of the studies using the AAQ suggests that there is a relationship between experiential avoidance, PTSD, and other psychological symptoms following trauma among people with varied ethnocultural backgrounds and trauma histories. Nonetheless, many of the studies utilizing the AAQ have used undergraduate, nonclinical samples to examine the connection between experiential avoidance and symptoms of PTSD. Future research should consider investigating the effects of experiential avoidance in older populations and individuals seeking treatment for posttraumatic symptomatology. Such studies would elucidate how experiential avoidance relates to psychopathology and quality of life in those with clinically significant symptoms of PTSD.

Despite converging evidence relating experiential avoidance to PTSD, it remains possible that the relationship between experiential avoidance and PTSD symptomatology may be better explained by their shared relationship with more global measures. One investigation found that experiential avoidance did not add to the prediction of PTSD symptoms when taking into account general psychiatric symptom severity and the number of traumatic events the individual was exposed to. However, experiential avoidance uniquely predicted anxiety, depression, and somatization among individuals exposed to multiple traumas (Tull, Gratz, Salters, & Roemer, 2004). Similarly, Morina (2007) reported that experiential avoidance did not predict PTSD symptoms over and above general psychiatric distress in Kosovo War survivors. Further research is needed to determine if experiential avoidance is a unique predictor of PTSD symptomatology or a predictor of generalized psychological dysfunction among trauma survivors. In addition, it is essential

Table 1. Studies of Posttraumatic Outcomes Using Measures Grounded in the Mindfulness- and Acceptance-Based Literature

Citation	*N*	Population Studied	Methodological Considerations	Findings
Chopko and Schwartz (2009)	183	Police officers exposed to work-related traumatic events	KIMS used as a predictor variable; predominantly White, Christian sample; average age of pts was 37.9; average time since traumatic event was 9.1 months	Observing and describing correlated with posttraumatic growth; acceptance without judgment correlated with less posttraumatic growth
Gold, Marx, and Lexington (2007)	74	Gay males who experienced one or more episodes of sexual assault	AAQ used as a predictor variable; sample included CSA and ASA survivors; ethnically diverse sample; average age of pts was 34.71	EA correlated highly with PTSD and depression; EA partially mediated the relation between internalized homophobia and PTSD
Gold, Dickstein, Marx, and Lexington (2009)	72	Lesbian women who experienced one or more episodes of sexual assault	AAQ used as a predictor variable; average of 12 traumatic events per participant; majority of pts were refugees or internally displaced during the war	EA correlated with PTSD and depression; EA fully mediated the relation between internalized homophobia and PTSD
Kashdan, Morina, and Priebe (2009)	74	Albanian civilian survivors of the Kosovo War	AAQ used as a predictor variable; sample included CSA and ASA survivors; ethnically diverse sample; average age of pts was 33.47	EA correlated with PTSD; EA partially mediated the effects of PTSD on quality of life but not the effects of PTSD on global distress
Marx and Sloan (2002)	99	Female undergraduates with and without a history of CSA	AAQ used as a predictor variable; ethnically diverse sample; average age at which abuse occurred was 8; average age of pts was 19.10	EA mediated the relationship between CSA history and psychological distress
Marx and Sloan (2005)	185	Undergraduates with a history of trauma	AAQ used as a predictor variable; ethnically diverse sample; majority of pts endorsed multiple traumas; time since trauma ranged from less than 1 month to greater than 5 years	EA predicted PTSD sx severity at baseline; EA predicted PTSD sx severity at Time 3 over and above baseline PTSD sx severity
Morina (2007)	152	Kosovo civilians exposed to war-related trauma	AAQ used as a predictor variable; average age of pts was 39.3; slightly more than half of pts were women; average number of traumatic events was 9.8; snowball sampling utilized	EA did not predict PTSD sxs over and above general psychiatric distress
Morina, Stangier, and Risch (2008)	84	Kosovo civilians exposed to war-related trauma	AAQ used as a predictor variable; average age of pts was 38.4; slightly more than half of pts were women; average number of traumatic events was 5.3	Pts with PTSD had greater EA scores than pts who recovered from PTSD or did not have PTSD; no difference in EA between recovered PTSD and no-PTSD groups
Orcutt, Pickett, and Pope (2005)	229	Undergraduates with a history of interpersonal trauma	AAQ used as a predictor variable; pts were mostly female and under age 24; ethnically diverse sample	EA partially mediated the effects of interpersonal trauma on PTSD sxs

(continued)

Table 1 (continued)

Citation	*N*	Population Studied	Methodological Considerations	Findings
Plumb, Orsillo, and Luterek (2004)	118 (*s*1) 160 (*s*2) 37 (*s*3)	Undergraduates who experienced an "extremely negative" life event (*s*1), undergraduates with a history of trauma (*s*2), and male veterans receiving inpatient PTSD treatment (*s*3)	AAQ used as a predictor variable; pts were mostly female and White (*s*1, *s*2); average age was 20.63 (*s*1) and 20.97 (*s*2); average age of pts not provided (*s*3)	Baseline EA predicted distress at 8-week follow-up over and above baseline distress (*s*1); EA predicted PTSD sx severity above and beyond trauma severity (*s*2); EA predicted PTSD sx severity over and above degree of combat exposure (*s*3)
Polusny, Rosenthal, Aban, and Follette (2004)	304	Female undergraduates	AAQ used as a predictor variable; pts were primarily White; average age was 19	EA partially mediated the relation between adolescent sexual assault and sxs of depression and distress
Rosenthal, Hall, Palm, Batten, and Follette (2005)	151	Female undergraduates with and without a history of CSA	AAQ used as a predictor variable; pts were primarily White; average age was 24	EA fully mediated the relation between CSA severity and distress in adulthood
Thompson and Waltz (2010)	191	Undergraduates with a history of trauma	AAQ and FFMQ used as predictor variables; pts were primarily female; average age of pts was 19.56	Nonjudgmental facet of FFMQ predicted PTSD avoidance sxs above and beyond EA alone
Tull, Gratz, Salters, and Roemer (2004)	160	Women who experienced sexual assault and one other potentially traumatic event	AAQ used as a predictor variable; ethnically diverse sample; average age of pts was 26.40	EA did not predict PTSD sx severity over and above number of traumatic events and general psychiatric sx severity
Vujanovic, Youngwirth, Johnson, and Zvolensky (2009)	239	Individuals without an Axis I disorder who endorsed a history of trauma	KIMS used as a predictor variable; pts were primarily White; slightly more than half of pts were women; average age of pts was 23	Accepting without judgment subscale of KIMS was an incremental predictor of overall PTSD sxs and specific clusters of sxs

Note. These studies were located through an exhaustive search of the PsycINFO database. The following key words and Boolean operators were used for this search: "mindfulness and trauma," "acceptance and PTSD," and "experiential avoidance and trauma." Published studies that utilized measures of mindfulness, acceptance, and/or experiential avoidance in the study of posttraumatic outcomes were included, while published studies that utilized measures that were not grounded in the mindfulness- and acceptance-based literature were excluded. AAQ = acceptance and action questionnaire; CSA = childhood sexual abuse; ASA = adult sexual abuse; EA = experiential avoidance; pts = participants; sx = symptom; sxs = symptoms; s1 = Study 1; s2 = Study 2; s3 = Study 3; FFMQ = Five Facet Mindfulness Questionnaire; KIMS = Kentucky Inventory of Mindfulness Skills.

for future research to clarify whether or not experiential avoidance predicts PTSD symptoms over and above the construct's shared content with the avoidant symptom cluster in the current PTSD diagnostic criteria (APA, 2000).

Other investigations of the relationship between avoidance and posttraumatic functioning have utilized measures of coping that assess forms of cognitive and behavioral avoidance and disengagement, including the COPE scale (Carver, Scheier, & Weintraub, 1989) and the Ways of Coping Questionnaire (Folkman & Lazarus, 1985). Many of these studies demonstrated a relationship between poor posttraumatic functioning and the use of coping strategies that involve emotional disengagement, including avoidance, distraction, and denial. The use of avoidant coping strategies has been found to be associated with greater PTSD symptoms in a variety of populations, including women who experienced interpersonal violence in adolescence or adulthood (Krause, Kaltman, Goodman, & Dutton, 2008; Ullman, Townsend, Filipas, & Starzynski, 2007; Valentiner, Foa, Riggs, & Gershuny, 1996), Gulf War veterans (Benotsch et al., 2000; Stein et al., 2005), individuals with a severe traumatic brain injury (Bryant, Marosszeky, Crooks, Baguley, & Gurka, 2000), inner-city youth exposed to community violence (Dempsey, Overstreet, & Moely, 2000), and survivors of Hurricane Katrina (Glass, Flory, Hankin, Kloos, & Turecki, 2009; Pina et al., 2008; Sprang & LaJoie, 2009). In the aftermath of the terrorist attacks on September 11, 2001, individuals who used emotion-focused disengagement strategies, such as self-blame, self-distraction, and denial, experienced a significantly greater number of PTSD symptoms and significantly greater distress than those who used coping strategies involving emotional engagement (Silver, Holman, McIntosh, Poulin, & Gil-Rivas, 2002).

Prospective studies of avoidance and PTSD. Many of the studies described thus far are limited by the use of correlational or cross-sectional research designs (e.g., Marx & Sloan, 2002; Tull et al., 2004). Such designs do not permit researchers to examine the temporal relationship between experiential avoidance, avoidant coping, and PTSD symptomatology. In contrast, prospective studies allow researchers to determine whether pretrauma, trait-like tendencies toward experiential avoidance and the use of emotional disengagement strategies lead to the development of PTSD following trauma exposure, or whether exposure to trauma itself produces both emotional and behavioral disengagement (e.g., Silver et al., 2002; Tull et al., 2004). Gil (2005) shed light on this issue in a rare prospective study of students who were exposed to a terrorist attack on a bus near their university. This study found that avoidance coping 2 weeks before the attack significantly predicted a diagnosis of PTSD 6 months after the attack. In contrast, a recent study reported that greater avoidance coping before the terrorist attacks on 9/11 did not predict greater PTSD symptoms at 1 and 3 months postattacks in a sample of undergraduate students (Baschnagel, Gudmundsdottir, Hawk, & Beck, 2009). These conflicting findings are likely due in part to differences in methodology, including the use of different measures to assess coping style. In addition, the sample studied by Baschnagel and colleagues (2009) was indirectly exposed to the attacks on 9/11, while more than a third of Gil's (2005) sample was directly exposed to the terrorist attack. The conflicting results may also be due to differences in the samples' cultural backgrounds, as the sample studied by Gil (2005) was predominantly Israeli-born, and Baschnagel et al.'s (2009) sample appeared to be comprised of American citizens. These mixed findings demonstrate the importance of conducting further prospective studies in order clarify the direction of the relationship between avoidance and posttraumatic functioning.

Overall, there appears to be considerable support for the hypothesis that experiential avoidance, denial, and other forms of emotional disengagement are related to greater PTSD symptom severity and poorer functioning following trauma exposure. However, it is currently unclear whether or not trait-like, pretrauma tendencies toward experiential avoidance predispose individuals to PTSD, or if the development of avoidant coping in the aftermath of trauma increases vulnerability to the disorder. Future research should address this issue by assessing experiential avoidance before individuals are exposed to trauma. This could be accomplished by studying people awaiting the results of life-changing medical tests, those who live in areas that are frequently exposed to natural disasters, or troops who are about to be deployed to combat zones. Finally, this line of research would benefit from utilizing reliable and valid measures of the experiential avoidance construct, including the AAQ and the Acceptance and Action Questionnaire-II (AAQ-II; Bond et al., in press). The AAQ-II has been shown to have greater internal consistency than the original AAQ and has exhibited good criterion-related validity (Bond et al., in press).

The role of thought suppression. Thought suppression, involving conscious attempts to keep unwanted thoughts out of awareness (Wegner, 1994), can be viewed as one aspect of the experiential avoidance construct (Tull et al., 2004). Thought suppression may be particularly ineffective for individuals who have been exposed to a traumatic event because when a person is experiencing stress, efforts to suppress undesired thoughts may paradoxically increase awareness of the very thoughts the person wishes to avoid (Wegner, 1994).

Chronic thought suppression has been shown to predict PTSD symptom severity among individuals exposed to a terrorist attack (Vázquez, Hervás, & Pérez-Sales, 2008). Thought suppression has also been found to predict PTSD symptom severity, when controlling for both general psychiatric symptom severity and the number of traumatic events the individual has been exposed to (Tull et al., 2004). Furthermore, several studies have reported that people with PTSD experience rebounds in trauma-related cognitions following thought suppression tasks (Aikins et al., 2009; Amstadter & Vernon, 2006; Shipherd & Beck, 1999, 2005). These studies add to a large body of literature supporting the role of thought suppression in the etiology and maintenance of PTSD (Purdon, 1999). Though this literature implicates chronic thought suppression

in the maintenance of PTSD, further research is needed to investigate the relationship between pretrauma tendencies toward thought suppression and symptoms of PTSD.

Dissociation and Posttraumatic Symptoms

Mindfulness has been operationalized as consisting of two primary components: sustained attention to the present moment and an accepting attitude toward experience (Bishop et al., 2004). Dissociation, constituting disturbances in consciousness, perception, memory, or identity (APA, 2000), may be conceptualized as the clinical antithesis of mindful attention to present experience (Michal et al., 2007). The relationship between dissociation and PTSD is currently a controversial topic in the psychological literature (Simeon, 2007), with many unresolved questions regarding the temporal relationship between these two clinical phenomena (Ginzburg, Solomon, Dekel, & Bleich, 2006).

The vast majority of the literature on the relationship between dissociation and PTSD has focused on the effects of peritraumatic dissociation, or dissociative phenomena that occur during or shortly after a potentially traumatic event. Peritraumatic dissociation has been shown to predict PTSD symptom severity in Vietnam theater veterans (Marmar et al., 1994) and survivors of violent assault and physical trauma (Birmes et al., 2003; Shalev, Peri, Canetti, & Schreiber, 1996). Recent meta-analyses (Breh & Seidler, 2007; Ozer et al., 2003) have concluded that peritraumatic dissociation is one of the strongest predictors of PTSD in the psychological literature.

Although there appears to be a large body of evidence supporting the ability of peritraumatic dissociation to predict PTSD symptoms, many authors have indicated serious methodological flaws associated with this literature (e.g., Bryant, 2007). Specifically, Candel and Merkelbach (2004) point out that though certain studies have assessed peritraumatic dissociation shortly after the potentially traumatic event (e.g., Birmes et al., 2003; Shalev et al., 1996), the majority of studies have relied on retrospective self-reports. The use of retrospective self-reports is particularly problematic in the assessment of peritraumatic dissociation, since changes in PTSD symptoms have been shown to be positively correlated with changes in recall of peritraumatic dissociation (Marshall & Schell, 2002). Moreover, studies continue to rely on self-report measures of peritraumatic dissociation despite evidence that investigations using interview-based assessments report weaker correlations between peritraumatic dissociation and PTSD than studies using self-report measures (Ozer et al., 2003). Finally, many studies have been criticized for neglecting to investigate the value of peritraumatic dissociation as an independent predictor of PTSD symptoms, thereby failing to control for the possibility that common shared risk factors may be producing a spurious relationship between these variables (van der Velden & Wittmann, 2008).

In accordance with critiques of the literature, a recent review of prospective studies on peritraumatic dissociation and PTSD found that peritraumatic dissociation is not a significant, independent predictor of the disorder (van der Velden & Wittmann, 2008). For example, peritraumatic dissociation did not emerge as a significant, independent predictor of PTSD among survivors of a fireworks disaster (van der Velden et al., 2006), victims of accidents or physical assault (Wittmann, Moergeli, & Schnyder, 2006), young adults injured as a result of community violence (Marshall & Schell, 2002), or undergraduate students exposed to a variety of potentially traumatic events (Marx & Sloan, 2005).

Emerging evidence suggests that trait or persistent dissociation may be a greater vulnerability marker for PTSD than is peritraumatic dissociation. Specifically, one prospective study of urban police officers reported that trait dissociation predicted greater peritraumatic dissociation and PTSD symptoms after 12 months of active duty (McCaslin et al., 2008). Among children who were hospitalized with severe burns, the tendency to dissociate partially mediated the relationship between total burn area and PTSD at 3 months postburn (Saxe et al., 2005). Similarly, a prospective study of children who had experienced sexual abuse found that the tendency to dissociate during the disclosure of abuse predicted PTSD symptoms in later months (Kaplow, Dodge, Amaya-Jackson, & Saxe, 2005). Finally, persistent dissociation has been found to be a strong predictor of both PTSD status (Briere, Scott, & Weathers, 2005) and symptomatology (Halligan, Michael, Clark, & Ehlers, 2003), with one study reporting that the relationship between PTSD and peritraumatic dissociation ceased to exist once persistent dissociation was taken into account (Briere et al., 2005).

Taken together, these findings suggest that trait dissociation and/or the tendency to persistently dissociate following exposure to trauma serve to maintain symptoms of PTSD. This body of evidence corresponds with existing clinical theory (Briere et al., 2005), which purports that dissociation promotes the development and maintenance of PTSD by impeding emotional processing of the traumatic event (Foa & Riggs, 1995). If the tendency to dissociate is associated with increased vulnerability to PTSD, then it seems possible that trait mindfulness may protect individuals from developing PTSD following a traumatic event. More research is needed on the relationship between dissociation, mindfulness, and PTSD. This line of research would benefit from prospective studies that examine the independent value of pretrauma mindfulness and dissociation in the prediction of PTSD (e.g., McCaslin et al., 2008), and that utilize both self-report and interview-based assessment tools.

Acceptance and Resilience After Trauma

In addition to implicating experiential avoidance (including dissociation) in the development of pathological posttraumatic processes, acceptance-based theories of PTSD also posit that the practice of mindfulness and acceptance skills promotes recovery from the core symptoms of the disorder (e.g., Orsillo & Batten, 2005; Walser & Hayes, 2006). If this hypothesis is correct, then individuals who utilize such skills in the aftermath of trauma should demonstrate fewer PTSD symptoms and more

positive psychological outcomes. Indeed, lack of emotional acceptance and difficulties with emotional clarity in the aftermath of trauma have been found to be associated with greater rates of PTSD (Tull, Barrett, McMillan, & Roemer, 2007). Conversely, the use of acceptance as a coping strategy was associated with fewer PTSD symptoms and lower levels of distress in the 6 months following the terrorist attacks on September 11, 2001 (Silver et al., 2002). Moreover, Major, Richards, Cooper, Cozzarelli, and Zubek (1998) reported that using acceptance to cope with abortion was positively associated with contentment with the decision and positive well-being, and negatively associated with distress.

Methodological considerations. Although preliminary evidence suggests that acceptance is related to positive psychological outcomes, the literature is limited by the same methodological issues that characterize the body of research on avoidance and posttraumatic functioning. Specifically, these studies are cross-sectional in nature, which limits the ability to identify if individuals with pretrauma tendencies toward acceptance exhibit superior psychological outcomes. The authors are currently unaware of any studies that investigated the relationship between pretrauma acceptance and posttraumatic symptoms following Criterion A traumatic events (APA, 2000). Moreover, the vast majority of the literature on acceptance and posttraumatic coping uses assessment tools that are grounded in the literature on coping, rather than the mindfulness and acceptance tradition. Consequently, it is possible that the term ''acceptance'' may have been used to describe different constructs. Future research should attempt to use assessment tools that have developed out of the mindfulness and acceptance literature, including the AAQ-II (Bond et al., in press), the Philadelphia Mindfulness Scale (PHLMS; Cardaciotto, Herbert, Forman, Moitra, & Farrow, 2008), and the Five Facet Mindfulness Questionnaire (FFMQ; Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006). The PHLMS exhibited good internal consistency and criterion-related validity in clinical and nonclinical samples (Cardaciotto et al., 2008), and the FFMQ demonstrated adequate to good internal consistency and good criterion-related validity in samples of meditators and nonmeditators (Baer et al., 2006).

A small number of studies have attempted to investigate the relationship between acceptance and posttraumatic outcomes using measures grounded in the mindfulness and acceptance literature. One such study using the Kentucky Inventory of Mindfulness Skills (KIMS; Baer et al., 2004) found that the ability to accept without judgment predicted fewer posttraumatic stress symptoms and that the ability to act with awareness predicted fewer reexperiencing symptoms among trauma-exposed individuals without an Axis I diagnosis (Vujanovic, Youngwirth, Johnson, & Zvolensky, 2009; see Table 1). Similarly, a recent study using the FFMQ with a sample of individuals exposed to Criterion A traumatic events demonstrated that mindfulness, particularly nonjudgmental acceptance, explained additional variance in PTSD avoidance symptom severity over and above the contribution of experiential avoidance (Thompson & Waltz, 2010; see Table 1). In contrast, in a study of police officers exposed to traumatic events while in the line of duty, though the abilities to observe and describe internal and external stimuli were related to posttraumatic growth, the ability to accept without judgment was associated with lower ratings on a measure of posttraumatic growth (Chopko & Schwartz, 2009; see Table 1). These results raise the question of whether positive judgments or evaluations of one's experience following a traumatic event are necessary components of posttraumatic growth. Although these designs were cross-sectional in nature, the findings suggest the need for further research that examines whether trait mindfulness and acceptance assessed pretrauma are associated with greater resilience following Criterion A traumatic events.

Conclusions

Methodological Considerations and Future Directions

There is considerable evidence to support the hypothesis that trait mindfulness and acceptance are associated with greater adjustment following trauma, while experiential avoidance, emotional disengagement strategies, and persistent dissociation are associated with increased vulnerability to PTSD and global psychological dysfunction. In particular, studies that have utilized assessment tools grounded in the mindfulness- and acceptance-based literature (see Table 1) have demonstrated these associations in studies that investigated samples with diverse ethnocultural backgrounds, sexual orientations, trauma histories, and ages at which the traumatic event occurred. Nonetheless, many of these studies have examined the relationship between avoidance, acceptance, and psychological functioning in predominantly female, nontreatment-seeking samples with a mean age below 40. Future studies would benefit from examining the relationship between these constructs in primarily male samples, older adults, and those seeking treatment for PTSD. Moreover, several studies that utilized assessment tools grounded in the mindfulness- and acceptance-based literature relied on samples of undergraduate students exposed to a potentially traumatic event. This raises the question of whether these findings would extend to samples of trauma survivors with a limited educational background and/or lower socioeconomic status. In addition, future research should also consider examining whether or not the relationship between mindfulness, experiential avoidance, and psychological symptoms following trauma depends on the type of traumatic event experienced and/or the length of time since the trauma occurred.

Although there is little direct evidence to suggest that mindfulness and acceptance confer resilience to trauma, the literature on posttraumatic outcomes indicates that there is much to be learned from prospective research that examines mindfulness, acceptance, and experiential avoidance in individuals at risk for trauma, and evaluates how these constructs are related to resilience and vulnerability to PTSD over time. In order to

demonstrate that experiential avoidance increases vulnerability to PTSD (and conversely, that mindfulness and acceptance promote resilience to PTSD), future studies will need to show that these traits predict PTSD over and above the variance that they share with the disorder's cardinal symptom clusters. Further research on this topic should also utilize reliable and valid measures of the mindfulness and acceptance constructs themselves, including the AAQ, AAQ-II, FFMQ, and PHLMS, as opposed to more generalized measures of coping that may have different operational definitions of such constructs as avoidance.

Implications for Practice

The current literature on posttraumatic outcomes suggests that psychological treatments that focus on promoting mindfulness and acceptance and decreasing experiential avoidance may improve the core symptoms of PTSD (e.g., Follette et al., 2006; Kimbrough et al., 2010; Orsillo & Batten, 2005). These approaches may be particularly useful with trauma survivors who refuse to engage in or fail to respond to more traditional forms of cognitive-behavioral therapy for PTSD, including exposure therapy (Orsillo & Batten, 2005; Twohig, 2009). Encouraging patients to engage in experiential practice of mindfulness and acceptance may also serve as a useful adjunct to exposure therapy by promoting nonjudgmental contact with the present moment (Walser & Hayes, 2006), thereby reducing cognitive distraction and other forms of avoidance that may lead to suboptimal activation of fear networks during exposure sessions. Furthermore, treatments such as ACT may be particularly effective for patients with chronic PTSD who exhibit persistent emotional numbing and almost complete withdrawal from meaningful life activities. ACT's focus on values and committed action may facilitate these patients' reexamining of their values and help them to reorient their behavior toward living a life of meaning, regardless of whether they continue to experience residual symptoms of PTSD.

The present review suggests that mindfulness and acceptance may also have a place in programs designed to prevent the development of PTSD in individuals who have a high probability of exposure to a potentially traumatic event. Such a prevention program has already been proposed for social workers (Berceli & Napoli, 2006), as mental health professionals are at risk for vicarious traumatization. A recent study also investigated the protective effects of mindfulness training delivered to U.S. Marine Corps reservists prior to deployment to Iraq, and found that more mindfulness practice was related to lower negative affect and greater positive affect postdeployment (Jha, Stanley, Kiyonaga, Wong, & Gelfand, 2010). This exciting line of research suggests that similar prevention programs may be effective in promoting psychological resilience among other populations who are at high risk for trauma exposure, including children growing up in violent areas of the world.

This review also suggests that mindfulness- and acceptance-based treatments may be promising early interventions for individuals who have recently experienced a traumatic event. The empirical literature largely supports the contention that experiential avoidance and avoidant coping in the aftermath of a traumatic event are associated with poor psychological outcomes, while early engagement with trauma-related emotions is associated with greater psychological adjustment (e.g., Gilboa-Schechtman & Foa, 2001). Mindfulness- and acceptance-based interventions may be particularly well suited for individuals who are experiencing psychological symptoms in the initial weeks following a traumatic event, as these interventions emphasize present moment contact with trauma-related emotions, memories, and associated physiological reactivity, while simultaneously withholding the tendency to judge these experiences. Consequently, these interventions may facilitate early emotional engagement with trauma-relevant experiences and prevent the catastrophic interpretations that often lead to persistent avoidance behaviors and chronic hyperarousal. Further research evaluating the efficacy of such early intervention programs would provide an important contribution to the resilience literature.

Implications for Policy, Practice, and Research

- Psychological interventions that emphasize the acquisition of mindfulness- and acceptance-based skills and the reduction of experiential avoidance may improve symptoms of PTSD.
- Preliminary evidence suggests that mindfulness- and acceptance-based skills may have a place in programs designed to prevent PTSD in populations at risk for experiencing Criterion A traumatic events. Mindfulness- and acceptance-based treatments may also serve an important role in early interventions for trauma survivors who are experiencing psychological symptoms in the initial days and weeks following a traumatic event.
- Prospective studies are needed to better understand whether pretrauma tendencies toward mindfulness and acceptance are related to psychological resilience following traumatic events. Such studies should demonstrate that these traits predict variance in posttraumatic outcomes over and above the traits' shared variance with PTSD symptom clusters.
- Future studies of mindfulness, acceptance, and resilience to trauma should utilize assessment tools grounded in the mindfulness- and acceptance-based literature, including the AAQ (Hayes, Strosahl, et al., 2004), AAQ-II (Bond et al., in press), FFMQ (Baer Smith, Hopkins, Krietemeyer, & Toney, 2006), and PHLMS (Cardaciotto, Herbert, Forman, Moitra, & Farrow, 2008).

Key Points of the Review

- Mindfulness- and acceptance-based theories postulate that symptoms of PTSD are developed and maintained by experiential avoidance and nonmindful behavior.
- Resilience to trauma consists of the ability to overcome factors that place one at risk for negative outcomes and to exhibit positive psychological adjustment following trauma.

- Trait mindfulness and acceptance may contribute to resilience to trauma through multiple pathways, including: nonjudgmental acceptance of and compassion for temporary psychological symptoms, increased willingness to experience fear-laden internal and external events, decentering from anxious and ruminative cognitions, heightened distress tolerance, and increased emotional processing of the event through contact with the present moment.
- To date, only two studies have examined how pretrauma tendencies toward acceptance and avoidance relate to posttraumatic outcomes, with mixed findings.
- Studies of diverse clinical and nonclinical populations have reported that experiential avoidance, avoidant coping, and thought suppression are associated with greater PTSD symptoms, depression, and general distress following a traumatic event, although the temporal sequence of these associations remain unclear.
- Preliminary evidence suggests that mindfulness, particularly nonjudgmental acceptance, is associated with fewer reexperiencing, avoidance, and arousal symptoms of PTSD.
- Persistent dissociation, which can be conceptualized as the antithesis of mindful behavior, may be a greater risk factor for PTSD than peritraumatic dissociation.

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