Journal of Anxiety Disorders 24 (2010) 447–451

Contents lists available at ScienceDirect

Journal of Anxiety Disorders

Evaluation of the Atypical Response scale of the Trauma Symptom Inventory-2 in detecting simulated posttraumatic stress disorder

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ARTICLE INFO

Article history:
Received 27 July 2009
Received in revised form 1 February 2010
Accepted 19 February 2010

Keywords:
Malingering
Symptom overreporting
Posttraumatic stress disorder
Trauma Symptom Inventory

ABSTRACT

This investigation evaluated the Atypical Response (ATR) scale of the Trauma Symptom Inventory – 2nd edition (TSI-2) in terms of its ability to distinguish genuine symptoms of posttraumatic stress disorder (PTSD) from simulated PTSD. Seventy-five undergraduate students were trained to simulate PTSD and were given monetary incentives to do so. Their responses on the PTSD Checklist (PCL), TSI-2 ATR, and Personality Assessment Inventory (PAI) validity scales were compared to responses of 49 undergraduate students with genuine symptoms of PTSD instructed to respond honestly on testing. Results indicate that the revised version of the ATR is superior to the original version in detecting malingered PTSD. Discriminant Function Analyses revealed correct classification of 75% of genuinely distressed individuals and 74% of PTSD simulators.

The lifetime prevalence of posttraumatic stress disorder (PTSD) in the United States is estimated to be 7–14% (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995; Resnick, Kilpatrick, Dansky, Saunders, & Best, 1993). Yet, it is not an inevitable outcome for trauma-exposed individuals. Although slightly over half of the United States population reports at least one event that potentially could elicit PTSD, less than 10% go on to develop the disorder (Kessler et al., 1995). The symptoms of PTSD, which include nightmares and flashbacks, effortful avoidance and emotional numbing, and autonomic hyperarousal (American Psychiatric Association, 2000), can result in significant ongoing distress and psychosocial dysfunction, and represents a significant mental health hazard for combat veterans, victims of interpersonal violence, and those exposed to disasters (Briere, 2004).

Although PTSD is a serious psychological outcome, symptoms of PTSD may be feigned, for example, for financial gain (e.g., to obtain disability payments, personal injury litigation settlements, etc.) or to reduce criminal charges (Resnick, West, & Payne, 2008). Some studies estimate that PTSD malingering (including intentional exaggeration of bona fide symptoms) may occur in as much as 20–30% of personal injury litigation contexts (Lees-Haley, 1997) and in 20% of compensation-seeking combat veterans (Frueh, Hamner, Cahill, Gold, & Hamlin, 2001), although such determinations are often difficult to make with certainty and prevalence rates vary from study to study (Marshall & Bagby, 2006; Rogers, 1997). Although good data are lacking with respect to the economic impact of malingered PTSD, the estimated prevalence of this variant of feigned psychiatric distress suggests that associated costs to society may be significant. Moreover, mental health resource and personnel limitations in certain clinical settings (e.g., VA Medical Centers) increase the importance of differentiating genuine from feigned or exaggerated posttraumatic distress.

At present, no "gold standard" assessment strategy for detecting malingered PTSD exists. Several clinical interviews and questionnaires have been designed to distinguish genuine psychiatric distress from feigned distress; yet these measures (e.g., the Personality Assessment Inventory; PAI) include scales designed to detect nonspecific exaggerated distress as opposed to malingered PTSD specifically. Although many scales have been shown to successfully differentiate genuine and feigned PTSD cases, none is definitive and most have difficulty differentiating malingerers from those experiencing extreme, authentic distress (for an excellent review of PTSD malingering detection approaches and relevant research, see Taylor, Frueh, & Asmundson, 2007).

One of the most commonly used instruments that assess long-term effects of trauma (including but not limited to posttraumatic stress) is the Trauma Symptom Inventory (TSI; Briere, 1995). In addition to clinical scales, it includes an Atypical Response (ATR) scale, designed to detect symptom overreporting. In a previous study, the first two of the current authors reported that although PTSD simulators scored significantly higher than true PTSD patients on the ATR, overall classification rates were not particularly impressive (Elhai et al., 2005), corroborating other similar findings (Rosen et al., 2006). This result was not surprising in that the ATR was

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doi:10.1016/j.janxdis.2010.02.011

not designed to detect PTSD malingering specifically, and symptom exaggeration measures generally tend to perform more poorly when used to detect the malingering of specific disorders (e.g., PTSD; Taylor et al., 2007). Rather than focusing solely on malingering, the original ATR included items designed to tap any one of a number of reasons why the TSI might not be valid, including presence of psychosis, random responding, tendency for a variety of reasons to endorse unlikely symptoms, and so forth (Briere, 1995).

Although the TSI ATR scale was not intended to evaluate malingering, per se, this measure's frequent use in forensic contexts, and the requirement that malingering be ruled out when diagnosing PTSD (American Psychiatric Association, 2000), suggested the need to revisit the TSI's approach to assessing symptom misrepresentation. In response, the second edition of the Trauma Symptom Inventory (TSI-2; Briere, 2010) includes a substantively revised ATR scale. Instead of assessing willingness to endorse bizarre or extreme symptomatology (as in the first ATR), the new ATR scale includes items that seeming index posttraumatic stress, but, in fact, are unlikely to be endorsed by "true" posttraumatic stress sufferers – either by virtue of the extremity of the response or because the item reflects how someone without posttraumatic stress might misinterpret PTSD symptoms. A typical TSI-2 ATR item, for example, is "Having flashbacks many times a day, every day, for several weeks at a time."

Because the TSI-2 is a new, as yet unpublished psychological test, information on its psychometric characteristics is incomplete. Specifically, there are no published data on the new ATR scale regarding its ability to distinguish genuine from feigned posttraumatic stress. As a first test of this scale, undergraduate psychology students in the current study were screened for exposure to traumatic events and PTSD symptoms. Those deemed to be largely free of posttraumatic stress symptoms were invited to participate in the next phase of the study which required them to learn about PTSD and attempt to feign the disorder when completing questionnaires of psychiatric symptoms for monetary incentives. Their responses were compared to the genuine responses of students who reported significant symptoms of posttraumatic distress during the screening phase. It was hypothesized that the revised version of the TSI-2 ATR would successfully differentiate genuine from feigned PTSD symptoms and would compare favorably to other established measures of malingering detection.

1. Method

1.1. Participants

PTSD simulation group. A sample of 75 participants (47 women, 28 men) enrolled in introductory psychology courses served as subjects for the PTSD simulation condition. These students were at least age 18 and attending college at one of the two medium-sized universities in the Midwestern and Western United States. Participants were recruited in groups from their departmental research pool in exchange for research credit. Participants qualified for, and were invited to participate in this study as simulators, if they endorsed no trauma exposure history using the Life Events Checklist (LEC; Gray, Litz, Hsu, & Lombardo, 2004) and/or no symptoms of PTSD on the PTSD Checklist (PCL; Weathers, Litz, Herman, Huska, & Keane, 1993). Demographic characteristics of the simulator group were as follows: age ranged from 18 to 40 years (M = 19.5, SD = 2.84), educational level ranged from 12 to 16 years, with an average of 12.64 (SD = 1.19), modal race was Caucasian/white (92.6%), and the majority was unemployed (62%) or working part-time (32%).

Genuinely distressed group. The genuine posttraumatic distress group was similarly recruited from introductory psychology courses, based on their responses on the LEC and PCL. Participants were included in this group if they both (a) endorsed a PTSD qualifying traumatic experience on the LEC, per the Diagnostic and Statistical Manual of Mental Disorders – 4th edition – Text Revision's (DSM-IV-TR; American Psychiatric Association, 2000) PTSD criteria, and (b) scored above the empirically derived PTSD diagnostic cut-score of 44 on the PCL (Blanchard, Jones-Alexander, Buckley, & Forneris, 1996). Demographics, of the 49 participants who met these criteria were as follows: age ranged from 18 to 31 years (M = 20.3, SD = 2.68), educational level ranged from 12 to 17 years (M = 20.3, SD = 2.68), modal race was Caucasian/white (88%), and the majority was unemployed (62%) or working part-time (32%).

1.2. Measures

The Trauma Symptom Inventory 2nd edition (*TSI*-2). The TSI-2 is one of the newest psychological instruments measuring symptoms of PTSD and other sequelae of traumatic event exposure. The original TSI has been used extensively in research and clinical contexts and demonstrates strong psychometric properties. Reliability is excellent (alpha values range from .84 to .87 across studies) as is predictive validity – victims of interpersonal trauma score higher than control subjects on all scales, and 91% of patients diagnosed with PTSD are correctly classified using the TSI (Briere, Elliott, Harris, & Cotman, 1995; Edens, Otto, & Dwyer, 1998). The original TSI consists of 10 clinical scales and 3 validity scales, including the ATR. The TSI-2 is scheduled for release in late 2010 and, at the time of the present investigation, a few clinical scales were still undergoing validation and refinement. The 8-item TSI-2 ATR scale was finalized and available for validation research and was therefore used in the present study. The clinical TSI-2 scales most closely representing DSM-IV-TR (American Psychiatric Association, 2000) PTSD symptom criteria – Intrusive Experiences (IE), Defensive Avoidance (DA), and Anxious Arousal (AA) scales – were also used in the present investigation in order to assess the degree to which PTSD simulators approximate symptoms reported by those experiencing genuine posttraumatic stress symptoms.

The Life Events Checklist (*LEC*). The LEC (Blake et al., 1995) is a self-report survey assessing prior exposure to 16 potentially traumatic events. Participants are asked to indicate whether a given event happened to them, if they witnessed it occurring to others, or learned about it occurring to someone close to them. It exhibits good temporal stability, converges strongly with other measures of trauma exposure and is predictive of PTSD symptomatology in college students and combat veterans (Gray et al., 2004).

The PTSD Checklist (*PCL*). The PCL is a 17-item, Likert-type measure of DSM-IV PTSD symptoms. It exhibits adequate internal consistency and temporal stability (Blanchard et al., 1996) and correlates strongly with other validated measures of PTSD among college students (Ruggiero, Del Ben, Scotti, & Rabalais, 2003). For the present investigation, a cut-score of 44 (Blanchard et al., 1996) was used as the qualifying criterion for the PTSD group.

The Personality Assessment Inventory (*PAI*) *validity scales*. The PAI (Morey, 1991) is a self-report measure for assessing personality, psychopathology and treatment-related issues. For the present study, the 46 items that collectively make up the 4 primary validity scales were extracted from the instrument and administered. The *Negative Impression Management* (*NIM*) scale is comprised of 9 items reflecting bizarre and rarely endorsed symptoms, and is designed to assess a tendency to portray oneself in a negative light (e.g., malingering). It has been shown to distinguish malingerers and non-malingerers in a number of studies (e.g., Morey & Lanier, 1998). The *Positive Impression Management* (*PIM*) is a 9-item scale that detects efforts to present a favorable impression by denying common faults and foibles. It has been shown to successfully discriminate positive dissimulators from honest responders (Fals-Stewart, 1996). The 8-item *Infrequency* (*INF*) scale consists of items