
REVIEW

Experiential Avoidance as a Functional Dimensional Approach to Psychopathology: An Empirical Review



Neharika Chawla

University of Washington



Brian Ostafin

North Dakota State University

The construct of experiential avoidance has become more frequently used by clinical researchers. Experiential avoidance involves the unwillingness to remain in contact with private experiences such as painful thoughts and emotions and is often proposed to be critical to the development and maintenance of psychopathology. This review summarizes the empirical studies on experiential avoidance as a factor in the etiology of maladaptive behavior and its relationship to specific diagnostic categories. Although some of the current literature suggests that experiential avoidance may be implicated in various forms of psychopathology, a fundamental limitation of this research is the lack of theoretical integration and refinement with regard to operationalizing and assessing experiential avoidance. Future studies should attempt to understand the core processes involved in experiential avoidance better, and then clearly operationalize the construct and determine its incremental validity relative to other constructs. © 2007 Wiley Periodicals, Inc. *J Clin Psychol* 63: 871–890, 2007.

The idea that avoiding negative affect influences psychopathology is as old as the various schools of clinical psychology (Binswanger, 1963; Freud, 1914; Kelly, 1955; Mowrer, 1947). This idea has recently been repackaged as the construct of experiential avoidance, and is receiving increasing attention in the empirical literature. Experiential avoidance (EA) is described as consisting of two related parts: (a) the unwillingness to remain in contact with aversive private experience (including bodily sensations, emotions, thoughts, memories, and behavioral predispositions), and (b) action taken to alter the aversive

Correspondence concerning this article should be addressed to: Neharika Chawla, University of Washington, Department of Psychology, Box 351525, Seattle WA, 98195-1525; e-mail: nchawla@u.washington.edu

experiences or the events that elicit them (Hayes, Wilson, Gifford, Follette, & Strosahl, 1996). It has also been described as a putative pathological process that is recognized by a wide number of theoretical orientations (Hayes et al., 1996) and is thought to be critical to the development and maintenance of psychopathology (Hayes, Strosahl, & Wilson, 1999). Classic examples of harmful avoidance strategies include excessive drinking, drug use, or high-risk sexual behavior. According to Hayes et al. (1996) experiential avoidance includes both avoidance and escape in all of their forms, as long as they are used as methods of altering the form and frequency of experiences. It has been a decade since Hayes and colleagues reviewed evidence for EA as a functional dimension in psychopathology. The two main aims of this article are to update the Hayes et al. (1996) review and to offer suggestions for future research that may help to clarify the utility of EA in understanding psychopathology.

The Construct of Experiential Avoidance

It is widely held that animals, including humans, are motivated to avoid negative affect. Thus, a rat that receives an electric shock in a chamber will be reluctant to return to that chamber (Blanchard & Blanchard, 1968). This has obvious survival value in that the ability to avoid signals of danger may allow the organism to circumvent actual bodily harm. Hayes and colleagues suggest that the problem of experiential avoidance is rooted in the literal and evaluative functions of human language and cognition (Blackledge & Hayes, 2001). Language can be thought of as being bidirectional in that the “functions of events are partially available in the symbolic description and vice versa” (Hayes et al., 1996, p. 1155). That is, verbally reporting pain can lead to a reexperiencing of that pain. Thus, the advent of language exponentially increases the number of potential cues for danger, and a human may become motivated to avoid not only external cues of actual danger, but also symbolic representations of that aversive experience. Although the exercise of such deliberate, verbally guided control strategies is effective in a number of contexts (Hayes et al., 1996), these strategies tend to dominate even when less literal and less judgmental strategies would be more effective (Hayes & Wilson, 2003).

The idea that humans are motivated to avoid aversive private experiences is attested to by a substantial literature detailing cognitive and affective strategies such as thought suppression (Wenzlaff & Wegner, 2000), emotional suppression (Gross & Levenson, 1993), avoidance coping (Penley, Tomaka, & Wiebe, 2002), reappraisal (Lazarus, 1991), and self-deception (Paulhus, 1988). Cognitive strategies such as thought suppression and thought control involve the general tendency to suppress unwanted thoughts and control them through means such as distraction and worry. These strategies have been shown to lead to a paradoxical increase in the occurrence of the target thoughts (Clark, Ball, & Pape, 1991; Gold & Wegner, 1995; Wegner, Schneider, Carter, & White, 1987; Wegner, Schneider, Knutson, & McMahan, 1991). Similarly, emotional suppression, which involves the avoidance of affective responses (including physiological, subjective, and behavioral responses), has demonstrated associations with poor psychological and physical health outcomes (e.g., Gross, 1989, 2004; Gross & John, 2003). Avoidance coping, or the tendency to engage in behavioral avoidance strategies in response to stressful situations (e.g., turning to work or other activities) is additionally associated with negative psychological outcomes (Penley, Tomaka, & Wiebe, 2002).

Each of these strategies can be labeled as EA in that they represent specific methods by which action is taken to alter aversive private experience. However, Hayes and colleagues (2004) argue that the construct of EA is broader than specific strategies, and that EA “relates several more specific behavioral phenomena into a theoretically coherent

perspective” (p. 565). From an empirical standpoint, this remains to be demonstrated and the distinction between EA and other constructs is often unclear. Although the review section of this article will place an emphasis on research using the broader conception of EA that seems to be intended by Hayes and colleagues, the summary section will critically evaluate the claim that EA is a theoretically inclusive construct.

Experiential Avoidance and Psychopathology: Theory

Hayes and his colleagues have argued that one advantage of EA is that it may have clinical utility by providing a functional perspective of presenting symptoms, bypassing the limitations of the currently prevalent syndromal perspective of psychopathology (Beutler & Malik, 2002). For example, diverse processes can establish the same topographical outcome of symptoms and signs (syndrome), or different topographical outcomes can come from the same process (Hayes et al., 1996). Thus, a symptom such as a headache could occur due to a number of factors (e.g., influenza, vision problems, ruptured blood vessels), each of which have different treatment implications. As a consequence, reliably diagnosing a headache does not mean that one then reliably knows the underlying functional cause, a point which is obviously crucial for treatment decisions. In a functional approach, behaviors are organized by the functional processes that are thought to have produced and maintained them, suggesting effective courses of intervention and providing the potential to integrate findings from a variety of theoretical paradigms (Hayes et al., 1996).

How might EA functionally contribute to psychopathology? Hayes et al. (1996) propose several potential pathways. One pathway is that deliberate avoidance strategies are usually verbal and involve the avoided item (e.g., “I won’t think about using heroin today” includes the symbolic representation of using heroin). Because of this fact, the avoided item may actually become more accessible and likely to influence further cognition and behavior (Wenzlaff & Wegner, 2000). A second pathway is that private experiences are often classically conditioned, and thus may not be amenable to verbal control strategies. Work on the neural pathways of fear conditioning indicates that higher (verbal) cortical areas are not necessary in the creation of classically conditioned fear and that the subcortical projections to the cortex are much denser than are those from the cortex to the subcortex (see LeDoux, 1996). Both of these findings suggest that using verbal control strategies may be relatively ineffective for nonverbal processes involved in pathology. A third pathway is that even if avoidance strategies are effective, they may lead to secondary problems such as a severely constricted life as in agoraphobic efforts to prevent panic or an inability to adapt to inevitable changes (processing the death of a loved one or shifting one’s role identity in different periods of life).

According to Blackledge and Hayes (2001), experiential avoidance has been recognized, implicitly or explicitly, within most systems of therapy (e.g., psychodynamic, behavioral, and cognitive therapies). For instance, psychodynamic therapy places a great deal of emphasis on repression, the process by which conscious material that is painful or threatening is relegated to the unconscious (Freud, 1915). Although behavioral and cognitive therapies have traditionally focused on changing (rather than accepting) private experiences, even within these domains, emotional and other forms of experiential avoidance have been recognized as a problem. Cognitive therapists have recognized that unpleasant events tend to be ignored, distorted, or forgotten (Foa, Steketee, & Young, 1984). Modern behavioral therapies such as dialectical behavior therapy (Linehan, 1992) and acceptance and commitment therapy (ACT; Hayes et al., 1999) are focused on accepting

negative experiences rather than controlling them. Acceptance and commitment therapy, in particular, attempts to alter the impact of emotions and cognitions by altering the struggle with them rather than by attempting to change their form, frequency, or the contexts that give rise to them. It teaches clients to contact psychological experiences, directly and fully (Hayes et al., 1996). Instead of abandoning change efforts completely, ACT targets them towards more readily changeable domains such as overt behavior or life situations, rather than thoughts and feelings (Hayes, 1994). In addition to encouraging psychological acceptance, ACT attempts to weaken the verbal constructions that support dysfunctional behavior and discourages the degree to which clients respond to thoughts as if they were literally true. Experiential avoidance is also implicated in interventions that involve training in mindfulness skills, such as mindfulness-based stress reduction (Kabat-Zinn, 1990), mindfulness-based cognitive therapy (Teasdale, Seagal, & Williams, 1995), and relapse prevention (Marlatt & Gordon, 1985). Mindfulness is a method that involves "bringing one's complete attention to the present experience on a moment-to-moment basis" (Marlatt & Kristellar, 1999). It is specifically designed to counter avoidance by encouraging deliberate, non-evaluative contact with events that are here and now (Hayes & Wilson, 2003).

Experiential Avoidance and Psychopathology: Evidence

The studies reviewed here examine the role of EA in the etiology, maintenance, and treatment of maladaptive behavior and psychopathology. To locate relevant studies, a computer search (using PsycInfo, PsycArticles, and PubMed databases) of articles and chapters including the terms EA and ACT was conducted. Reference lists of all articles were searched for additional articles. Studies on the process and outcomes related to ACT, that do not specifically address EA were excluded, and have been evaluated elsewhere (Hayes, Luoma, Bond, Masuda, & Lillis, 2006; Hayes, Masuda, Bissett, Luoma, & Guerrero, 2004). Studies on both, clinical and nonclinical samples were included.

We found 28 studies that met these criteria. The sample sizes in these studies have ranged from 19 to 304. The mean age of participants ranged from 19 to 70 years old. The gender ratio of the subjects ranged from 4.3 to 100% female. Table 1 summarizes the demographics, type of research design, dependent variables, and effect sizes for each study. Studies are organized by type of psychopathology or problem behavior, and studies on the role of EA in the psychotherapy process are included at the end of the table.

Most of the studies used the Acceptance and Action Questionnaire (AAQ), which is designed to cut "across several specific strategies and response domains" (Hayes et al., 2004, p. 565). Although the items load onto a single factor, they measure a number of conceptually distinct constructs, including need for emotional and cognitive control, avoidance of negative private events, inability to take needed action in the face of private events, and forms of negative entanglement such as excessively negative evaluations of private events or negative self-references (Hayes et al., 2004). Some of the studies reviewed here use a 9-item version of the measure whereas others use an older 16-item version. These two versions have been found to be correlated ($r = .89$; Hayes et al., 2004). Although the majority of studies reviewed below used the AAQ, a few studies used other measures of EA, including an inductive analysis of qualitative data, a subscale of the Trauma Symptoms Inventory (Batten, 2001), and factor-analyzed scores from a variety of measures such as the subscales of the Ways of Coping Questionnaire and the Trauma Symptom Inventory (Batten, Follette, & Aban, 2001; Higgins, 2000). Factor analyses in these studies revealed a two-factor solution consisting of a general experiential avoidance

Table 1
Empirical Studies on the Clinical Implications of Experiential Avoidance

Study	Participants	Mean %		Research design	Effect size	Experiential Avoidance measure	Other measures	
		N	Age					
Stewart et al. (2002)	Undergraduate students	182	22.3	60	Correlational	<i>Partial rs</i> = .29 (coping) and .21 (enhancement)	AAQ (16-item)	R Drinking Motives Q Anxiety Sensitivity Index Toronto Alexithymia Scale
Forsyth et al. (2003)	Veterans in residential inpatient substance abuse treatment program	94	44	4.3	Correlational	<i>Partial rs</i> = .06 to .27	AAQ (16-item)	Addiction Severity Index Drug of choice
Westrup (1999)	Participants in inpatient addiction treatment	71	36.1, 42.9	38	Between groups	<i>r</i> = .19	AAQ (16-item)	Life Experiences Q Coping Strategy Indicator BDI, BAI
Boeschel et al. (2001)	Nonclinical sample of rape victims	137	39	100	Correlational	<i>r</i> = -.01	Inductive analysis of qualitative data	Rape Attribution Q McPearl Belief Scale D Family Perception Grid Memory Characteristics Q
Orcutt et al. (2005)	Undergraduate students	229	96% under 24	71	Correlational	<i>r</i> = .45	AAQ (9-item) Toronto Alexithymia Scale, WBSI	Enright Forgiveness Inventory, Distressing Events Questionnaire
Tull et al. (2004)	Nonclinical sample of trauma survivors	160	26.4	100	Correlational	<i>R</i> ² s = .26 (depression), .25 (anxiety) and .17 (somatization)	AAQ (16-item)	WBSI, BSI, PTSD Checklist Life Events Checklist
Plumb et al. (2004)	Undergraduates/veterans in inpatient PTSD treatment	362, 235, 37	—	—	Correlational	<i>R</i> ² s = .65; .18 (PTSD) & .31 (distress); .26 (PTSD) & .31 (distress)	AAQ (16-item)	BSI, Life Events, Scale, Life Experiences Q, CAPS
Higgins (2000)	Community sample	102	70.4	100	Correlational	<i>R</i> ² = .57	AAQ (16-item), WOCO, TSI, TSI Belief Scale	SLEQ, WSHQ, NWSVS, SES, CTS, SCL-90, ELSI Hardness Scale
Tull & Roemer (2003)	Nonclinical sample of sexual assault survivors	170	24	100	Correlational	<i>R</i> ² = .39	AAQ (16-item)	PTSD Checklist Life Events Scale

continued

Table 1 Continued

Study	Participants	Mean %		Research design	Effect size	Experiential Avoidance measure	Other measures
		N	Age				
Marx & Sloan (2003)	Undergraduate students	185	19.56	70.8	Correlational	AAQ (9-item)	PDS PDEQ-SR
Polusny et al., (2004)	Undergraduate students	304	19	100	Correlational	AAQ (16-item)	SES, BDI, SCL-90, ADS
Batten et al. (2001)	Undergraduate students	257	20	100	Correlational/ between groups	AAQ, TSI, IES, WOCQ	SBQ, BSI, WSHQ, SES
Batten (2000)	Survivors of child sexual abuse	61	34.6	100	Experimental	AAQ (16-item), TSI, TSI Belief Scale, RIES, WOCQ	SLEQ, WSHQ, SES, CTIS, PCCTS, BDI, SCL-90, PANAS, PILL, WBSI
Marx & Sloan (2002)	Undergraduate students	99	19.2	100	Correlational	AAQ (9-item)	Life Experiences Q Emotion Expressivity Scale BSI
Roemer et al., (2003)	Undergraduate students	240	23.3	100	Correlational/ between groups	AAQ (16-item)	Penn State Worry Q GAD Q-IV Affective Control Scale
Roemer et al. (2005)	Clinical sample of GAD patients	19	34.4	68	Between groups	AAQ (9-item)	Penn State Worry Q Affective Control Scale Depression Anxiety & Stress Scale
Kashdan et al. (2006) Study 1	Undergraduate students	382	18.86	180	Correlational	AAQ (9-item)	Anxiety Sensitivity Index Body Sensations Q Trait Anxiety Inventory Suffocation Fear Scale
Kashdan et al. (2006) Study 2	Undergraduate students	97	19.75	64	Correlational	AAQ (9-item)	Positive/Negative Affect Social Anxiety Positive/Negative Events Satisfaction, meaning etc.
Begotka et al. (2004)	Clinical sample of trichotillomania patients	436	—	93.8	Between groups	AAQ (9-item)	MGH-HS

Chapman et al. (2005)	Prison inmates diagnosed with BPD	105	33.9	100	Correlational	$r = .53$ (BPD severity)	AAQ (16-item)	WBSI, COPE, LPC-2
Zetle (2003)	Undergraduate students	24	30	83	Experimental	—	AAQ (9-item)	Math Anxiety Rating Scale Trait Anxiety Inventory Wide Range Achiev Test Therapeutic Progress Rigs
Carpenter (2000)	Patients in a behavioral medicine setting	50	38	75	Experimental	—	AAQ (16-item)	POQ, Medical Outcomes Study Short-Form GHS, RIES DSQ, SUDS
Karekcia et al. (2003)	Undergraduate students	54	19.89	55.5	Between groups	η^2 's = .22 (cognitive symptoms) and .30 (physical symptoms)	AAQ (9-item)	
Feldner et al. (2003)	Undergraduate students	48	19.23	56	Between groups	η^2 's = .11 (anxiety) and .22 (affective response)	AAQ (9-item)	Self-Assessment Manikin SUDS Physiological Measures Perceived efficacy (VAS) DSQ, SUDS, Physiological Measures
Spira et al., (2004)	Undergraduate students	80	19.88	50	Correlational	R^2 's = .08 (anxiety), and .17 (physical symptoms)	COPE	
Eifert & Heffner (2003)	Undergraduate students	60	19.4	100	Experimental	η^2 's = .18 (latency), .11 (drop-out), and .07 (will- ingness)	AAQ (9-item)	SUDS, Response latency Drop-out, Willingness to participate in 2 nd challenge
Levitt et al., (2004)	Panic disorder patients	60	33.08	63	Experimental	$f^2 = .16$ (anxiety), $\eta^2 = .12$ (willingness)	Willingness to participate in 2 nd challenge	MASQ-AA, Anxiety Ratings Physiological Measures
Zetle et al., (2005)	Undergraduate students	25	23.1	68	Between groups	$ds = .77$ (tolerance), and .77 (endurance)	AAQ (9-item)	CSQ, Pain-Related Measures (threshold, tolerance, intensity, endurance)
Sloan (2004)	Undergraduate students	62	19	58	Between groups	—	AAQ (9-item)	PANAS Physiological Measures

Note. Q = Questionnaire; R = Revised; Achiev = Achievement; Rigs = Ratings; GAD = Generalized Anxiety Disorder; SLEQ = Stressful Life Events Questionnaire; WSHQ = Wyatt Sexual History Questionnaire; PCCTS = Parent-Child Conflict Tactics Scale; SES = Sexual Experiences Survey; NWSYS = National Women's Study Victimization Screening; PDS = Post-traumatic Stress Diagnostic Scale; PDEQ-SR = Peritraumatic Dissociative Experiences Questionnaire-Self Report; RIES = Revised Impact of Events Scale; WOCQ = Ways of Coping Questionnaire; DES = Dissociative Experiences Scale; Q-F = Quantity-Frequency Index of Alcohol Consumption; ADS = Alcohol Dependence Scale; SBQ = Sexual Behaviors Questionnaire; SCL-90 = Symptom Checklist-90; BDI = Beck's Depression Inventory; TSI = Traumatic Symptom Inventory; ELSI = Elder's Life Stress Inventory; PANAS = Positive and Negative Affect Schedule; PILL = Pennebaker Inventory of Limbic Languidness; WBSI = White Bear Suppression Inventory; BSI = Brief Symptom Inventory; GHS = General Health Survey; SUDS = Subjective Units of Distress; CRA = Computer-assisted measurement of the Referential Cycle; POQ = Participant Opinion Questionnaire; GAD Q IV = Generalized Anxiety Disorder Questionnaire (DSM IV); VAS = Visual Analogue Scale; CAPS = Clinician Administered PTSD Scale; MGH-HS = Massachusetts General Hospital Hairpulling Scale; COPE = Coping Strategies; LPC-2 = The Lifetime Parasuicide Count-2; MASQ-AA = The Mood and Anxiety Symptom Questionnaire-Anxious Arousal Scale.

factor and a trauma specific factor. The AAQ and the subscales of the Trauma Symptoms Inventory loaded heavily on the general avoidance factor, which dealt with both control over private events such as thoughts and feelings, and behavioral and emotional avoidance. The specific avoidance factor loaded heavily on the subscales of the Ways of Coping Questionnaire and the Impact of Event Scale and assessed coping strategies or symptoms identified in response to a specific stressful event (Batten et al., 2001).

Experiential Avoidance in relation to Maladaptive Behavior and Psychopathology

Substance abuse. It has been suggested that substance abuse is a highly effective short-term strategy for experiential manipulation and that a subgroup of substance abusers are experiential avoiders (Hayes et al., 1996). Even if substance abusers did not start their patterns of abuse as a method of EA, the effects of drugs on dysphoric or withdrawal states that are the result of excessive drug use may help maintain the pattern of abuse (Baker, Piper, McCarthy, Majeskie, & Fiore, 2004; Marlatt & Gordon, 1985). Two studies were found that examined EA and anxiety sensitivity in relation to substance abuse. A study by Stewart, Zvolensky, and Eifert (2002) investigated these variables as predictors of motivations for drinking in a sample of young adults. The results indicated that EA was the only significant predictor, over and above the other variables, of drinking for negative reinforcement (coping) and positive reinforcement (enhancement) reasons. Further, EA mediated the relationship between higher levels of anxiety sensitivity and greater coping motivations for drinking.

In contrast, Forsyth, Parker, and Finlay (2003) did not find EA to predict addiction severity or drug of choice in a sample of substance abusing veterans. Despite being positively correlated with medical complications related to substance abuse, when EA was entered into a model that included additional psychological variables (anxiety sensitivity, depression, and controllability over anxiety-related events), it failed to predict the various indices of addiction severity (medical, employment, psychiatric, legal, etc.). Additionally, in combination with the other psychological variables, EA did not vary reliably as a function of drug of choice. One explanation for these null findings may be the high degree of intercorrelations between the psychological variables of interest and the potentially imprecise classification of drug use categories (i.e., stimulants, depressants, mixed, etc.). Further research is needed to clarify these discrepancies across findings.

A third study by Westrup (1999) examined the relationship between EA and alcohol relapse by assessing whether EA differentiated alcohol-dependent relapsers from nonrelapsers in 71 subjects receiving inpatient addiction treatment. Although EA alone accounted for only 4% of the variance between relapsers and nonrelapsers, and failed to discriminate between the two, when entered in a model along with negative life events, the two variables were able to significantly distinguish relapsers from nonrelapsers. Additionally, the interaction between negative life events and EA accounted for a significant portion of the variance between groups (8%), over and above negative life events alone. Thus, experientially avoidant individuals who endorsed negative life events were more likely to relapse than less avoidant individuals who also experienced negative life events. However, the results of this study do not allow directional interpretations of the relationship between EA, environmental stress, and alcohol relapse. Future studies should assess the role of EA as a mediator in the relationship between stress and relapse, using a controlled, longitudinal design, with each of the variables assessed at separate time points.

Trauma and posttraumatic stress disorder. A number of studies were found that investigated EA in samples of trauma survivors across a range of traumatic experiences (e.g., female sexual assault survivors and male combat veterans). Five studies examined EA

as a predictor of psychological distress or posttraumatic stress disorder (PTSD) symptom severity (Boeschen, Koss, Figueredo, & Coan, 2001; Higgins, 2000; Orcutt, Pickett, & Pope, 2005; Plumb, Orsillo, & Luterek, 2004; Tull, Gratz, Salters, & Roemer, 2004). Boeschen and colleagues (2001) derived a qualitative measure of EA by asking rape victims to mark and label significant personal events on a lifeline; they then followed-up with a series of questions about the meaning of their rape experience (which had been identified during the screening phase of the study) based on whether or not they had placed it on their lifeline. Cognitive blocking of thoughts and memories related to the rape and rationalization of the rape experience (vs. integrating and making meaning of the experience), were used as markers of EA. Participant narratives were coded by independent raters who rated each response for the presence or absence of avoidance. Contrary to expectations, EA assessed in this manner, was not significant in predicting PTSD, either directly or indirectly. However, given the lack of data on the stability and validity of the measure used to assess EA, it is difficult to draw conclusions based on the results of this study.

A recent study by Orcutt and colleagues (2005) assessed EA and forgiveness as response styles that may mediate the relationship between interpersonal trauma exposure and PTSD symptoms. Subjects were 229 undergraduate students who reported experiencing an interpersonal trauma. The primary hypothesis was that an experientially avoidant style would be positively related to the development of PTSD, whereas a forgiving response style would be negatively related to PTSD symptomatology. Consistent with the hypothesis, both experientially avoidant and forgiving response styles partially mediated the relationship between interpersonal trauma and PTSD (in the predicted directions).

Another study (Tull et al., 2004) examined the relationship between EA, posttraumatic stress symptom severity, depression, anxiety, and somatization among a sample of 160 women who had been exposed to multiple traumatic events. In contrast to the previous study, the results indicated that EA did not significantly predict PTSD symptom severity beyond the number of potentially traumatic events and general psychiatric symptom severity. However, EA did account for significant additional variance in depression, anxiety, and somatization, over and above number of potentially traumatic events and PTSD symptom severity. Although this study did not support the hypothesis that EA is related to PTSD symptom severity, the results suggested that EA may be related to general psychiatric symptoms in those exposed to a number of potentially traumatic experiences.

Plumb et al. (2004) assessed the role of EA in predicting posttrauma functioning across three sets of samples: male and female undergraduate students who had experienced a stressful life event (e.g., academic failure, financial problems, injury/illness of a close family member), male and female undergraduate students who had experienced a traumatic event based on *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)*; American Psychiatric Association, 1994) criteria for PTSD, and a sample of male veterans presenting for inpatient PTSD treatment. In the first sample, EA predicted general psychological distress following a stressful life event, beyond initial levels of distress. In the second sample, EA predicted PTSD symptom severity and general psychological distress, over and above the severity of the traumatic experience. In the sample of veterans, EA predicted PTSD symptom severity and depression, beyond the degree of combat exposure. Overall, the results of this study seem to indicate that individuals who use EA as a coping strategy following exposure to either stressful or traumatic life events are more likely to display impaired psychological functioning. Consistent with Tull et al. (2004), EA accounted for a greater proportion of the unique variance in depression and general psychological distress than in PTSD symptom severity.

A study by Higgins (2000) investigated relationships between a history of interpersonal trauma, EA, and general and trauma specific psychological distress in a sample of

elderly women. Factor analysis of several EA measures resulted in two factors: (a) generalized levels of EA (i.e., need for control over private events), and (b) avoidance coping specifically in response to trauma. Although there were no significant differences between participants with and without a history of trauma on both of these factors, generalized levels of EA demonstrated a large effect size correlation with psychological distress, after controlling for the number of trauma experiences. Specific avoidance coping did not predict psychological distress over and above generalized levels of avoidance coping. Once again, this suggests that EA may show a stronger association with general psychiatric distress than with disorder specific symptomatology.

In addition to studies that examined EA as a predictor of PTSD, a study by Tull and Roemer (2003) examined its role as a mediator in the relationship between different symptoms of PTSD. Based on previous research suggesting a predictive relationship between hyperarousal and emotional numbing symptoms of PTSD (Flack, Litz, Hsieh, Kaloupek, & Keane, 2000), they hypothesized that the association between these variables was a result of the relationship of each of these to EA. Without the inclusion of hyperarousal, EA significantly predicted emotional numbing over the intrusion and avoidance symptoms of PTSD, but no longer remained significant when hyperarousal was included in the model. However, there may be some conceptual overlap with regard to the definition and measurement of EA, emotional numbing, and avoidance, making it difficult to tease apart these constructs to establish a clear understanding of these findings.

Hayes and colleagues (1996) have also proposed that peritraumatic dissociation (i.e., occurring during a traumatic event) is a form of EA. Marx and Sloan (2003) examined whether peritraumatic dissociation serves as a proxy risk factor for EA, in its relationship to PTSD. Individuals who reported having experienced one or more traumatic stressors were assessed over an 8-week time period. Although EA and peritraumatic dissociation were both found to predict PTSD symptom severity at baseline, EA was the only significant predictor 4-weeks and 8-weeks later, beyond initial symptoms severity, as was expected.

The sequelae of child sexual abuse. Child sexual abuse (CSA) is related to a variety of adverse long-term correlates such as depression, general anxiety disorders, posttraumatic stress disorder, self-injurious behaviors, substance abuse, personality disorders, and adult victimization (Browne & Finkelhor, 1986; Polusny & Follette, 1995). Based on Hayes' conception of EA, Polusny and Follette (1995) proposed a model of avoidance for understanding the wide range of the adverse outcomes experienced by CSA survivors. They defined avoidance as behavioral strategies that are employed by CSA survivors to temporarily avoid or alleviate negative abuse-related internal experiences. Polusny, Rosenthal, Aban, and Follette (2004) conducted a study to investigate the role of EA as a mediating variable in the relationship between child-adolescent sexual victimization and negative adult outcomes (depression, psychological distress, and alcohol abuse) in 304 female college students. Consistent with Polusny and Follette's model (1995), child and adolescent sexual victimization were associated with higher levels of EA. Experiential avoidance partially mediated the influence of adolescent victimization on depression and general psychological distress. However, EA was not a significant mediator of the relationship between sexual victimization and problem drinking, suggesting that EA may contribute to increased distress, which, in turn, may be related to problem drinking.

A study by Batten and colleagues (2001) investigated a number of variables related to two of the long-term correlates of CSA, general psychological distress and high-risk sexual behavior, in a sample of 257 female undergraduate students. Experiential avoidance was assessed by factor analyzing scores on a number of different measures,

including the AAQ. The results revealed the same two factors as Higgins (2000): (a) generalized levels of EA, and (b) trauma specific avoidance. Generalized EA and extent of CSA history both predicted psychological distress. Although there were no differences between CSA and non-CSA survivors on number of sexual partners, or amount of sexual activity with a primary partner, women with a CSA history demonstrated higher scores on a measure of risky sexual behavior with men not identified as primary partners. Once again, the only significant predictors of this measure were generalized EA and extent of CSA. Thus, the results of this study support those of Higgins (2000), suggesting that with regard to the long-term consequences of trauma and CSA, avoidance may involve two discrete factors. However, further research is required to make a clear distinction between generalized and trauma-specific avoidance.

A study by Batten (2001) attempted to test the efficacy of a written self-disclosure intervention with a group of adult women who had experienced CSA. Sixty-one participants were randomly assigned to either write about their sexual abuse history or about time management and were assessed 3 months posttreatment. Experiential avoidance was examined using multiple measures, for possible associations with psychological and physical symptoms and as a potential change mechanism. Contrary to expectations, the control group demonstrated a decrease in physical and psychological symptoms, whereas the experimental group reported no change in these variables. However, across the three periods, EA scores were higher for the control group. The two variables that predicted pretreatment depression were EA and current levels of physical aggression by a partner. The only variable that predicted a decrease in psychological distress over the 12-week period was a decrease in EA.

In a study on the role of emotion in the psychological functioning of adult survivors of CSA, Marx and Sloan (2002) assessed 47 CSA survivors and 52 non-CSA participants. The results indicated that CSA participants scored significantly higher on EA and general psychological distress. Child sexual abuse participants also scored significantly lower on emotional expressivity than non-CSA participants. A regression analysis revealed that the relationship between CSA status and psychological distress was mediated by EA, over and above emotional expressiveness.

In general, findings show statistically significant relationships between having a history of CSA, EA, and psychological distress. However, the actual direction of these relationships is uncertain due to the correlational nature of these studies and the variations in models of causality.

Generalized anxiety disorder and anxiety related pathology. Borkovec's (1994) theory of generalized anxiety disorder (GAD) conceptualizes worry as a form of avoidance. He suggests that worry serves a function in the avoidance of internal distress and is negatively reinforced by the short-term reduction in distress and arousal that accompany it. However, it does not reduce the likelihood of negative outcomes or increase the likelihood of effective coping, and may interfere with successful emotional processing (Roemer & Orsillo, 2002).

Roemer, Salters, Raffa, and Orsillo (2005) conducted two studies to assess the role of EA and fear of emotional responding in GAD related symptomatology. In the first study, using a large sample of female undergraduate students, both worry and EA were significant predictors of GAD severity. In a second study with 19 GAD clients at an anxiety disorders clinic, EA scores were found to be higher than in the nonclinical sample used in the previous study and were significantly correlated with depression, but not with worry. However, the small sample size and preliminary nature of this study makes it difficult to draw any strong conclusions.

Recently, Kashdan, Barrios, Forsyth, and Steger (2006) conducted a two-part study assessing EA as a mediator of the relationship between maladaptive coping and emotion-regulation strategies, and anxiety-related distress (e.g., anxiety sensitivity, trait anxiety, suffocation fears, and body sensation fears). Participants for study 1 were 382 undergraduate students. Consistent with the hypotheses, they found that predispositions towards EA were positively related to aversive outcomes, and that relationships between different self-regulatory strategies and psychological outcomes were mediated by EA. Building upon the results of Study 1, Study 2 assessed the relationship between self-regulatory strategies and psychological outcomes over time, using experience-sampling methodology. Participants were 97 undergraduate students who completed daily report forms over a period of 21 days. Once again, all significant relations between emotion regulation and daily outcomes (e.g., negative affect and social anxiety) were mediated by EA. Thus, it appears that maladaptive coping and self-regulatory strategies may lead to anxiety-related distress via the tendency to avoid unwanted private experiences.

Trichotillomania. In a sample of 436 individuals diagnosed with trichotillomania, Begotka, Woods, and Wetterneck (2004) found a significant correlation between EA and the severity of trichotillomania. Further, those who were high on EA reported significantly greater frequency and intensity of urges as well as significantly lower ability to control urges. Although these findings are consistent with the hypothesis that hair-pulling is a form of avoidance, this interpretation is qualified by the finding that these differences pertained only to the urges to pull, and not to actual pulling.

Deliberate self-harm. Using the construct of EA, Chapman, Gratz, and Brown (2006) recently proposed a theoretical framework to understand the factors that control deliberate self-harm better. According to this model, self-harm in the absence of any intent to die is a strategy for reducing unwanted emotional distress and arousal. Additionally, these destructive behaviors are maintained and strengthened through the process of escape conditioning and negative reinforcement.

Chapman, Specht, and Cellucci (2005) conducted a study to test this hypothesis in a sample of 105 female inmates with elevated rates of borderline personality disorder (35.2% of the sample) and a high lifetime prevalence of deliberate self-harm (47.6%). Although higher borderline personality disorder (BPD) severity was associated with greater self-harm frequency and higher EA, structural equation modeling revealed that EA did not significantly mediate the relationship between BPD and deliberate self-harm. Furthermore, an alternative model based on a potential moderation effect also failed to reveal a significant interaction between EA and self-harm. The only exception to this was that thought suppression, which may be viewed as a form of avoidance, was significantly associated with self-harm among BPD participants, but not among non-BPD participants.

Given that this is the first study of its kind, future research should explore alternative models of the relationship between EA and self-harm. For instance, it is possible that a diagnosis of BPD accounts for the relationship between EA and deliberate self-harm, as opposed to EA mediating the relationship between BPD and self-harm. Moreover, the inclusion of behavioral indicators of avoidance, in addition to self-report measures, may serve to better elucidate this relationship.

Evidence From Psychotherapy Process Research

Two studies were found that examined the role of EA in treatment and intervention. Zettle (2003) compared the usefulness of acceptance and commitment therapy and systematic

desensitization in alleviating math anxiety in a sample of college students. Participants were randomly assigned to ACT (Hayes et al., 1999), which is designed to encourage experiential acceptance rather than avoidance, or to systematic desensitization. Participants were assessed at pretreatment, posttreatment, and 2-month follow-up. Although both conditions showed equivalent reductions in math and test anxiety, levels of EA at pretreatment were significantly associated with reductions in math anxiety only for participants treated with ACT. This suggests that a differential change process may be at work in the two forms of therapy and that the degree of EA may be related specifically to responsiveness to ACT.

Carpenter (2000) examined the clinical utility of written self-disclosure in comparison with relaxation training to decrease EA and increase perceived meaning and acceptance in a heterogeneous behavioral medicine sample. Participants were randomly assigned to four sessions of writing about a traumatic event or relaxation training. There were no between-group differences in outcome. Contrary to the hypothesis, the relaxation group had lower posttest scores on EA as compared to the writing group (although this difference was not significant). There may be a number of potential explanations for this, including the possibility that self-disclosure is related to increased avoidance in the short-term, but decreased avoidance in the long-term, or that relaxation training is related to a decrease in the avoidance of bodily sensations. Alternatively, these results may simply be attributed to preexisting differences between the groups. However, given the lack of prior evidence with regard to the mechanisms involved in either of the interventions, it is difficult to determine the precise reasons for this unexpected finding.

Individual Differences in Avoidance Processes

A number of recent studies have attempted to understand experiential avoidance better as a potentially pathogenic process, which may occur in response to emotionally and physically distressing stimuli. In one such study, Karekla, Forsyth, and Kelly (2004) evaluated experiential avoidance in relation to an acute state of physical stress induced by a carbon dioxide challenge. The participants were 54 undergraduate students who were divided into high ($n = 27$) and low ($n = 27$) experiential avoiders. Although there were no significant differences between the groups on physiological reactions to the panicogenic stimulus, those high on experiential avoidance reported a significantly greater frequency of physical and cognitive panic symptoms compared to less-avoidant individuals.

In a similar study examining the relationship between experiential avoidance and response to an aversive emotional state induced by a carbon dioxide challenge, Feldner, Zvolensky, Eifert, and Spira (2003) used a 2 (high and low experiential avoiders) \times 2 (instructions to either suppress or simply observe their bodily sensations and emotional responses) design. Participants high on experiential avoidance demonstrated higher pre-experimental heart rate, greater displeasure, and higher levels of anxiety in response to the biological challenge. The high experiential avoidance group also reported greater levels of anxiety in the suppression condition and less efficacy in terms of their perceived ability to regulate their emotional response regardless of condition. Consistent with the findings of Karekla and colleagues (2004), when controlling for pretreatment levels, no differences were found between high and low experiential avoiders on heart rate, suggesting that experiential avoidance may be related to how bodily arousal is experienced rather than how it actually occurs.

In yet another attempt to better understand the impact of avoidant coping tendencies on responses to physical stress, Spira, Zvolensky, Eifert, and Feldner (2004) investigated

the extent to which preexperimental levels of avoidance-oriented coping predicted anxious and fearful responding during a carbon dioxide challenge. Consistent with their hypotheses, a composite index of self-reported avoidance coping (denial, mental disengagement, and alcohol-drug disengagement) significantly predicted physical panic symptoms and increased challenge-induced anxiety. However, avoidance coping did not significantly predict cognitive panic symptoms or physiological arousal (heart rate and skin conductance). In keeping with the findings of Karekla et al. (2004) and Feldner et al. (2003), this suggests that avoidance coping may not be related to the actual occurrence of bodily sensations, but rather to the perception of such sensations.

A study by Eifert and Heffner (2003) attempted to actively manipulate emotion-regulation strategies and used a number of behavioral indicators to assess avoidance (response latency, drop-out rates, willingness to return for another session). They compared the effects of an acceptance intervention (mindfully observing sensations) to a control treatment context (instructions to control symptoms by using diaphragmatic breathing), and a no-instruction control group, on the avoidance of thoughts and emotions during a carbon dioxide challenge. Participants were 60 female undergraduates who scored one standard deviation above the mean on a self-report measure of anxiety. Although there were no significant differences between the acceptance group and the control context group on response latency for Trials 1 and 2, the control context group took significantly longer to begin Trial 3 than the acceptance group. Additionally, the acceptance participants were significantly less likely to drop out and expressed greater willingness to return for another session, compared to the control context and the no-instruction participants. Moreover, control participants reported more intense cognitive and subjective fear symptoms than acceptance participants, although there were no differences between groups on self-reported intensity of physiological symptoms.

A study by Levitt, Brown, Orsillo, and Barlow (2004), used a similar design to investigate the effects of different emotion-regulation strategies during an aversive situation in a clinical sample. They examined the effects of acceptance versus suppression of emotions and thoughts in the context of a carbon dioxide challenge in a sample of 60 patients diagnosed with panic disorder. In keeping with the hypotheses, participants in the acceptance group reported less-subjective anxiety and greater willingness to participate in a second challenge, compared to the suppression and the control group, controlling for resting anxiety. However, there were no differences between the three groups on self-reported panic symptoms or physiological arousal (heart rate and skin conductance). Consistent with the results of previous studies (Eifert & Heffner, 2003; Karekla et al., 2004; Feldner et al., 2003), these findings indicate that participants in the three groups did not differ in their experience of panic sensations, but rather in their report of subjective anxiety and their willingness to participate in another challenge.

A study by Zettle and colleagues (2005) attempted to investigate the relationship between experiential avoidance and reactions to pain (induced by a cold pressor task) by comparing participants displaying high versus low levels of experiential avoidance (one standard deviation above and below the mean on AAQ scores). Participants were 25 undergraduate students (14 in the high experiential avoidance group and 11 in the low experiential avoidance group). Although the groups did not differ significantly with regard to their sensitivity to pain (threshold for reporting pain during the task), participants reporting low levels of experiential avoidance displayed significantly greater levels of pain tolerance (total amount of time that hand remained immersed in water) and endurance (amount of time hand was immersed in water after indicating that it was painful) than did the high experiential avoidance group. Thus, in keeping with studies using a carbon dioxide challenge, the main difference between the groups was not in their sensitivity to pain, but in their reaction to it.

A study by Sloan (2004) examined the differences between high and low experiential avoiders in their reactions to pleasant, unpleasant, and neutral emotion eliciting stimuli. Subjects were shown a series of film clips that represented each of these emotion domains and were assessed using physiological and self-report measures. High experiential avoiders showed greater heart rate and electromyographic activity of smile and frown muscles in response to the neutral film clip compared to low experiential avoiders. The high experiential avoidance group reported experiencing not only greater negative emotion to the fear and disgust film clips, but also greater positive emotion to the happiness film clip. Contrary to expectations based on the previous studies, high experiential avoiders showed decreased heart rate reactivity to the fear and disgust film clips ($p < .001$) relative to the low experiential avoidance group, but no differences on the happiness, contentment, or sadness clips. Although there is no empirical evidence to explain this, one hypothesis is that decreased heart rate reactivity may be a physiological marker of avoidance. Overall, it appears that individual differences in experiential avoidance are related to the ways in which individuals perceive and react to internal distress, rather than the way it occurs. This is in keeping with Hayes and colleagues' (1996) conceptualization of experiential avoidance as a phenomenon that involves the unwillingness to remain in contact with private experiences.

Summary and Comments

One of our purposes in this article was to review the past decade's research on the Hayes et al. (1996) assertion that EA is a functional dimensional approach to psychopathology. We focused on research that conceptualized EA as a broad construct that can theoretically integrate specific avoidance content and strategies. Thus, most of the research reviewed utilized the AAQ, a measure designed to assess EA as a broad construct that subsumes particular avoidance strategies (Hayes et al., 2004).

In sum, there is a growing literature suggesting that an unwillingness to be in contact with aversive private experience and taking action to alter that experience does indeed influence psychopathology. Although there are some inconsistencies between studies, the broad picture of the evidence suggests that EA (a) influences the likelihood of substance use relapse, (b) mediates the relation between traumatic events and general psychological distress, (c) predicts severity of symptoms in some specific disorders such as GAD and trichotillomania, and (d) mediates the relationship between maladaptive coping and self-regulatory strategies, and psychological distress. Further, although little research has been conducted on EA as a mediator in psychotherapy, there is some evidence suggesting that focusing treatment on reducing EA can lead to improvements in an anxiety-disordered sample. It may indeed be that "many forms of psychopathology are not merely bad problems, they are also bad solutions" (Hayes et al., 1996, p. 1162).

Our second purpose here was to critically evaluate the conceptualization of EA as a broad theoretical construct that subsumes a variety of other strategies and suggest several avenues for future research. From our perspective, it is currently unclear whether EA should be viewed as a broad overarching construct that is comprised of a single factor, or as a multifaceted construct with a number of different dimensions (e.g., cognitive, affective, and behavioral). Additionally, the boundaries and distinctions between EA and related constructs, such as thought suppression, thought control, avoidance coping, reappraisal, and emotional suppression, are relatively unclear. To further confuse matters, these constructs are often described as aspects of or prototypical examples of EA.

Thus, an important task for future research is to refine the operationalization of EA. Although the AAQ has demonstrated utility in assessing EA in psychopathology, its use

as the primary measure for assessing EA has not been without limitations. Perhaps the most salient limitation of the AAQ relates to the determination of what the scale measures. The nine items seem to assess disparate constructs, including the need for emotional and cognitive control, avoidance of negative private events, inability to take needed action in the face of private events, and forms of negative entanglement. Additionally, the items on the AAQ do not adequately tease apart the construct of EA from the outcomes to which it is theoretically related (i.e., psychological distress; Zvolensky, Feldner, Leen-Feldner, & Yartz, 2005). Although initial research indicated that these items loaded onto a single factor ($\alpha = .70$; Hayes et al., 2004), other research has suggested lower estimates of internal consistency ($\alpha s < .50$; Zvolensky et al., 2005). The broad item content and modest internal consistency of the AAQ not only point to the limitations of the measure, but also the current lack of theoretical refinement with regard to operationalizing EA.

Additionally, the AAQ was constructed within the context of ACT (Hayes et al., 1999), by having therapists generate an item pool of the kinds of clinical processes targeted by ACT. Thus, the AAQ may be viewed as a more general measure of several ACT processes (Hayes et al., 2006), rather than as a specific measure of EA. Finally, the AAQ was designed for use with population-based samples rather than clinical samples, bringing into question its use as a clinical instrument. Although disorder-specific versions of the AAQ are becoming available for use with clinical samples (e.g., the Chronic Pain Acceptance Questionnaire; McCracken, 1998), the majority of evidence assessing the relationship between EA and psychological problems to date, has relied on some form of the AAQ.

Thus, although the AAQ has served as a useful measure that has initiated research on EA, further evaluation of the construct and additional scale development is warranted. We think that the capacity for EA to act as an integrative functional diagnostic dimension could be developed by creating a scale that more clearly measures the unwillingness to remain in contact with aversive private experience. As Hayes et al. (1996) note, a functional approach to classification deemphasizes the topographical characteristics of what may seem to be disparate behaviors to determine a common underlying function. The unwillingness to experience negative internal states logically connects cognitive and behavioral responses such as self-deception, emotion-focused coping, and agoraphobic constriction of behavior. Demonstrating this empirically would advance EA as a theoretically integrative construct.

One approach to developing a scale that captures a common motivational component would be to conduct a factor analysis on extant measures that include items that represent the motivation to avoid aversive private experience such as the AAQ, mindfulness scales (Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006), thought-suppression scales (Wegner & Zanakos, 1994), and emotion-regulation scales (Gratz & Roemer, 2004). This type of research would not only provide important information about how this construct should be defined and measured, but may give rise to a multidimensional approach to assessing EA that offers greater utility as a research instrument. Future studies should also develop disorder specific measures of EA that are validated specifically for use with clinical samples. A potential problem in creating a self-report measure of EA is that individuals may not be able to report their own motivation accurately (Nisbett & Wilson, 1976). One way in which this problem can be addressed is by examining the construct validity of the scale with behavioral (Daughters et al., 2006) and physiological (Tomarken & Davidson, 1994) measures.

As evidence that EA plays a role in psychopathology grows, we believe that even more interesting and important work can be done. For example, it will be important to assess further the utility of EA in understanding models of psychopathology, by evaluating

it as a mediator and a moderator of outcome. It will also be important to examine specifically *how* EA influences psychopathological outcomes. Hayes et al. (1996) suggest several possible alternatives, including that avoidance strategies may activate the avoided experience, classically conditioned private experiences may not be amenable to verbal control strategies and successful avoidance may lead to harmful secondary effects. Experimental work has begun to be done on the first alternative (avoidance strategies activating the avoided experience) and has been reviewed by Zvolensky et al. (2005). However, the majority of this work has examined suppression as the specific avoidance strategy. Given that EA is proposed to subsume a wide variety of cognitive (e.g., distraction, reappraisal, repression, and self-deception) and behavioral avoidance strategies, more work should be done to examine whether and how other specific verbally mediated strategies also influence the accessibility of the avoided content. That is, would distraction or reappraisal similarly lead to heightened accessibility of the to-be-avoided content because of the bidirectional nature of language? Some evidence would suggest not (Cioffi, 1991), but this work remains to be done.

A potentially important dimension on which the specific EA strategies differ is whether they are deliberate and controlled (e.g., suppression) versus involuntary and automatic (e.g., repression). The automaticity of specific EA strategies may lead to several areas of research including whether some strategies are more effective than others are. That is, some (e.g., suppression) may be more effortful than others (e.g., repression), leading to fewer available self-control resources to regulate the to-be-avoided content (Baumeister, Bratslavsky, & Tice, 1998). Additionally, research may examine whether automaticity influences intervention efficacy and whether strategies become automatic through developmental processes (e.g., extended use), intensity of EA, or other factors.

In conclusion, the past decade has seen increasing evidence that the broad construct of EA has potential as an integrative explanatory construct for a number of types of psychopathology. The next decade may produce research that will help to determine whether that potential is fulfilled.

References

- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J., & Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment*, 13, 27–45.
- Baker, T. B., Piper, M. E., McCarthy, D. E., Majeskie, M. R., & Fiore, M. C. (2004). Addiction motivation reformulated: An affective processing model of negative reinforcement. *Psychological Review*, 111, 33–51.
- Batten, S. V. (2001). Testing the effects of a written disclosure task with sexual abuse survivors (Doctoral dissertation, University of Nevada, 2001). *Dissertation Abstracts International*, 61, 4970.
- Batten, S. V., Follette, V. M., & Aban, I. B. (2001). Experiential avoidance and high-risk sexual behavior in survivors of child sexual abuse. *Journal of Child Sexual Abuse*, 10, 101–120.
- Baumeister, R. F., Bratslavsky, E., Muraven, M., & Tice, D. M. (1998). Ego depletion: Is the active self a limited resource? *Journal of Personality and Social Psychology*, 74, 1252–1265.
- Begotka, A. M., Woods, D. W., & Wetterneck, C. T. (2004). The relationship between experiential avoidance and the severity of trichotillomania in a nonreferred sample. *Journal of Behavior Therapy*, 35, 17–24.
- Beutler, L. E., & Malik, M. L. (2002). Diagnosis and treatment guidelines: The example of depression. In L. E. Beutler & M. L. Malik (Eds.), *Rethinking the DSM* (pp. 251–278). Washington, DC: American Psychological Association.

- Binswanger, L. (1963). *Being-in-the-world*. Selected papers of Ludwig Binswanger (J. Needleman, Trans.). New York: Basic Books.
- Blackledge, J. T., & Hayes, S. C. (2001). Emotion regulation in acceptance and commitment therapy. *Clinical Psychology Science and Practice, 10*, 161–165.
- Blanchard, R. J., & Blanchard, D. C. (1968). Escape and avoidance responses to a fear eliciting situation. *Psychonomic Science, 13*, 19–20.
- Boeshen, L. E., Koss, M. P., Figueredo, A. J., & Coan, J. A. (2001). Experiential avoidance and post-traumatic stress disorder: A cognitive mediational model of rape recovery. *Journal of Aggression, Maltreatment and Trauma, 4*, 211–245.
- Borkovec, T. D. (1994). The nature, functions, and origins of worry. In G. C. L. Davey & F. Tallis (Eds.), *Worry: Perspectives on theory, assessment, and treatment* (pp. 5–34). Sussex, UK: Wiley.
- Browne, A., & Finkelhor, D. (1986). Impact of child sexual abuse: A review of the research. *Psychological Bulletin, 99*, 66–77.
- Carpenter, K. M. (2000). Change mechanisms and clinical utility of written self-disclosure in a behavioral medicine setting (Doctoral dissertation, Clark University, 2000). *Dissertation Abstracts International, 61*, 4974.
- Chapman, A. L., Gratz, K. L., & Brown, M. Z. (2005). Solving the puzzle of deliberate self-harm: The experiential avoidance model. *Behavior Research and Therapy, 44*, 371–394.
- Chapman, A. L., Specht, M. W., & Cellucci, T. (2005). Borderline personality disorder and self-harm: Does experiential avoidance play a role? *Suicide and Life Threatening Behavior, 35*, 388–399.
- Cioffi, D. (1991). Beyond attentional strategies: A cognitive-perceptual model of somatic interpretation. *Psychological Bulletin, 109*, 25–41.
- Clark, D. M., Ball, S., & Pape, D. (1991). An experimental investigation of thought suppression. *Behavior Research and Therapy, 29*, 253–257.
- Daughters, S. B., Lejuez, C. W., Bornovalova, M. A., Kahler, C. W., Strong, D. R., & Brown, R. A. (2006). Distress tolerance as a predictor of early treatment dropout in a residential substance abuse treatment facility. *Journal of Abnormal Psychology, 114*, 729–734.
- Eifert, G. H., & Heffner, M. (2003). The effects of acceptance versus control contexts on avoidance of panic-related symptoms. *Journal of Behavior Therapy and Experimental Psychiatry, 34*, 293–312.
- Feldner, M. T., Zvolensky, M. J., Eifert, G. H., & Spira, A. P. (2003). Emotional avoidance: An experimental test of individual differences and response suppression using biological challenge. *Behavior Research and Therapy, 41*, 401–411.
- Flack, W. F., Litz, B. T., Hsieh, F. Y., Kaloupek, D. G., & Keane, T. M. (2000). Predictors of emotional numbing, revisited: A replication and extension. *Journal of Traumatic Stress, 13*, 611–618.
- Foa, E. B., Steketee, G., & Young, M. C. (1984). Agoraphobia: Phenomenological aspects, associated characteristics, and theoretical considerations. *Clinical Psychology Review, 4*, 431–457.
- Forsyth, J. P., Parker, J. D., & Finlay, C. G. (2003). Anxiety sensitivity, controllability, and experiential avoidance and their relation to drug of choice and addiction severity in a residential sample of substance-abusing veterans. *Addictive Behaviors, 28*, 851–870.
- Freud, S. (1914). Remembering, repeating, and working through. *Standard Edition, 12*, 145–156.
- Gold, D. B., & Wegner, D. M. (1995). Origins of ruminative thought: Trauma, incompleteness, non-disclosure and suppression. *Journal of Applied Social Psychology, 25*, 1245–1261.
- Gratz, K. L., & Roemer, L. (2004). Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure, and initial validation of the difficulties in emotion regulation scale. *Journal of Psychopathology & Behavioral Assessment, 26*, 41–54.
- Gross, J. (1989). Emotional expression in cancer onset and progression. *Social Science and Medicine, 28*, 1239–1248.
- Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes:

- Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology*, 85, 348–362.
- Gross, J. J., & Levenson, R. W. (1993). Emotional suppression: Physiology, self-report, and expressive behavior. *Journal of Personality and Social Psychology*, 64, 970–986.
- Hayes, S. C., Luoma, J. B., Bond, F. W., Masuda, A., & Lillis, J. (2006). Acceptance and commitment therapy: Model, processes and outcomes. *Behavior Research and Therapy*, 44, 1–25.
- Hayes, S. C., Masuda, A., Bissett, R., Luoma, J., & Guerrero, L. F. (2004). DBT, FAP, and ACT: How empirically oriented are the new behavior therapy technologies? *Behavior Therapy*, 35, 35–54.
- Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (1999). *Acceptance and commitment therapy: An experiential approach to behavior change*. New York: Guilford Press.
- Hayes, S. C., Strosahl, K. D., Wilson, K. G., Bissett, R. T., Pistorello, J., Taormino, D., et al. (2004). Measuring experiential avoidance: A preliminary test of a working model. *Psychological Record*, 54, 553–578.
- Hayes, S. C., & Wilson, K. G. (2003). Mindfulness: Method and process. *Journal of Consulting and Clinical Psychology*, 64(6), 1152–1168.
- Hayes, S. C., Wilson, K. G., Gifford, E. V., Follette, V. M., & Strosahl, K. (1996). Experiential avoidance and behavioral disorders: A functional dimensional approach to diagnosis and treatment. *Journal of Consulting and Clinical Psychology*, 64, 1152–1168.
- Higgins, A. B. (2000). *The dialectic of trauma: Trauma symptoms and resiliency in older women* (Doctoral dissertation, University of Nevada, 2000). *Dissertation Abstracts International*, 21, 1084.
- Karekla, M., Forsyth, J. P., & Kelly, M. M. (2004). Emotional avoidance and panicogenic responding to a biological challenge procedure. *Behavior Therapy*, 35, 725–746.
- Kashdan, T. B., Barrios, V., Forsyth, J. P., & Steger, M. F. (2006). Experiential avoidance as a generalized psychological vulnerability: Comparisons with coping and emotion regulation strategies. *Behaviour Research and Therapy*, 9, 1301–1320.
- Kelly, G. (1955). *The psychology of personal constructs*. New York: Norton.
- Lazarus, R. S. (1991). *Emotion and adaptation*. Oxford, UK: Oxford University Press.
- LeDoux, J. (1996). *The emotional brain*. New York: Touchstone.
- Levitt, J. T., Brown, T. A., Orsillo, S. M., & Barlow, D. H. (2004). The effects of acceptance versus suppression of emotion on subjective and psychophysiological response to carbon dioxide challenge in patients with panic disorder. *Behavior Therapy*, 35, 757–766.
- Marlatt, G. A., & Gordon, J. R. (1985). *Relapse prevention: Maintenance strategies in the treatment of addictive behaviors*. New York: Guilford Press.
- Marlatt, G. A., & Kristellar, J. L. (1999). Mindfulness and meditation. In W. R. Miller (Ed.), *Integrating spirituality into treatment* (pp. 67–84). Washington, DC: American Psychological Association.
- Marx, B. P., & Sloan, D. M. (2002). The role of emotion in the psychological functioning of adult survivors of childhood sexual abuse. *Behavior Therapy*, 33, 563–577.
- Marx, B. P., & Sloan, D. M. (2003). Peritraumatic dissociation and experiential avoidance as predictors of posttraumatic stress symptomatology. *Behavior Research and Therapy*, 43, 569–583.
- McCracken, L. M. (1998). Learning to live with pain: Acceptance of pain predicts adjustment in persons with chronic pain. *Pain*, 74, 21–27.
- Mowrer, O. H. (1947). On the dual nature of learning: A reinterpretation of “conditioning” and “problem solving.” *Harvard Educational Review*, 17, 102–148.
- Nisbett, R. E., & Wilson, T. D. (1977). Telling more than we can know: Verbal reports on mental processes. *Psychological Review*, 84, 231–259.
- Orcutt, H. K., Pickett, S., & Pope, E. (2005). Experiential avoidance and forgiveness as mediators in the relation between traumatic life events and PTSD symptoms. *Journal of Social and Clinical Psychology*, 24, 1003–1029.

- Paulhus, D. L. (1988). Self-deception: Where do we stand? In J. S. Lockard & D. L. Paulhus (Eds.), *Self-deception: An adaptive mechanism?* (pp. 252–255). Englewood Cliffs, NJ: Prentice-Hall.
- Penley, J. A., Tomaka, J., & Wiebe, J. S. (2002). The association of coping to physical and psychological health outcomes: A meta-analytic review. *Journal of Behavioral Medicine, 25*, 551–603.
- Plumb, J. C., Orsillo, S. M., & Luterek, J. (2004). A preliminary test of the role of experiential avoidance in post-event functioning. *Journal of Behavior Therapy, 35*, 245–257.
- Polusny, M. A., & Follette, V. M. (1995). Long-term correlates of child sexual abuse: Theory and review of the empirical literature. *Applied and Preventative Psychology, 4*, 143–166.
- Polusny, M. A., Rosenthal, M. Z., Aban, I., & Follette, V. M. (2004). Experiential avoidance as a mediator of the effects of adolescent sexual victimization on negative adult outcomes. *Violence and Victims, 19*, 109–120.
- Roemer, L., & Orsillo, S. M. (2002). Expanding our conceptualization of and treatment for generalized anxiety disorder: Integrating mindfulness/acceptance-based approaches with existing cognitive behavioral models. *Clinical Psychology Science and Practice, 9*, 54–68.
- Roemer, L., Salters, K., Raffa, S. D., & Orsillo, S. M. (2005). Fear and avoidance of internal experiences in GAD: Preliminary tests of a conceptual model. *Cognitive Therapy and Research, 29*, 71–88.
- Sloan, D. M. (2004). Emotion regulation in action: Emotional reactivity in experiential avoidance. *Behavior Research and Therapy, 42*, 1257–1270.
- Spira, A. P., Zvolensky, M. J., Eifert, G. H., & Feldner, M. T. (2004). Avoidance-oriented coping as a predictor of anxiety-based physical stress: A test using biological challenge. *Journal of Anxiety Disorders, 18*, 309–323.
- Stewart, S. H., Zvolensky, M. J., & Eifert, G. H. (2002). The relations of anxiety sensitivity, experiential avoidance, and alexithymic coping to young adults' motivations for drinking. *Behavior Modification, 26*, 274–296.
- Teasdale, J. D., Segal, Z. V., & Williams, M. G. (1995). How does cognitive therapy prevent depressive relapse and why should attentional control (mindfulness training) help? *Behavior Research and Therapy, 33*, 25–39.
- Tomarken, A. J., & Davidson, R. J. (1994). Frontal brain activation in repressors and nonrepressors. *Journal of Abnormal Psychology, 103*, 339–349.
- Tull, M. T., Gratz, K. L., Salters, K., & Roemer, L. (2004). The role of experiential avoidance in posttraumatic stress symptoms and symptoms of depression, anxiety, and somatization. *The Journal of Nervous and Mental Disease, 192*, 754–761.
- Tull, M. T., & Roemer, L. (2003). Alternative explanations of emotional numbing of posttraumatic stress disorder: An examination of hyperarousal and experiential avoidance. *Journal of Psychopathology and Behavioral Assessment, 25*, 147–154.
- Wegner, D. M., Schneider, D. J., Carter, S. R., & White, T. L. (1987). Paradoxical effects of thought suppression. *Journal of Personality and Social Psychology, 53*, 5–13.
- Wegner, D. M., Schneider, D. J., Knutson, B., & McMahon, S. R. (1991). Polluting the stream of consciousness: The effects of thought suppression on the mind's environment. *Cognitive Therapy and Research, 15*, 141–151.
- Wegner, D. M., & Zanakos, S. (1994). Chronic thought suppression. *Journal of Personality, 62*, 615–640.
- Wenzlaff, R. M., & Wegner, D. M. (2000). Thought suppression. *Annual Review of Psychology, 51*, 59–91.
- Westrup, D. (1999). *Experiential avoidance and alcohol dependence relapse* (Doctoral Dissertation, West Virginia University, 1999). *Dissertation Abstracts International, 62*, 568.
- Zettle, R. D. (2003). Acceptance and commitment therapy (ACT) vs. systematic desensitization in treatment of mathematics anxiety. *The Psychological Record, 53*, 197–215.
- Zvolensky, M. J., Feldner, M. T., Leen-Feldner, E., & Yartz, A. R. (2005). Exploring basic processes underlying acceptance and mindfulness. In S. Orsillo & L. Roemer (Eds.), *Acceptance and mindfulness-based approaches to anxiety: Conceptualization and treatment* (pp. 325–359). New York: Springer.