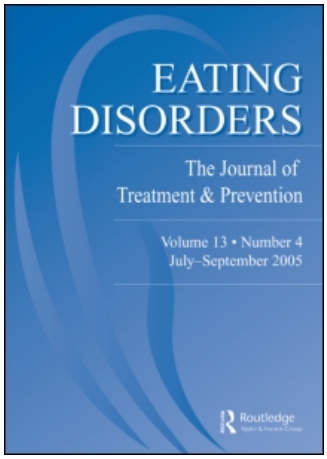

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Assessment of Trauma Symptoms in Eating-Disordered Populations

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Research suggests that individuals with eating disorders (EDs) are relatively likely to have been abused or neglected as children, or to have been victimized in adolescence or adulthood. These experiences, in turn, are often associated with a range of psychological symptoms, as well as, in some cases, a more severe or complex ED presentation. In this article, we review both generic and more trauma-specific psychological tests that can be used to (a) identify clinically relevant trauma histories in the ED patient and (b) uncover trauma-relevant symptoms that may complicate or intensify a given instance of ED. We also discuss the clinical implications of a detailed trauma assessment, including its usefulness in guiding treatment for ED-trauma patients.

This article provides an overview of the relationship between trauma and eating disorders (EDs), symptomatology often comorbid with disordered eating, and assessment measures relevant to the evaluation of trauma-related symptoms in ED populations. We suggest that effective treatment of this population can be aided by the careful use and interpretation of selected trauma-specific tests, because a significant proportion of eating disturbance is associated with a history of trauma exposure.

THE RELATIONSHIP BETWEEN TRAUMA AND EDs

A review of the literature indicates that individuals with EDs are more likely than others to have a history of trauma and, conversely, those with trauma

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histories are more likely to report disordered eating patterns (see reviews by Gustafson & Sarwer, 2004; Mantero & Crippa, 2002; Smolak & Murnen, 2002). Childhood sexual abuse is especially implicated (e.g., Ackard & Neumark-Sztainer, 2003; Wonderlich, Crosby, Mitchell, Thompson, et al., 2001) as well as physical maltreatment (e.g., Neumark-Sztainer, Story, Hannan, Beuhring, & Resnick, 2000; Williamson, Thompson, Anda, Dietz, & Felitti, 2002). Other traumas are also linked to EDs, including adult sexual victimization (e.g., Dansky, Brewerton, Kilpatrick, & O'Neil, 1997; Faravelli, Giugni, Salvatori, & Ricca, 2004), prisoner-of-war experiences (e.g., Polivy, Zeitlin, Herman, & Beal, 1994), exposure to violent environments (e.g., Schmidt, Tiller, & Treasure, 1993), and, in one case study, torture (Aksaray, Kaptanoglu, & Özaltin, 2000). The most commonly cited outcome of such traumatic events is bulimic (binge-purge) behaviors (Ackard, Neumark-Sztainer, Hannan, French, & Story, 2001; Gustafson et al., 2006), although relationships to obesity and dietary restriction have also been reported (Gustafson & Sarwer, 2004; Williamson et al., 2002; Wonderlich, Crosby, Mitchell, Roberts, et al., 2000).

Despite the above findings, at least one study has found the rate of sexual abuse among those with ED to be approximately that of the general population (Conners & Morse, 1993). In addition, studies indicate that EDs are not inevitably associated with childhood sexual or physical abuse. Thus, trauma is likely to be a risk factor for the development of some instances of ED, but other variables (such as general family environment, quality of the parent-child attachment, social expectations regarding physical attractiveness, sex-role socialization, and non-trauma-related emotional distress) are undoubtedly also important etiological and/or mediating variables (Polivy & Herman, 2002; Smolak, Levine, & Streigel-Moore, 1996).

SYMPTOMATOLOGY FOUND IN ED POPULATIONS WITH TRAUMA HISTORIES

To the extent that trauma is involved in the development of at least some ED presentations, the potentially mediating role of trauma symptoms becomes important. Studies in this area have generally focused on sequelae of childhood sexual or physical abuse, since these appear to be the most common traumatic experiences among individuals with ED. In ED populations, child abuse (especially sexual abuse) is associated with greater anxiety and depression (Carter, Bewell, Blackmore, & Woodside, 2006; Fullerton, Wonderlich, & Gosnell, 1995), interpersonal problems (Carter et al., 2006), somatization (Gustafson & Sarwer, 2004), alexithymia (Hund & Espelage, 2006), suicidality (Fullerton, Wonderlich & Gosnell, 1995), obsessive and/or compulsive symptoms (Carter et al., 2006; Lockwood, Lawson, & Waller, 2004), substance abuse (Gustafson & Sarwer, 2004; Wonderlich

et al., 2001), self-injurious behaviors (Favaro & Sontonastaso, 1999; Paul, Schroeter, Dahme, & Nutzinger 2002), impulsivity (Wonderlich et al., 2001), low self-esteem (Carter et al., 2006; Harned & Fitzgerald, 2002), dissociation (Armsworth, Stronck, & Carlson,1999; Brown, Russell, Thornton, & Dunn, 1999), and posttraumatic stress (Kaye, Bulik, Thornton, Barbarich, & Masters, 2004; Mantero & Crippa, 2002).

The fact that childhood maltreatment is associated with a variety of symptoms among eating disordered individuals may or may not pertain to the etiology of EDs. Such abuse-related responses may (a) be relatively independent of a co-existent ED, (b) be non-etiologic, but nevertheless intensify or complicate ED symptoms, or (c) directly underlie the development of an ED. In the first two cases, the clinician should nevertheless monitor—and ideally treat—comorbidities associated with the ED, since they may not only increase the severity or complexity of ED symptoms but also may be a source of additional distress and decreased psychosocial functioning. In the third case, to the extent that abuse-related symptoms specifically result in an ED, reducing trauma effects may be an important component of ED treatment.

Complex ED Presentations

When childhood trauma is relevant to an ED, it is not uncommon to find a more complex clinical presentation than might otherwise be the case. As noted earlier, the patient may report disordered eating in the context of dysphoria, distorted cognitions, self-injurious behavior, dissociation, affect dysregulation, and/or posttraumatic stress. Symptoms of this breadth and type generally correspond to what others have called *complex PTSD* (Herman, 1992) or *Disorders of Extreme Stress, Not Otherwise Specified* (DESNOS; van der Kolk, Roth, Pelcovitz, Sunday, & Spinazzola, 2005). This symptom pattern tends to arise in the context of early, prolonged, and developmentally disruptive traumatic events (especially child abuse and neglect), and is associated with both direct trauma effects and coping responses to trauma-related distress (Briere & Spinazzola, 2005).

Direct effects of abuse might include low self-esteem, shame, and a negatively distorted body image, leading to needs to be good, thin, perfect, and pleasing to others—all of which are associated with food restriction in some ED patients (Cassin & von Ranson, 2005; Garner & Magana, 2006). Coping responses to abuse, sometimes called *tension reduction behaviors*, on the other hand, generally arise when an individual's internal capacities to regulate trauma-related affects are overwhelmed, resulting in the need to resort to external activities that distract, sooth, numb, or produce distress-incompatible states (Briere & Scott, 2006). In this context, the ED pattern most related to childhood trauma—bulimia—may

serve as a way to down-regulate abuse-related distress. For example, food binging may distract the individual from painful cognitions and feelings and may produce positive (distress-incompatible) sensations associated with eating or filling oneself. Purging may reduce the guilt, shame, and self-criticism associated with binging as well as further distract the individual from abuse-related dysphoria. Such adaptations are inevitably temporary, however, requiring additional binge-purge cycles, which reinforce the disorder.

ASSESSING TRAUMA-RELATED ISSUES

Given the relationship between trauma, trauma-related symptoms, and some instances of ED, psychological assessment is typically indicated to identify (or rule out) the role of adverse experiences in eating disordered patients. In addition to using measures that directly evaluate eating disturbance (e.g., the Eating Disorder Inventory–3 [EDI-3; Garner, 2004]), it is recommended that the clinician determine whether the ED patient has a history of childhood and/or adult trauma exposure and whether he or she is suffering from significant posttraumatic disturbance. In the remainder of this paper, we describe the most common trauma-related psychological tests available to the clinician and make suggestions for an optimal test battery for assessing traumatized ED patients.

Evaluating Trauma Exposure

There are several inventories available to the clinician that assess for trauma exposure. The best of these cover the general range of traumatic events potentially experienced by a patient, using descriptive phrases and terminology that avoid psychologically loaded words such as “rape” or “abuse.” These include the Potential Stressful Events Interview (PSEI; Falsetti, Resnick, Kilpatrick, & Freedy, 1994) and the Stressful Life Events Screening Questionnaire (SLESQ; Goodman, Corcoran, Turner, Yuan, & Green, 1998). However, the research focus and length of these measures sometimes preclude their use in everyday clinical practice. A shorter, more clinically focused trauma-exposure measure is the Initial Trauma Review-3 (Briere & Scott, 2006), which can be verbally administered and provides greater or lesser detail as needed. Another approach is to use the trauma specification section of one of two standardized post-traumatic stress disorder (PTSD) instruments (the Posttraumatic Stress Disorder Scale [PDS; Foa, 1995] or the Detailed Assessment of Posttraumatic Stress [DAPS; Briere, 2001]), as described below. These latter instruments have the advantage of allowing the evaluation of trauma exposure and trauma symptoms at the same point in time.

Evaluating Trauma-Related Symptomatology

When assessing potential trauma effects in ED clients, the practitioner may employ *generic* measures (i.e., those that evaluate general psychological disturbance, such as depression or anxiety) and *trauma-specific* tests (e.g., those tapping the symptoms of PTSD or dissociation). Although the clinician might be tempted to restrict himself or herself to trauma-specific instruments alone, symptoms associated with trauma exposure are not limited to classic PTSD or dissociation. For example, a patient with bulimic symptoms might have a history of childhood sexual abuse with the associated symptoms of posttraumatic stress, but she might also present with anxiety, depression, obsessional thinking, interpersonal problems, or even evidence of borderline personality disorder—all of which may relate to her trauma history. If the clinician focuses only on those symptoms obviously posttraumatic in nature, he or she runs the risk of overlooking other outcomes that are potentially integral to both the patient's ED and the childhood history. On the other hand, the clinician who uses only generic measures (for example, the Minnesota Multiphasic Personality Inventory-2 [MMPI-2; Butcher, Dahlstrom, Graham, Tellegen, & Kaemmer, 1989]) may be led to a treatment formulation that overlooks significant posttraumatic disturbance. For this reason, we strongly suggest the use of a test battery that includes both types of assessment instruments.

Generic Tests

There are a large number of psychological tests that can be used to evaluate generic symptomatology in ED populations. Perhaps the most often used are the MMPI-2, the Millon Clinical Multiaxial Inventory-III (MCMI-III) (Millon, 1994), and the Psychological Assessment Inventory (PAI) (Morey, 1991). Each of these measures has validity scales and evaluates a wide range of symptomatology, including anxiety, depression, obsessive-compulsive symptoms, personality disturbance, and other potentially trauma-related outcomes. All also have PTSD scales, although their specificity and sensitivity is not always optimal (Carlson, 1997). Although the EDI-3 is not technically a generic test, its subscales can provide data on cognitive and emotional problems that, while intrinsic to eating disturbance, may also be trauma-related. Other scales (for example, the Trauma and Attachment Belief Scale [TABS; Pearlman, 2003]; the Inventory of Altered Self-Capacities [IASC; Briere, 2000]; and the Bell Object Relations and Reality Testing Inventory [BORRTI; Bell, 1995]) evaluate more psychodynamic constructs, such as affect regulation problems, impulsivity, tension reduction behaviors, and interpersonal/attachment disturbance, that, as noted earlier, have been associated with early trauma exposure in ED populations. Finally, certain generic issues, such as suicidality and substance abuse, can be evaluated

not only with several of the above measures, but also with at least one trauma-focused measure (the DAPS).

Proper use of one or more of the above instruments allows the clinician to assess less trauma-specific symptomatology that, nevertheless, frequently mediates between trauma exposure and more complex ED presentations. It also supports the evaluation of disturbance that, although potentially unrelated to ED or trauma, is of sufficient importance to warrant clinical attention.

Trauma-Specific Tests

In contrast to generic measures, trauma-specific tests evaluate symptomatology that is more directly relevant to trauma exposure. This symptom domain may be relatively circumscribed. Of all psychological outcomes, the *Diagnostic and Statistical Manual of Mental Disorders, 4th edition* (DSM-IV) (American Psychiatric Association, 1994) identifies trauma as an etiology in only three diagnostic areas: posttraumatic stress (PTSD and acute stress disorder [ASD]), dissociation, and brief psychotic disorder with marked stressors (BPDMS). Of these, brief psychotic disorder is less relevant to this discussion, since psychotic symptoms are rarely comorbid with EDs.

Posttraumatic Stress

Measures of posttraumatic stress ideally evaluate the three components of PTSD and ASD: *reliving symptoms* (e.g., flashbacks, nightmares, intrusive memories), *avoidance symptoms* (e.g., avoiding people, places, and situations that remind the patient of the trauma; psychological numbing and decreased emotional responsiveness), and *hyperarousal symptoms* (e.g. heightened startle responses, hyperalertness, sleep disturbance). These symptoms may be measured continuously and/or may yield diagnoses of PTSD and ASD. According to a recent review (Elhai, Gray, Kashdan, & Franklin, 2005), the most commonly used standardized tests of posttraumatic stress are the Trauma Symptom Inventory (TSI) (Briere, 1995), the Posttraumatic Stress Diagnostic Scale (PDS) (Foa, 1995), and the Detailed Assessment of Posttraumatic Stress (DAPS) (Briere, 2001).

The broadest of these measures is the 100-item TSI, which taps the amount of posttraumatic and trauma-related symptomatology experienced by an individual, without reference to any specific traumatic event. Each symptom item is rated according to its frequency over the prior six months. The clinical scales of the TSI evaluate the three components of posttraumatic stress, but also other symptom outcomes seen in EDs and in those with more complicated posttraumatic outcomes, including dissociation, dysfunctional sexual behavior, identity disturbance, and tension reduction behavior. The TSI also has validity scales to assess whether the patient is

under- or over-reporting distress. It does not, however, yield a DSM-IV diagnosis.

The 49-item PDS evaluates not only trauma exposure, as noted earlier, but also the seventeen symptoms corresponding to DSM-IV PTSD criteria for reexperiencing, avoidance, and hyperarousal. Although the PDS yields data on the patient's relative level of posttraumatic stress, its primary use is to determine PTSD status. The relative accuracy and brevity of this measure makes it the most popular of available PTSD diagnostic tests.

The 104-item DAPS provides information on the patient's history of exposure to traumatic events, as well as scales that tap (a) his or her immediately posttraumatic cognitions and emotional reactions, (b) posttraumatic stress symptoms, and (c) level of disability relevant to a specific trauma. Like the PDS, the DAPS provides a potential DSM-IV diagnosis of PTSD; in addition, it provides a potential diagnosis of ASD. It has two validity scales and three scales that measure common PTSD and ED comorbidities (dissociation, substance abuse, and suicidality).

Dissociation

Dissociation refers to the tendency of some traumatized individuals to experience alterations in awareness, such as depersonalization, derealization, disengagement (e.g., "spacing out"), and trauma-related amnesia. Sometimes present in those with ED (e.g., Brown et al., 1999), high levels of dissociation may result not only in functional disability, but in a decreased response to psychological treatment (e.g., Michelson, June, Vives, Testa, & Marchione, 1998). There are currently two dissociation measures commonly used in clinical practice, as well as two dissociation subscales that can be found in other measures (the *Dissociation* scale of the TSI and the *Trauma-Specific Dissociation* scale of the DAPS). The most popular free-standing measure is the 28-item Dissociative Experiences Scale (DES) (Bernstein & Putnam, 1986), which has good psychometric characteristics. However, this measure is not normed on the general population, and thus specific scores are somewhat difficult to interpret clinically (Armstrong, 1995). Also, like the TSI and DAPS dissociation subscales, the DES yields a single summary score, despite recent research that suggests that dissociation is a multi-dimensional construct (e.g., Briere, Weathers, & Runtz, 2005).

The other freestanding test of dissociative responses is the 30-item Multiscale Dissociation Inventory (MDI) (Briere, 2002). The MDI contains six scales (*Disengagement, Depersonalization, Derealization, Memory Disturbance, Emotional Constriction*, and *Identity Dissociation*), allowing the clinician to evaluate the full range of dissociative responses. Unlike the DES, the MDI is fully standardized and normed.

Recommended Trauma Battery for Eating Disordered Populations

Given the range of trauma-relevant instruments and their potential redundancy, the clinician must choose which are most appropriate for which ED client. In general, we recommend the following:

- *One measure of ED symptomatology*. We recommend the EDI-3.
- *One measure of trauma exposure*. For those preferring an interview, the ITR-3 may be most helpful. If a psychometric test is desired, the trauma specification section of the PDS or the DAPS is recommended. Researchers, or those requiring a more detailed trauma history, may choose the SLESQ or, for the most extensive review, the PSEI.
- *One broadband test of generic symptoms*. Typically, this would involve the PAI, MMPI-2, or MCMI-III. In many cases, the PAI is especially useful, given its psychometric superiority and the wide range of disorders it evaluates. The MMPI-2, on the other hand, is most familiar to clinicians, and has the strongest interpretive database, whereas the MCMI-III is especially focused on personality disorders.
- *One broadband test of trauma-related symptoms*. The only standardized, normed test of this type is the TSI. This measure may be particularly helpful when the ED client presents with a range of posttraumatic symptoms and comorbidities (i.e., in instances of complex posttraumatic disturbance).
- *If necessary, a diagnostic test for PTSD*. The PDS is easily and quickly administered, whereas the DAPS requires more time but covers more detail and symptomatology. Both tests generate PTSD diagnoses that agree well with the gold standard clinical interview (the Clinician-Administered PTSD Scale [CAPS; Blake et al., 1995]), but require far less time and training.
- *Other tests as indicated, based on the client's specific presentation*. For those with evidence of personality-level disturbance, the IASC or BORRTI may be useful, whereas the suicidal or substance abusing client might benefit from assessment with the DAPS. The patient with distorted cognitions about himself/herself and others might be given the TABS. Additional tests, not covered here, can also provide important information on other potentially trauma-related issues (see Briere, 2004; Carlson, 1997; and Wilson & Keane, 2004 for detailed reviews).

CONCLUSIONS

Because trauma exposure and trauma symptoms are relatively common among ED patients, psychological assessment of trauma issues is often indicated when dysfunctional eating is part of the clinical presentation. As

described in this article, there are a variety of tests that may be helpful in the assessment process. The final choice of instruments will vary from patient to patient, as a function of his or her specific history, clinical needs, and symptomatology.

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