Posttraumatic Stress Symptom Profiles in Individuals Exposed to Criterion A Traumas versus Non-Criterion A Stressors

by

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Abstract

Variable methods for assessing trauma exposure and mixed findings on the development of posttraumatic stress disorder (PTSD) following traumatic and non-traumatic events have fueled debate regarding the necessity of the traumatic stressor criterion (Criterion A) for a PTSD diagnosis. The current study replicated and expanded previous research by examining the impact of an increasingly rigorous Criterion A rating methodology and several participant characteristics on endorsement of PTSD symptoms in a sample of undergraduate students (N = 1872) who completed a written trauma narrative and self-report measures of trauma exposure, PTSD, and other psychopathology. Profiles of self-rated symptoms of PTSD and co-morbid psychopathology between Criterion A and Non-Criterion A groups were examined with profile analysis (a type of multivariate ANOVA) following the identification of Criterion A groups through three methods: self-report checklist, trauma narrative review, and trauma narrative review with confidence ratings. Possible reasons for endorsement of PTSD symptoms by non-traumatized participants were also explored using profile analysis, including negative impression management, presence of comorbid psychopathology, and exposure to a high magnitude stressor that just missed the definition of a *DSM-5* Criterion A trauma. Results indicated that Criterion A groups generally endorsed higher levels of PTSD symptoms than Non-Criterion A groups, especially for the most rigorous Criterion A coding methodology. This supports the Criterion A requirement for a PTSD diagnosis, and highlights the benefits of using narratives and confidence ratings when assessing Criterion A. Further, group profiles departed from parallelism, indicating larger differences between symptoms of reexperiencing, avoidance, and arousal and reactivity compared to negative alterations in cognitions and mood symptoms. The High Magnitude Stressors group responded more similarly to the Criterion A group across self-rated measures of

PTSD symptoms and psychopathology. Non-Criterion A participants who endorsed higher levels of PTSD symptoms also endorsed higher depression and anxiety compared to those who endorsed lower levels of PTSD symptoms. Lastly, as part of an exploratory analysis, the removal of sexually violent events from the analysis attenuated the difference between Criterion A and Non-Criterion A groups. The current findings have implications for the accurate identification of trauma exposure, definition of *DSM-5* Criterion A, potential differential trauma-relatedness of PTSD symptoms, and the impact of event type and co-occurring psychopathology on the assessment of PTSD.

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Table of Contents

List of Tables

List of Figures

Posttraumatic Stress Symptom Profiles in Individuals Exposed to Criterion A Traumas versus Non-Criterion A Stressors

Since posttraumatic stress disorder (PTSD) was formally recognized as a diagnostic category in the *Diagnostic and Statistical Manual of Mental Disorders, Third Edition* (*DSM-III;* American Psychiatric Association [APA], 1980), Criterion A—the foundational stressor or index event criterion—has been the focus of considerable controversy. PTSD was novel in requiring exposure to an environmental event as a diagnostic criterion. Criterion A has subsequently been the focus of considerable debate regarding the definition of trauma, the boundaries and threshold for a traumatic event, and even the overall necessity and utility of Criterion A (Weathers & Keane, 2007).

The Criterion A Debate

The definition of a traumatic event in Criterion A has evolved considerably since the original version in *DSM-III* (see Weathers & Keane, 2007 for a full discussion of Criterion A through the fourth edition of the *DSM*). The *DSM-IV* (APA, 1994) version of Criterion A was a two-part definition requiring that the individual (a) experienced a trauma and (b) responded to the trauma with intense fear, helplessness, or horror. Further, *DSM-IV* allowed the traumatic event to be experienced directly, witnessed, or experienced indirectly through learning about the event happening to a loved one. Critics of the *DSM-IV* definition argued that it had departed too substantially from the original conceptualization of a traumatic event, and that the language regarding indirect exposure was somewhat vague and the main source of excessive broadening (e.g., McNally, 2003; Rosen, 2004).

With the release of *DSM-5* (APA, 2013), notable changes were made to Criterion A, with a primary goal of narrowing the definition. Criterion A2 was removed, and the language was updated to clarify ambiguity in the previous definition (Weathers et al., 2014). The current

definition of Criterion A is “exposure to actual or threatened death, serious injury, or sexual violence in one (or more) of the following ways: (a) directly experiencing the traumatic event(s), (b) witnessing, in person, the event(s) as it occurred to others, (c) learning that the traumatic event(s) occurred to a close family member or close friend, (d) experiencing repeated or extreme exposure to aversive details of the traumatic event(s)” (APA, 2013, p. 271).

Despite all the attention to the definition of a traumatic event and the role of Criterion A in the diagnosis of PTSD, the debate concerning the nature and necessity of Criterion A and the distinction between traumatic events and other stressful events continues. The key questions in the debate are whether or not Criterion A should be included as a diagnostic criterion for PTSD, and if so, how narrowly or broadly it should be defined. Given that the lifetime risk of PTSD is currently estimated at 8.7% (APA, 2012) and lifetime prevalence of PTSD is 5.6% despite 69.7% of individuals experiencing traumas (Koenen et al., 2017), it is clear that trauma exposure is not sufficient for developing PTSD. However, the Criterion A debate has focused more on the question of whether trauma exposure is even necessary for developing PTSD. The original rationale for Criterion A was that traumatic stressors could be differentiated in severity from non-traumatic stressors, and that PTSD was uniquely caused by traumatic stressors. However, as Weathers and Keane (2007) noted, it has proven difficult to develop a definition for Criterion A that would clearly distinguish traumatic from non-traumatic stressors, and many events fall in a gray area. This ambiguity has fueled arguments for and against the inclusion of certain types of stressors in Criterion A, as well as arguments for eliminating the Criterion A requirement altogether.

Conceptual discussion and empirical investigations regarding PTSD diagnostic status and symptom severity between individuals with and without Criterion A accelerated with the

publication of *DSM-IV*, when Criterion A was altered to include the "confronted with" specifier to explicitly permit indirect exposures to traumatic events to qualify. In a study of the impact of changes in PTSD criteria from *DSM-III-R* to *DSM-IV*, Breslau and Kessler (2001) found that the revised Criterion A led to a considerable increase (59.2%) in the number of events considered traumatic.

Consistent with Breslau and Kessler's (2001) findings, McNally (2003) coined the term "bracket creep" to refer to the broadening of the definition of Criterion A. He argued that the widening of the definition of Criterion A (e.g., the "confronted with" specifier, "threat to physical integrity" language, and Criterion A2) may lead to an inclusion of both extreme traumas (e.g., warfare) and minor stressors (e.g., crude work jokes) under the same stressor standard. McNally (2003, 2004) drew attention to how normal stress reactions become pathologized with an expanded definition of Criterion A (e.g., "medicalizing" emotional reactions to the 9/11 terrorist attack as symptoms of PTSD [p. 4]). McNally also argued that subjective appraisal of an event as traumatizing by the victim alone is an insufficient standard, and that traumas should be defined in accordance with the objective reality of the stressor. McNally advocated for the definition of Criterion A to be narrowed with the next revisions to the *DSM* to protect PTSD and avoid over-pathologizing. Similarly, Rosen (2004) argued that expanding Criterion A to include non-traumatic events (e.g., sexual harassment) would result in the loss of the disorder of PTSD and normalize or demean seriously threatening and traumatic events.

Conversely, others advocated for a broader application of Criterion A, such as the inclusion of sexual harassment as a Criterion A event given that it may pose a threat to physical integrity (Avina & O'Donohue, 2002). Avina and O'Donohue (2002) asserted that widening the definition of a traumatic event would not result in an increase in the prevalence of PTSD because

a person endorsing a minor event is unlikely to meet the succeeding psychological symptoms. Weathers and Keane (2007) echoed this point by reiterating the safeguards inherent in the PTSD criteria such as Criteria B-F, where a PTSD diagnosis would not be warranted without threshold endorsements for a range of accumulating symptoms, duration, and functional impairment. However, Weathers and Keane (2007) also defended the *DSM-IV* definition, highlighting Criterion A as a "gatekeeper" (p. 116), or safeguard, for PTSD. Acknowledging McNally's (2003) concern about bracket creep, Kilpatrick et al. (2009) empirically investigated the influence of Criterion A1 and A2 on the probability of meeting *DSM-IV* criteria for PTSD and found a low probability for meeting criteria B-F without initially meeting criteria A1 or A2. Therefore, Kilpatrick et al. argued for retaining this broader Criterion A, noting that PTSD would be an inappropriate diagnosis without first experiencing a qualifying traumatic event.

Hyland et al. (2021) argued that *DSM-5* Criterion A is not necessary in light of recent studies assessing the modified *International Classification of Diseases 11th Revision*'s (*ICD-11*; World Health Organization [WHO], 2018) criteria for PTSD and Complex PTSD (C-PTSD; WHO, 2018) which do not have a formal trauma exposure criterion. They predicted the narrower *ICD-11* PTSD criteria would have greater predictive validity than *DSM-5* and that psychologically threatening events (or Non-Criterion A events) may be just as likely to contribute to the development of PTSD symptoms as Criterion A events. Results demonstrated that there was a less than 1% increase in the prevalence of PTSD using the narrower *ICD-11* criteria, and there were no significant differences among Criterion A and Non-Criterion A groups in rates of PTSD. Hyland et al. (2021) interpreted these findings as evidence for the low predictive validity of the *DSM-5* criteria for PTSD, questioning the utility of Criterion A being included in the diagnostic criteria. They noted that psychologically threatening events or events

that challenge emotional safety are just as important to address in the assessment and treatment of PTSD. For context, it is important to note that while the *ICD-11* claims to simplify the criteria for PTSD by focusing only on the core symptoms of reexperiencing, avoidance, and hypervigilance (Maercker et al., 2013), removing the stressor criterion may contribute to broadening of the criteria in actuality.

Issues in the Measurement of Criterion A

Beyond the conceptual debate regarding the importance of Criterion A, the practical issue of how Criterion A is measured and identified is crucial. There are three main approaches to measuring Criterion A: self-report checklists, self-report narratives (e.g., verbal or written responses to open-ended questions regarding the event), and clinician-administered interviews. Dohrenwend (2006) illuminated the importance of accurate measurement of Criterion A by identifying the measurement challenge created by intracategory variability, i.e., the fact that specific stressors in a given general category such as motor vehicle accident vary widely in severity. Further, he identified four major areas of concern regarding the use of a checklist for identifying index events: (a) unreliability of recall, (b) susceptibility to recall bias, (c) lack of criterion validity, and (d) problems with construct validity (e.g., challenges defining what constitutes stress, over what time period, and to what extent).

As a remedy, Dohrenwend proposed (a) self-evaluations of stressfulness (e.g., where the individual rates how stressful the event was), (b) specification of inclusion and exclusion criteria for event categories (e.g., including specific examples of events that would qualify as a positive response), and (c) the narrative rating methodology. While self-report checklists require the fewest resources, Dohrenwend argued for the narrative approach, where a detailed description of

the event is obtained from the respondent and their response is rated by well-trained, independent raters who determine Criterion A status for optimal validity and reliability.

In a 2010 paper, Dohrenwend identified measurable differences among different types of stressors (e.g., traumatic versus other life stressors) by examining characteristics that vary between these events. The characteristics described include source of the event (external versus internal), valence (positive or negative), the degree to which the event was unpredictable, the magnitude of the event, centrality (or degree of threat to individual values or goals), and how much the event physically exhausts the individual. These components vary across event types and determine how likely an event is to disrupt and elicit change in the daily life of an individual, ultimately categorizing an event as mundane, stressful, or traumatic. Relatedly, a subset of research has identified the increased risk for development of PTSD following interpersonal traumas (e.g., assault, sexual violence) versus non-interpersonal traumas (e.g., motor vehicle accident), given features such as the severity of the direct threat and challenges to pre-existing core-beliefs (Breslau et al., 1999; Forbes et al., 2011; Thomas et al., 2021; Vaile Wright, Collinsworth, and Fitzgerald, 2010). However, in general, there is a paucity of research regarding the combination of event characteristics and conditions that result in the development of PTSD, which could aid in developing a maximally useful Criterion A definition and a more reliable study of the predictors of PTSD status and prognosis (Dohrenwend, 2010).

Van Hooff et al. (2009) examined how the identification and classification of Criterion A may influence prevalence rates of PTSD. They assigned people to Criterion A versus Non-Criterion A groups based on brief narrative responses to an open-ended question. Next, they conducted analyses using three categorization methods: (a) scoring using a single rater, (b) scoring using the majority method, where the event category (Criterion A versus Non-Criterion

A) that was nominated by 2 out of the 3 raters was used, or (c) the unanimous method, where an event was coded and included in analyses only if all raters agreed on the assignment. Unexpectedly, results demonstrated that regardless of what type of categorization method they used, there was significantly greater PTSD prevalence among people with Non-Criterion A events. Further, PTSD prevalence rates for the Non-Criterion A group were highest when using the unanimous method. Van Hooff et al. argued that investigators should make effort to minimize subjectivity in identifying events as traumatic through rigorous and congruent rating and coding methods.

Conceptual and Measurement Issues Regarding PTSD Symptoms

In addition to questions about measurement of Criterion A, there also has been concern that many of the *DSM* symptoms of PTSD represent a general syndrome of non-specific distress or overlap with symptoms of depression and anxiety (Byllesby et al., 2016; Byllesby et al., 2017; Bodkin et al., 2007; Brewin et al., 2009; Hyland et al., 2021; Spitzer et al., 2007). Several researchers have proposed that this closeness or lack of trauma-specificity in the symptom criteria could account for why individuals without a Criterion A trauma may endorse symptoms of *DSM* PTSD (Bodkin et al., 2007; Spitzer et al., 2007). For example, in a sample of individuals presenting for treatment of major depressive disorder (MDD), PTSD symptom endorsement was no different between people who had and had not experienced trauma (Bodkin et al., 2007). Relatedly, Erwin et al. (2006) found that people with social anxiety disorder (SAD), regardless of trauma exposure, also reported symptoms of PTSD, although individuals with a Criterion A trauma reported greater distress than those who experienced a non-traumatic socially stressful event.

Further, the assessment of PTSD symptoms is critical to this conversation, as it is likely to influence estimates of PTSD severity and prevalence. Self-report measures of PTSD pose unique risks to validity, in that there is an increased risk in the distortion of a person's responding because of response biases, item order, wording and language, and cultural differences in interpretation (Kazdin, 2017). Regarding PTSD, the Clinician-Administered PTSD Scale for *DSM-5* (CAPS-5; Weathers et al., 2018) has demonstrated good internal consistency, test-retest reliability, construct validity, and convergent and discriminant validity, and is considered the "gold-standard" (e.g., Forbes et al., 2015; Hunt et al., 2018) for diagnosis and assessment of *DSM-5* PTSD symptoms. Some studies in the present literature review utilized clinical interviews for assessing the presence of PTSD (e.g., Alessi et al., 2013; Anders et al., 2011; Bodkin et al., 2007; Mulder et al., 2013; van den Berg et al., 2017; Van Hooff et al., 2009), and no studies used the CAPS-5. The Bodkin et al. (2007) study referenced above, for example, used a clinical interview with less than optimal psychometric properties, potentially reducing the accuracy of PTSD diagnoses and subsequent conclusions. Further, the aforementioned studies that utilized a clinical interview to determine PTSD diagnostic status were variable in their methods for assessing Criterion A (discussed below).

PTSD in Individuals Exposed to Criterion A versus Non-Criterion A Stressors

The following section summarizes the previous literature regarding studies that have examined differences in PTSD symptoms and diagnosis between individuals with exposure to Criterion A traumas vs. Non-Criterion A stressors. This section is divided into studies that identified Criterion A with self-report checklists, open-ended narrative review, and mixed methods. Much of this literature, up to 2014, was evaluated in a meta-analysis by Larsen and Pacella (2016). Larsen and Pacella aimed to determine the overarching finding among such

studies investigating the presence of PTSD in persons who do and do not experience a traumatic event. Results yielded a small but significant effect size for PTSD symptoms, indicating that people endorsing *DSM*-compatible traumas have greater symptoms of *DSM-IV* PTSD than those experiencing Non-Criterion A events/life stressors. The authors uncovered two significant moderators for this finding: the inclusion of *DSM-IV* Criterion A2 and the use of self-report measures for the identification of life threat (Criterion A1). When they removed studies utilizing A2 from the meta-analysis, their results were no longer significant and there was no difference between groups. The authors argue that the self-selection of events and subjective nature of one's experiences may contribute to the discrepancy observed in the research and that such moderators should be taken into consideration when examining the empirical literature in this domain. To provide a comprehensive overview of this literature, many of the earlier studies covered in the meta-analysis are discussed here in addition to recent publications and *DSM-5* based studies on this topic. Related to the discussion that follows, please see Table 1 for a summary of these findings.

Studies Assessing Criterion A With Self-Report Checklists

Most studies (Anders et al., 2011; Cameron et al., 2010; Dewey and Schuldberg, 2013; Franklin et al., 2019; Hellmuth et al., 2014; Hyland et al., 2021; Lancaster et al., 2009; Lancaster et al., 2014; Long et al., 2008; Mol et al., 2005; Mulder et al., 2013; Robinson et al., 2006; Roberts et al., 2012; Robinson and Larson, 2010; van den Berg et al., 2017; Wortmann et al., 2011) investigated differences in PTSD symptom presentation between people with and without trauma exposure using self-report checklist measures for Criterion A identification. Some found no differences between Criterion A and Non-Criterion A groups in PTSD symptom severity or prevalence (Cameron et al., 2010; Franklin et al., 2019; Hyland et al., 2021; Lancaster et al.,

2014; Mulder et al., 2013; Roberts et al., 2012; Robinson et al., 2006; Robinson and Larson, 2010), where the stressful life events (Non-Criterion A) group also presented with PTSD symptoms similar to the traumatic events group. Other studies (Anders et al., 2011; Long et al., 2008; Mol et al., 2005; van den Berg et al., 2017) unexpectedly found that the Non-Criterion A group presented with greater PTSD symptoms than those who experienced a trauma. Of these studies utilizing a self-report to identify Criterion A, three (Anders et al., 2011; Mulder et al., 2013; van den Berg et al., 2017) utilized a clinician-administered interview of PTSD symptoms.

Boals and Schuettler (2009), Dewey and Schuldberg (2013), Hellmuth et al. (2014), Lancaster et al. (2009), and Wortmann et al. (2011) expectedly found that persons who experienced a Criterion A trauma had significantly greater PTSD symptoms than those who experienced non-traumatic life stressors, typically with small effect sizes of the difference between Criterion A and Non-Criterion A groups (Boals & Schuettler, 2009; Lancaster et al., 2009). Similarly, Wortmann et al. (2011) found a small relationship between trauma exposure and PTSD symptoms, noting that cognitive and emotional appraisals of a traumatic event may have a greater impact on the development and severity of PTSD. Dewey and Schuldberg's (2013) results specifically demonstrated that Criterion A persons had significantly greater PTSD symptoms when controlling for time since event. They noted that studies demonstrating greater PTSD symptoms in persons with Non-Criterion A events are not controlling for time since event, arguing that this may influence results given the increased frequency and recency of Non-Criterion A events.

Studies Assessing Criterion A With Open-Ended Narrative Reviews

Several studies (Alessi et al., 2013; Anders et al., 2012; Bodkin et al., 2007; Erwin et al., 2006; Gold et al., 2005; Rumball et al., 2020; Van Hooff et al., 2009) used open-ended narrative

responses and rating methods to assist in the identification of Criterion A. Again, like those who utilized self-report methods, findings were mixed, where some found the Non-Criterion A group to have greater rates of PTSD or symptoms (Alessi et al., 2013; Anders et al., 2012; Gold et al., 2005; Van Hooff et al., 2009) and others found no differences between groups (Bodkin et al., 2007; Rumball et al., 2020). Others (Erwin et al., 2006; Hovens and van der Ploeg, 1993) found the opposite (and expected) finding that people reporting traumatic experiences and distress from such experiences have greater PTSD symptoms than those experiencing non-traumatic life events. Of these studies that utilized a narrative rating method for the identification of Criterion A, three (Alessi et al., 2013; Bodkin et al., 2007; Van Hooff et al., 2009) used a clinical interview to assess PTSD symptoms but not the gold-standard assessment measure.

Notably, four of these studies utilized a clinical sample or special population (e.g., LGBTQ+ sample; Alessi et al., 2013; Bodkin et al., 2007; Rumball et al., 2020; Van Hooff et al., 2009). It may be possible that symptoms related to minority group stressors (e.g., chronic discrimination) or other mental health experiences have confounded the results and are reflected in their endorsement of symptoms of PTSD. The other two studies (Anders et al., 2012; Gold et al., 2005) utilized an undergraduate sample, and it is possible that an increase in school-related stress may be manifesting in symptoms similar to PTSD. These findings may reflect how events other than Criterion A traumas may be influencing endorsement of PTSD symptoms.

Studies Assessing Criterion A With Mixed Methods

Still other studies utilized mixed methods for assessing Criterion A status. Waelde et al. (2010) collected narrative descriptions of race-related traumas and Criterion A status was determined by participant selection of dichotomous items assessing A1 and A2 criteria (where responding “yes” to at least one A1 or A2 item categorized them into the trauma group). Their

results demonstrated that persons experiencing race-related traumas meeting *DSM-IV* Criterion A (both A1 and A2) had significantly greater symptoms of PTSD than those whose race related event was not considered Criterion A.

Another example of a mixed method for identifying Criterion A is Lansing et al.'s (2017) study on the effects of how cumulative Non-Criterion A and Criterion A events affected a sample of adjudicated adolescent females. To assess Criterion A status, a clinical interview for trauma exposure was administered, followed up with a modified version of a widely used traumatic events checklist. Respondents dichotomously responded to the query of events in the interview without open-ended questions about the event description. Participants' worst event was identified by the checklist and used to determine Criterion A versus Non-Criterion A status. Results demonstrated that girls with Non-Criterion A adversity did not differ in PTSD symptoms from girls who experienced Criterion A events, but functional impairment was greater for those endorsing Non-Criterion A adversity (potentially specific to academic adversity). It is important to note that Lansing et al.'s (2017) study involved a special population of imprisoned adolescent females, and it is likely that additional psychopathology and the more recent stressors related to adjudication and imprisonment may be potential confounds.

Assignment to Criterion A Groups

For studies employing a narrative component, some used an agreement method where a person was assigned to a criterion group if all raters agreed on their Criterion A status (e.g., Anders et al., 2012; Bodkin et al., 2007; Van Hoof et al., 2009). Others utilized the majority method, where group status was based on the majority assignment of a person to the Non-Criterion A or Criterion A groups (e.g., Franklin et al., 2019). Some used more unique rating methods, such as ranking identified events on a scale of "no chance of threat" to "sure threat,"

where the average score between the raters was used to determine group assignment (e.g., Alessi et al., 2013). There was large variation in who rated Criterion A status across studies: unspecified (e.g., Lansing et al., 2017; Mulder et al., 2013), general (e.g., "two independent raters"; Alessi et al., 2013; van den Berg et al., 2017), and expert (e.g., "a psychiatrist and two research psychologists, all with extensive experience in PTSD"; Van Hooff et al., 2009, p. 80). Taken together, studies on PTSD symptom differences between Criterion A and Non-Criterion A groups are limited by the lack of rigorous and systematic rating systems, the presence of confounding variables, and use of less psychometrically sound assessment measures, greatly limiting what cohesive information we have gathered to date on the Criterion A debate.

The Present Study

Although there has been an increase in theoretical argument against Criterion A, there remains a lack of empirical evidence regarding the implications of using the criterion. This is further exacerbated by the inconsistency in measurement and rating of Criterion A across the literature, which has produced widely inconsistent and possibly misleading conclusions about PTSD symptoms following non-traumatic events. Systematic research on this topic is increasing in importance as the debate surrounding Criterion A continues unresolved. Given that findings from the existing literature are mixed, the present study was a comprehensive replication and extension of previous investigations of PTSD symptoms in Criterion A versus Non-Criterion A groups in a large undergraduate sample with a wide range of exposure to traumatic and non-traumatic stressors. The present study was structured specifically to address gaps in the current literature on PTSD symptoms endorsed by individuals with and without Criterion A traumas, including (a) differences in measurement and coding of Criterion A, and (b) possible reasons for endorsement of PTSD symptoms by Non-Criterion A exposed participants.

Regarding the first literature gap, the present study utilized three coding methods for Criterion A. Method A included self-rated event exposure with a questionnaire. Method B involved the independent coding of a written event narrative by two trained raters. Lastly, Method C consisted of independent coding of the written event narrative and a confidence rating of Criterion A status by two trained raters (see Method section and Appendix A for a detailed description).

Method A directly replicates the self-report method used by most previous studies, but is subject to misclassification of individuals into Criterion A or Non-Criterion A groups. For example, if a participant selects an illogical response (marking "directly experienced" in response to the event "sudden violent death", when "directly experienced" refers to the death of the participant), this will result in a computer-generated Criterion A status when the narrative response (e.g., "losing my grandma to cancer and having to watch her be sick for so long") would have resulted in Non-Criterion A status.

Method B balances the economy of a self-report checklist combined with the rigor of reviewing participants' responses to a nonoptional open-ended narrative field regarding the index event, as suggested by Dohrenwend (2006). Utilizing an open-ended narrative field assists in reducing intracategory variability and grouping error due to participant response bias (e.g., misinterpreting the measure's directions and responding incorrectly). However, using narrative ratings alone may introduce error related to ambiguity as to whether a participant's experience certainly meets Criterion A, and therefore introduces higher heterogeneity within groups.

Method C is a novel method for index event classification where participants' self-report and narrative ratings are combined and rated for Criterion A *classification* and *confidence* by multiple independent raters who are well-trained by an expert in the field. The addition of

confidence ratings assured that only individuals who provided enough information to confidently determine Criterion A status were included in statistical analyses, ameliorating the risk of error present for other coding methods and purportedly capture pure traumatized vs. non-traumatized groups. Theoretically, including participants whose Criterion A status is uncertain (e.g., low-confidence Criterion A) in analyses on PTSD symptom endorsement across Criterion A and Non-Criterion A groups may have contributed to mixed findings in the literature thus far. Yet, no prior studies within trauma and PTSD research have utilized confidence ratings as a method for determining the sample for data analysis.

Therefore, the first aim of the present study was to test differences in the profiles of PTSD symptom endorsement between groups coded as having or having not experienced Criterion A traumas using the three different methods explained above. It was hypothesized that Criterion A groups would self-report significantly higher PTSD symptomatology (levels test) than Non-Criterion A groups. No hypotheses were made regarding the test of parallelism at the PTSD symptom level, but any differences were observed and noted. The methodological improvements of coding Method C (i.e., narratives and confidence ratings) were hypothesized to result in strong differentiation between Criterion A and Non-Criterion A groups on endorsed PTSD symptoms. Overall, the differences between Criterion A and Non-Criterion A groups in PTSD symptom endorsement were expected to be larger for more rigorous coding methods (confidence ratings following narrative review) compared to less rigorous coding methods (self-report checklist), as evidenced by effect size statistics.

Regarding the second literature gap, the present study empirically examined theoretical reasons participants without Criterion A traumas may endorse PTSD symptoms, including (a) the presence of other types of overlapping clinical symptoms or general distress; (b) negative

response bias (i.e., the tendency to report more severe levels of symptoms generally); and (c) experiencing PTSD or PTSD-like symptoms in response to a highly stressful event that "just misses" Criterion A (e.g., death of a parent from a terminal illness). Given the lack of clear evidence to date regarding how these factors interact and influence PTSD symptom endorsement, this secondary aim was primarily exploratory.

Accordingly, the present study included tests of the difference in the profiles of other clinical symptom endorsement (e.g., depression, anxiety) and response bias (e.g., negative impression management) between Criterion A and Non-Criterion A groups using the three different methods explained above. The present study also tested differences across profiles of psychopathology (e.g., depression, anxiety) and response bias (e.g., negative impression management) between those who endorsed high levels of PTSD symptoms and those who do not.

Next, a subset of the Non-Criterion A group whose events were objectively stressful but did not meet Criterion A were identified using a new coding method labeled as the High Magnitude Stressor group (see Method section and Appendix B for detailed description). The present study included tests of the difference in PTSD and other clinical symptom profiles between this High Magnitude Stressor group and the Non-Criterion A and Criterion A groups. Based on the literature surrounding other stressful but non-traumatic events, the High Magnitude Stressor group was expected to have higher score profiles across PTSD and other clinical symptoms, similar to the Criterion A group.

Lastly, based on previous event type research, participants with sexual traumas were removed from analyses to test differences in PTSD symptom profiles between the Non-Criterion A group and the Criterion A group with traumatic events other than sexually violent events.

In sum, the purpose of the present study is to provide and clarify the answer to the question "Is a traumatic event necessary for PTSD?", and to replicate and extend upon previous research with a similar query. Altogether, the extensions to previous research include (a) utilizing *DSM-5* criteria for Criterion A and PTSD given the scarcity of current publications on this topic; (b) the use of a concise and rigorous methodology for the identification of Criterion A that involves confidence ratings for Criterion A and Non-Criterion A group assignment; (c) utilizing profile analysis to observe differences between Criterion A groups; and (d) examining group differences within Non-Criterion A persons on type of event (e.g., High Magnitude Stressor or other life stressor) and other measures of psychopathology.

Method

Participants and Procedures

De-identified data was utilized from a larger two-part study examining the psychometric properties of a clinician administered interview for PTSD. All study procedures were approved by the university Institutional Review Board (IRB). Participants were undergraduate students (N = 2280) enrolled in psychology courses at a large, southeastern university who self-selected to participate for course credit based on their subjective history of stressful life experiences. Only Part I data were used for the present study, which included responses to a battery of self-report measures completed online. The battery included the Life Events Checklist for *DSM-5* (LEC-5; Weathers et al., 2013) to assess trauma exposure, the PTSD Checklist for *DSM-5* (PCL-5; Weathers et al., 2013) to assess PTSD symptom severity, and the Personality Assessment Inventory (PAI; Morey, 1991) to assess comorbid psychopathology (see Measures section). Participants were excluded from data analyses for reasons of duplicate participation (n = 1), PCL-5 survey non-completion (n = 88), PAI survey non-completion (n = 62), PAI Inconsistency

scale (INC) *T* score > 72 (*n* = 172), and PAI Infrequency scale (INF) *T* score > 75 (*n* = 85), resulting in a final sample of 1872 participants.

Criterion A status was determined in a two-step process using participants' survey responses and written descriptions of their identified worst event (index event). In step one, presumptive Criterion A status was coded using only participants' responses on the LEC-5. Index events were coded as presumptive Criterion A if a participant indicated that the index event "happened to" them or they "witnessed it" and they endorsed presence of life threat (self or other) or sexual violence. For index events marked as "learned about" by the participant (e.g., learning that the traumatic event occurred to a close family member or friend), events required the presence of sexual violence or accidental or violent death to be coded as presumptive Criterion A. After step one, there were 1203 participants rated as presumptive (LEC-5 indicated) Criterion A and 669 participants rated as Non-Criterion A.

In step two, Criterion A status was determined through rigorous evaluation of participants' written narratives by trained independent raters who were doctoral students in clinical psychology. Narrative responses were assigned a binary Criterion A rating (Criterion A or Non-Criterion A) and binary confidence rating (High or Low) depending on the amount of information provided in the written narrative. High confidence ratings were given when the participant's narrative was sufficiently detailed to make a certain decision about Criterion A status. Raters examined the narratives for a number of aspects of the event in making their confidence rating, including event type, event severity, how the event was experienced, and closeness of the relationship to the victim for indirectly experienced events. Low confidence ratings were given when there was insufficient or missing information regarding these aspects. Specifically, low confidence ratings were assigned as follows: unknown severity of the event (*n*

= 347), closeness to the individual (for learned about events) is unknown (*n* = 233), unknown proximity to the event (*n* = 143), missing (e.g., narrative, event checklist) information (*n* = 73), and unclear or conflicting information (*n* = 8). See Appendix A for a summary of coding procedures.

For index events with excessively vague, missing, or incoherent narratives, raters coded Criterion A status by defaulting to the LEC-5 indicated event, with low confidence. Participants varied in their selected exposure type (e.g., "It happened to me directly", "I witnessed it", or "I learned about it happening to a close family member or close friend") on the LEC-5, and therefore were assigned different presumptive Criterion A codes based on their responses to this self-report checklist. The only exception to this rule was for participants who indicated the index event of the death of a loved one by natural causes, which was coded as Non-Criterion A with low confidence regardless of initial presumptive Criterion A status. This was because there was a group of respondents (*n* = 80) who reported the death of a loved one (e.g., "grandfather passed away," "dad died") due to "natural causes", with a limited and vague narrative. Based on the narrative rating step, there were 706 Non-Criterion A (*n* = 461 high confidence; 245 low confidence) and 1034 Criterion A (572 high confidence; 462 low confidence) participants in the sample. Overall, interrater agreement for Criterion A status was high ($\kappa = 0.91$, $p < .01$). Authors resolved coding disagreements through consultation with the author's primary faculty mentor, an expert in assessment of trauma exposure and PTSD.

Next, the author developed a coding scheme for highly stressful and difficult events that do not meet the threshold for a *DSM-5* Criterion A trauma, termed for the purposes of this project "High Magnitude Stressors" (e.g., death of a loved one by natural causes, terminal illness, natural disasters with significant resource loss). For example, while a terminal illness

poses actual or threatened death, if the illness (or resulting death) is not sudden, catastrophic, violent, or accidental, it does not meet *DSM-5* Criterion A. However, experiencing a terminal illness directly or to a loved one is highly stressful (Cordova, Riba, and Spiegel, 2017). The full coding procedures for the high magnitude group are presented in Appendix B. Following these procedures, the author coded the written narratives of Non-Criterion A, high confidence group participants and Non-Criterion A, low confidence (vague death of loved one, $n = 80$) participants according to the high magnitude stressor criteria. In this step, 176 participants were coded into the High Magnitude Stressor group.

Measures

Participants completed a battery of questionnaires as part of the larger study, which included a demographics form, and self-report measures of trauma exposure and PTSD.

Life Events Checklist – Extended Version (LEC-5)

The LEC-5 (Weathers et al., 2013) is a 17-item measure assessing exposure to and experience of various traumatic events. For each event listed, the participant indicated whether the event has happened to them, they witnessed it, learned about it, occurred as part of their job, not sure, or doesn't apply. The extended version of the LEC-5 includes a field for a brief written narrative of the event and assesses other aspects of the experience (e.g., when the event occurred, if the event involved serious injury, illness, or death, and number of times they experienced the event).

Posttraumatic Stress Disorder Checklist for DSM-5 (PCL-5)

The PCL-5 (Weathers et al., 2013) is a 20-item measure assessing the 20 *DSM-5* symptoms of PTSD. Individuals responded on a scale from 0 = *not at all* to 4 = *extremely* bothered by the symptom in the past month. The PCL-5 has consistently shown excellent internal

consistency, test-retest reliability, construct validity, and convergent and discriminant validity (Blevins et al., 2015; Bovin et al., 2016). In the current sample of *n* = 1872, Cronbach's alpha for the PCL-5 was .95.

Personality Assessment Inventory (PAI)

The PAI (Morey, 1991) is a 344-item measure of psychopathology and personality traits and has demonstrated good psychometric properties (Morey, 1991, 2007). Participants rated how accurate the statement is of them, from *false/not at all true* to *very true*. In the present study, the Negative Impression Management (NIM), Depression (Cognitive, DEP-C; Affective, DEP-A; Full Scale, DEP), Anxiety (Affective, ANX-A; Physiological, ANX-P; Cognitive, ANX-C; Full Scale, ANX), and Anxiety Related Disorders (ARD) scales of the PAI were utilized. The PAI has been extensively validated and has consistently demonstrated excellent psychometric properties (Morey, 1991, 2007). In the current sample of *n* = 1872, Cronbach's alpha for the various PAI scales are as follows: α = .72 for the NIM, α = .83 for DEP-C, α = .87, α = .92 for DEP, α = .81 for ANX-A, α = .80 for ANX-P, α = .86 for ANX-C, α = .93 for ANX, and α = .82 for ARD subscales.

Data Analysis

All analyses were conducted with IBM SPSS Statistics Version 28. Descriptive frequencies were computed for demographic characteristics of the sample and Criterion A index event type (see Table 2). Five individuals with Criterion A traumas did not have their index event type coded due to missing narrative information. Cohen's *d* was used to examine effect size of previous findings in the literature. Independent samples *t*-test was utilized to examine differences between Criterion A and Non-Criterion A groups on PCL-5 total score. Profile analysis, a type of repeated-measures analysis of variance (ANOVA) was conducted to examine

group differences across items and PTSD symptom clusters on the PCL-5. Profile analysis evaluates a levels effect and a parallelism effect. The levels effect indicates whether groups differ in overall elevation of scores across items or subscales. The parallelism effect, which involves the group by item or subscale interaction, indicates whether groups had significantly different patterns of responding across items and subscales. Follow-up univariate tests and partial eta-squared (η^2) effect size statistics were computed to examine the size of group differences for individual items or subscales. Effect size statistics were interpreted following Cohen (1988): $\eta^2 <$ 0.06 small; 0.06-0.14 medium; > 0.14 large. According to Tabachnick and Fidell (2019), significance was determined through comparison with a Scheffé's critical *F* value to control for familywise Type I error. Given the high number of profile analyses with different groups conducted in the present study, multiple imputation methods specific to profile analyses (e.g., imputing missing values based on participant and group means) were not feasible for handling missing data across the entire dataset. Therefore, following Tabachnick & Fidell (2019, Ch. 8), missing data on the PCL-5 was handled with listwise deletion prior to the beginning of all analyses (n = 88 removed). To examine differences in endorsed psychopathology between Criterion A and Non-Criterion A groups, profile analyses were also conducted for select PAI scales, using PAI *T*-scores as dependent variables.

The analyses above were conducted using different subsamples of the current dataset. Analysis 1 was determined using Method A and included all participants in the sample (n = 1872). With Method A, groups are computer-generated based on participant endorsement of what events they experienced (e.g., unexpected death of loved one) and how ("directly experienced") on the LEC-5. Analysis 1 replicates previous studies that relied on only self-reports for the identification of Criterion A.

Then, to examine the effect of including a narrative field to assist in the identification of Criterion A and reduce intracategory variability, the second analysis included participants whose Criterion A status was based on their narrative response (Method B). Participants were removed from the dataset due to crucial missing index event information (e.g., failure to complete the trauma exposure checklist) or narrative (n = 61), no narrative information (n = 21), and inconsistent index event information (n = 50; e.g., providing mismatched or multiple traumatic events in the narrative), leaving a sample of 1740 for Analysis 2.

Next, Analysis 3 was comprised of groups based on Method C, where confidence ratings were utilized as an added rigorous method for determining Criterion A status. Given that there was insufficient information to determine for certain if the index event would qualify as Criterion A or Non-Criterion A, participants with low confidence ratings were removed (n = 707), leaving a sample of 1033 (n = 572 Criterion A high confidence; n = 461 Non-Criterion A high confidence) for Analysis 3.

Within the high confidence Non-Criterion A sample, individuals were coded into the High Magnitude Stressor group for Analysis 4 if their event met the parameters defined in Appendix B. Additionally, individuals with low confidence Non-Criterion A ratings for index events of the natural death of a loved one were also included if their event met criteria for a High Magnitude Stressor. Profile analyses for Analysis 4 were conducted using three groups: Criterion A (n = 572), Non-Criterion A (n = 281), and Non-Criterion A High Magnitude Stressor (n = 163).

Exploratory analyses were conducted to examine differences in psychopathology among only Non-Criterion A respondents with high (≥ 33) versus low (< 33) PCL-5 total scores (n =

410). Profile analysis was utilized to compare high PCL-5 and low PCL-5 groups across PAI scale *T*-scores.

Lastly, profile analyses were repeated with all participants endorsing a sexually violent event removed (n = 146), resulting in a sample of 887 participants. An exploratory profile analysis was utilized to compare the high confidence Non-Criterion A group to the high confidence Non-Sexually Violent Criterion A group across PCL-5 items and subscales.

Results

Analysis 1: Self-rated Criterion A

The first series of profile analyses were conducted using a sample of 1872 undergraduate participants who were identified as having experienced or not experienced a Criterion A event solely based on their LEC-5 responses.

Criterion A vs. Non-Criterion A PCL-5 Responding in LEC-5 Indicated Sample

An initial *t*-test of the difference in mean PCL-5 total scores revealed the Criterion A group had significantly higher mean PCL-5 total score (M = 15.3, SD = 16.6) compared to the Non-Criterion A group (M = 12.5, SD = 15.3), $t(1476.64) = -3.71$, $p < .001$.

The levels test examined if the Criterion A group scored significantly higher or lower than the Non-Criterion A group across all PCL-5 item mean scores. The PCL-5 item levels test demonstrated a large main effect for Group, with the Criterion A group scoring significantly higher overall on PCL-5 items, $F(1, 1870) = 13.14$, $p < .001$, partial $\eta^2 = .007$. The test of parallelism was used to examine differences in the pattern of responding (e.g., high versus low item endorsement) between groups across PCL-5 items. The test of parallelism was significant, $F(19, 1852) = 2.89$, $p < .001$, partial $\eta^2 = .029$, meaning that the two groups displayed different

patterns of highs and lows across PCL-5 items (Table 3). See Figure 1 for visual profiles across PCL-5 items for Criterion A and Non-Criterion A groups. Specifically, the Criterion A group had significantly higher mean scores for the following items: memories, nightmares, psychological distress, physiological reactivity, internal avoidance, external avoidance, amnesia, irritable behavior, risky behaviors, hypervigilance, exaggerated startle, concentration problems, and sleep problems. All other PCL-5 items did not significantly differ in mean score between groups, and no items had significantly higher mean scores for the Non-Criterion A group comparatively.

Like the item-level analysis above, the PCL-5 subscale levels test revealed a main effect for Group, with the Criterion A group scoring significantly higher overall on the PCL-5 subscales, $F(1, 1870) = 13.14$, $p < .001$, partial $\eta^2 = .007$. A test of parallelism focusing on PCL-5 subscale scores indicated a departure from parallelism, $F(3, 1868) = 3.20$, $p = .023$, partial $\eta^2 = .005$, meaning that the two groups displayed different patterns of highs and lows across the four PTSD symptoms clusters (Table 4). See Figure 2 for visual profiles across PCL-5 subscale symptom clusters for Criterion A and Non-Criterion A groups. Specifically, the Criterion A group had significantly higher mean scores for the reexperiencing, avoidance, and arousal and reactivity PTSD symptom clusters on the PCL-5, with the largest difference observed in the avoidance symptom cluster. There was no significant difference observed between groups on the negative alternations in cognition and mood symptom cluster.

Criterion A vs. Non-Criterion A PAI Responding in LEC-5 Indicated Sample

The PAI scales level test ($n = 1656$) was significant, indicating the Criterion A group scored significantly higher overall on the PAI scales, $F(1, 1654) = 11.66$, $p < .001$, partial $\eta^2 = .007$. The test of parallelism was also significant, $F(8, 1647) = 2.61$, $p = .008$, partial $\eta^2 = .012$, meaning that the Criterion A and Non-Criterion A groups displayed different patterns of high

and low endorsement across the PAI scales (Table 5). Specifically, the Criterion A group had significantly higher *T* scores for all scales (NIM, DEP-C, DEP-A, DEP, ANX-A, ANX-P, ANX-C, ANX, and ARD). See Figure 3 for visual profiles across PAI scales for Criterion A and Non-Criterion A groups.

Analysis 2: Narrative Criterion A

In Analysis 2, the second series of profile analyses were conducted using a sample of 1740 undergraduate participants coded into Criterion A or Non-Criterion A groups by reviewing narrative responses without confidence ratings.

Criterion A vs. Non-Criterion A PCL-5 Responding in Narrative Review Sample

An initial *t*-test of the difference in mean PCL-5 total scores revealed the Criterion A group had significantly higher mean PCL-5 total score (M = 15.5, SD = 17.0) compared to the Non-Criterion A group (M = 12.9, SD = 14.8), $t(1631.89) = -3.37$, $p < .001$. The PCL-5 item levels test demonstrated a large main effect for Group, with the narrative review Criterion A group scoring significantly higher overall on PCL-5 items, $F(1, 1738) = 10.82$, $p = .001$, partial $\eta^2 = .006$. The test of parallelism was also significant, $F(19, 1720) = 3.61$, $p < .001$, partial $\eta^2 = .038$, meaning that the two groups displayed different patterns of high and low endorsement across PCL-5 items (Table 3). See Figure 4 for visual profiles across PCL-5 items for Criterion A and Non-Criterion A narrative reviewed groups. Specifically, the Criterion A group had significantly higher mean scores for the following items: nightmares, psychological distress, physiological reactivity, external avoidance, amnesia, blame, negative feelings, hypervigilance, exaggerated startle, concentration problems, and sleep problems. All other PCL-5 items did not

significantly differ in mean scores between groups, and no items had significantly higher mean scores for the Non-Criterion A group comparatively.

The PCL-5 subscale levels test revealed a main effect for Group, with the narrative reviewed Criterion A group scoring significantly higher overall on PCL-5 subscales, $F(1, 1738) = 10.82$, $p < .001$, partial $\eta^2 = .006$. The test of parallelism was also significant, $F(3, 1736) = 6.05$, $p < .001$, partial $\eta^2 = .01$, meaning that the two groups displayed different patterns of high and low endorsement across the four PTSD symptoms clusters (Table 4). See Figure 5 for visual profiles across PCL-5 subscale symptom clusters for Criterion A and Non-Criterion A narrative reviewed groups. Specifically, the narrative reviewed Criterion A group had significantly higher mean scores for all PCL-5 subscales, with the largest difference observed in the arousal and reactivity subscale, and the smallest difference in the negative alterations in cognition and mood subscale.

Criterion A vs. Non-Criterion A PAI Responding in Narrative Review Sample

The PAI scales level test ($n = 1548$) demonstrated a large main effect for Group, with the narrative reviewed Criterion A group scoring significantly higher overall on the PAI scales, $F(1, 1546) = 9.31$, $p = .002$, partial $\eta^2 = .006$. The test of parallelism was also significant, $F(8, 1539) = 3.62$, $p < .001$, partial $\eta^2 = .018$, meaning that the two groups displayed different patterns of high and low endorsement across the PAI scales (Table 5). See Figure 6 for visual profiles across PAI scales for Criterion A and Non-Criterion A narrative reviewed groups. Specifically, the narrative reviewed Criterion A group had significantly higher *T* scores for the DEP-C, DEP, ANX-A, ANX-P, ANX, and ARD. There were no significant differences in mean scale scores observed between groups on the NIM, DEP-A, and ANX-C scales.

Analysis 3: High Confidence Narrative Criterion A

In Analysis 3, the third series of profile analyses were conducted using a sample of 1033 participants whose index event received a high confidence rating.

Criterion A vs. Non-Criterion A PCL-5 Responding in High Confidence Sample

An initial *t*-test of the difference in mean PCL-5 total scores revealed the high confidence Criterion A group had significantly higher mean PCL-5 total score (M = 18.4, SD = 18.2) compared to the high confidence Non-Criterion A group (M = 14.3, SD = 15.9), $t(1024.72) = -3.90$, $p < .001$. The PCL-5 item levels test demonstrated a large main effect for Group, with the high confidence Criterion A group scoring significantly higher overall on PCL-5 items, $F(1, 1031) = 14.75$, $p < .001$, partial $\eta^2 = .014$. The test parallelism was also significant, $F(19, 1013) = 3.75$, $p < .001$, partial $\eta^2 = .066$, meaning that the two groups displayed different patterns of high and low endorsements across PCL-5 items (Table 3). See Figure 7 for visual profiles across PCL-5 items for high confidence Criterion A and Non-Criterion A groups. Specifically, the high confidence Criterion A group had significantly higher mean scores for the following items: memories, nightmares, flashbacks, psychological distress, physiological reactivity, internal avoidance, external avoidance, amnesia, blame, negative feelings, risky behavior, hypervigilance, exaggerated startle, concentration problems, and sleep problems. All other PCL-5 items did not significantly differ in mean scores between groups, and no items had significantly higher mean scores for the high confidence Non-Criterion A group comparatively.

The PCL-5 subscale levels test revealed a main effect for Group, with the high confidence Criterion A group scoring significantly higher overall on PCL-5 subscales, $F(1, 1031) = 14.75$, $p < .001$, partial $\eta^2 = .014$. The test of parallelism was also significant, $F(3, 1029)$

= 4.45, p = .004, partial η^2 = .013, meaning that the two groups displayed different patterns of high and low endorsements across the four PTSD symptoms clusters (Table 4). See Figure 8 for visual profiles across PCL-5 subscale symptom clusters for high confidence Criterion A and Non-Criterion A groups. Specifically, the high confidence Criterion A group had significantly higher mean scores for all PCL-5 subscales, with the largest difference observed in the arousal and reactivity subscale, and the smallest difference in the negative alterations in cognition and mood subscale.

Criterion A vs. Non-Criterion A PAI Responding in High Confidence Sample

The PAI scales level test (n = 922) demonstrated a large main effect for Group, with the high confidence Criterion A group scoring significantly higher overall on the PAI scales, F(1, 920) = 11.18, p < .001, partial η^2 = .012. The test of parallelism was also significant, F(8, 913) = 4.31, p < .001, partial η^2 = .036, meaning that the two groups displayed different patterns of high and low endorsement across the PAI scales (Table 5). See Figure 9 for visual profiles across PAI scales for high confidence Criterion A and Non-Criterion A groups. Specifically, the high confidence Criterion A group had significantly higher T scores for the DEP-C, DEP, ANX-A, ANX-P, ANX, and ARD. There were no significant differences in mean scale scores observed between groups on the NIM and DEP-A scales.

Analysis 4: High Magnitude Stressor Analyses

A series of profile analyses were conducted using a sample composed of high confidence Criterion A and Non-Criterion A participants, as well as participants whose index event meet the criteria for the High Magnitude group outlined earlier (n = 1016). This profile analysis included three groups of participants coded as high confidence Non-Criterion A (N = 281), High

Magnitude Stressor ($N = 163$), and high confidence Criterion A ($N = 572$). See Figures 10, 11, and 12 for visual profiles across PCL-5 items, PCL-5 subscales, and PAI subscales for the High Magnitude Stressor, Non-Criterion A, and Criterion A groups.

Criterion A vs. High Magnitude Stressor on PCL-5 and PAI

First, the High Magnitude group was compared to the high confidence Criterion A group using profile analysis. The PCL-5 items level test demonstrated no overall main effect for Group, $F(1, 733) = .14$, $p = .709$, partial $\eta^2 = .000$. The test of parallelism was significant, $F(19, 715) = 2.40$, $p < .001$, partial $\eta^2 = .06$, meaning that the two groups displayed different patterns of high and low endorsements across the PCL-5 items (Table 6). The Criterion A group had significantly higher mean scores for hypervigilance and exaggerated startle response. All other PCL-5 items did not significantly differ in mean score between groups. Regarding PCL-5 subscales, the level test demonstrated no overall main effect for Group, $F(1, 733) = .14$, $p = .709$, partial $\eta^2 = .000$. The test of parallelism was not significant, indicating that the patterns of responding across the PCL-5 subscales did not differ between the High Magnitude and high confidence Criterion A groups, $F(3, 731) = 1.91$, $p = .126$, partial $\eta^2 = .008$ (Table 7). There were no significant differences between the High Magnitude and high confidence Criterion A groups across PCL-5 symptom clusters.

Using PAI *T*-scores as the dependent variable ($N = 657$), results of the PAI scales level test indicated no overall difference in PAI *T*-scores overall between the High Magnitude and high confidence Criterion A, $F(1, 655) = .58$, $p = .446$, partial $\eta^2 = .001$. The test of parallelism was not significant, indicating the pattern of responding across the PAI scales was similar for the High Magnitude and high confidence Criterion A groups, $F(8, 648) = 1.12$, $p = .345$, partial $\eta^2 = .014$ (Table 8).

Non-Criterion A vs. High Magnitude Stressor on PCL-5 and PAI

Next, the High Magnitude group was compared to the high confidence Non-Criterion A group. The PCL-5 items level test demonstrated a main effect for Group, with the High Magnitude group scoring significantly higher than the high confidence Non-Criterion A group, $F(1, 442) = 12.05$, $p < .001$, partial $\eta^2 = .027$. The test of parallelism was not significant, indicating that the overall pattern of responding across the PCL-5 did not differ between the two groups, $F(19, 424) = 1.05$, $p = .405$, partial $\eta^2 = .045$ (Table 6). The High Magnitude group had significantly higher mean scores for memories, flashbacks, psychological distress, physiological reactivity, internal avoidance, external avoidance, negative feelings, social withdrawal, anhedonia, risky behavior, and concentration problems. All other PCL-5 items did not significantly differ in mean score between groups. Regarding PCL-5 subscales, the level test demonstrated a main effect for Group, with the High Magnitude group scoring significantly higher overall than the high confidence Non-Criterion A group, $F(1, 442) = 12.05$, $p < .001$, partial $\eta^2 = .027$. The test of parallelism was not significant, indicating that the pattern of responding to PCL-5 subscales did not differ between the High Magnitude and high confidence Non-Criterion A groups, $F(3, 440) = 1.67$, $p = .173$, partial $\eta^2 = .011$ (Table 7). The High Magnitude group had significantly higher mean scores across all subscales, with the largest observed difference in the reexperiencing subscale, and smallest in the arousal and reactivity.

Using PAI *T*-scores as the dependent variable, ($N = 396$), results of the PAI scales level test indicated the High Magnitude group had higher overall PAI *T*-scores compared to the high confidence Non-Criterion A group, $F(1, 394) = 5.49$, $p = .02$, partial $\eta^2 = .014$. The test of parallelism was not significant, indicating the pattern of responding across the PAI scales did not differ for the High Magnitude and high confidence Non-Criterion A groups, $F(8, 387) = 1.70$, p

= .098, partial η^2 = .034 (Table 8). The High Magnitude group had significantly higher mean scores for the DEP, ANX-P, ANX-C, ANX, and ARD scales. There was no difference in PAI NIM *T* scores between the High Magnitude Stressor and Criterion A and Non-Criterion A groups.

Exploratory Analyses

Three additional profile analyses were conducted using the high confidence narrative subsample (*N* = 1033) to explore possible reasons for differences in PTSD symptom endorsement such as tendency to generally endorse high levels of distress, Criterion A index event type, and Non-Criterion A event magnitude.

Low PCL-5 vs. High PCL-5 PAI Responding Within High Confidence Non-Criterion A

A profile analysis on PAI *T* scores was conducted using only high confidence Non-Criterion A participants (*N* = 410) sorted into High PCL-5 (total score ≥ 33) and Low PCL-5 (total score < 33) groups. The PAI scales level test demonstrated a large main effect for Group, with the High PCL-5 group scoring significantly higher than the Low PCL-5 group on the PAI scales, $F(1, 408) = 199.53$, $p < .001$, partial $\eta^2 = .328$. The test of parallelism was also significant, $F(8, 401) = 25.92$, $p < .001$, partial $\eta^2 = .341$, meaning that the two groups (high confidence Non-Criterion A participants with high and low endorsements on the PCL-5) displayed different patterns of high and low endorsements across the PAI scales (Table 9). See Figure 13 for visual profiles across PAI scales for High PCL-5 versus Low PCL-5 groups within the high confidence Non-Criterion A subset. Specifically, the High PCL-5 group had significantly higher mean scores for all PAI *T* scores tested, with larger differences for DEP *T*

scores compared to ANX and ARD *T* scores, and a mean difference of 15.25 in PAI NIM *T* scores.

Non-Sexually Violent Criterion A vs. Non-Criterion A PCL-5 Responding

A series of profile analyses on PCL-5 scores were conducted using the sample of participants with high confidence ratings after removing any participants with a Criterion A event consisting of sexual violence (sexual assault, any unwanted or uncomfortable sexual experience), leaving a total sample of $N = 887$. An initial *t*-test of the difference in mean PCL-5 total scores revealed that the Non-Sexually Violent Criterion A group did not have a significantly higher mean PCL-5 total score ($M = 14.4$, $SD = 15.5$) compared to the Non-Criterion A group ($M = 14.3$, $SD = 15.9$), $t(882.63) = -0.09$, $p = .463$.

The PCL-5 items level test demonstrated no overall main effect for Group, $F(1, 885) = .01$, $p = .926$, partial $\eta^2 = .000$. The test of parallelism was significant, $F(19, 867) = 2.94$, $p < .001$, partial $\eta^2 = .06$, meaning that the two groups (high confidence Non-Sexually Violent Criterion A and Non-Criterion A) displayed different patterns of high and low endorsements across the PCL-5 items (Table 10). See Figure 14 for visual profiles across PCL-5 items for high confidence Criterion A and Non-Criterion A groups when sexual violence index events are removed. Specifically, the Criterion A group had significantly higher mean scores for hypervigilance and exaggerated startle. The Non-Criterion A group had significantly higher mean scores for social withdrawal, loss of interest, and negative beliefs. All other PCL-5 items did not significantly differ in mean score between groups.

The PCL-5 subscales level test demonstrated no overall main effect for Group, $F(1, 885) = .01$, $p = .926$, partial $\eta^2 = .000$. The test of parallelism was significant, $F(3, 883) = 5.05$, $p =$

.002, partial η^2 = .017, meaning that the two groups (high confidence Non-Sexually Violent Criterion A and Non-Criterion A) displayed different patterns of high and low endorsements across the PCL-5 subscales (Table 11). See Figure 15 for visual profiles across PCL-5 subscales for high confidence Criterion A and Non-Criterion A groups when sexual violence index events are removed. There were no significant differences between the Criterion A and Non-Criterion A high confidence groups across PCL-5 symptom clusters when sexual violence index events were removed.

Discussion

The current study used a series of profile analyses to examine the difference between groups of participants exposed to Criterion A traumas and Non-Criterion A events on self-rated PTSD symptoms and symptom clusters and comorbid psychopathology. Criterion A status was determined according to three different methods. The first method, Method A, relied only on self-rated event exposure without consideration of an event narrative. Method B included the independent review of participants' written narratives, however, retained individuals whose Criterion A status was uncertain due to lack of clarity or a missing narrative. Lastly, Method C incorporated confidence ratings in addition to the narrative review, including only participants whose written narrative provided enough information to determine Criterion A group status with certainty.

As hypothesized, overall, results indicated significantly more severe profiles across PCL-5 items and symptom clusters for individuals with Criterion A traumas compared to Non-Criterion A events. Further, the magnitude of the difference between PCL-5 scores between groups increased, and symptom- and cluster-level patterns of differences in self-rated PTSD symptoms varied depending on the methodology used to identify Criterion A status. Regarding

the level effect, the Criterion A group self-reported higher mean symptoms of PTSD overall on the PCL-5 at the item- and cluster-level. The effect sizes of these differences were small but slightly larger when using narrative plus confidence ratings (Analysis 3). Using narrative ratings alone (Analysis 2) did not change the magnitude of the difference between Criterion A and Non-Criterion A groups on PCL-5 endorsement over LEC-5 indicated methodology (Analysis 1). Regarding the parallelism test, the effect size of the departure from parallelism across PCL-5 items was medium when using narrative plus confidence ratings (Analysis 3) compared to small for other rating methods (1 and 2); the effect size of the departure from parallelism across PCL-5 clusters was small for all analyses. Lastly, when using PAI scales as the dependent variable, there was a greater difference between groups on endorsement of anxiety and anxiety-related symptoms but not depression symptoms when more rigorous coding methods were used. In general, this observed trend of increasing effect size and clearer differentiation between Criterion A and Non-Criterion A groups across Analyses 1, 2, and 3 demonstrated the positive impact of rigorous and careful assessment of Criterion A, specifically the use of narrative review with confidence ratings, for the accurate study of PTSD.

Notably, the location of deviation in parallelism across PCL-5 items varied between analyses, such that Analyses 1 and 2 yielded a lower number of differences in mean item scores than Analysis 3. In Analysis 3, only NACM items (PCL-5 item 9, 12, 13, 14, and 15) had the same endorsement between Criterion A and Non-Criterion A groups. In Analysis 1, there were no group differences for additional items 3 (flashbacks) and 10 (distorted blame), and in Analysis 2, there were no group difference for additional items 1 (intrusive memories), 3 (flashbacks), 4 (psychological distress), 6 (internal avoidance), and 16 (risk behaviors). Consistently, Criterion A and Non-Criterion A groups, even when rigorous coding methodology

was applied, had fewer differences in endorsement of NACM symptoms. When less rigorous coding methods were used, results showed no differences in endorsement of several hallmark symptoms of PTSD, providing additional evidence of the potential inaccuracy of conclusions about PTSD symptom differences when using poorly defined Criterion A status groups. This raises the question whether previous studies that failed to implement a rigorous rating method for Criterion A yielded reliable results. Specifically, would the direction of their results remain the same had they utilized a more accurate method for identifying groups? In fact, of the 18 studies (Alessi et al., 2013; Anders et al., 2011; Anders et al., 2012; Bodkin et al., 2007; Cameron et al., 2010; Franklin et al., 2019; Gold et al., 2005; Hyland et al., 2021; Lansing et al., 2017; Long et al., 2008; Mol et al., 2005; Mulder et al., 2013; Roberts et al., 2012; Robinson et al., 2006; Robinson and Larson, 2010; Rumball et al., 2020; van den Berg et al., 2017; Van Hooff et al., 2009) reviewed that unexpectedly found no difference or reversed differences in PTSD symptom endorsement between Criterion A and Non-Criterion A groups, 10 used only a self-report checklist, one used a self-report checklist and clinical interview combined, five used a self-report checklist and narrative review, one used an open-ended interview question, and one did not specify methodology for the identification of Criterion A status. The methodological findings of the current study provide a potential explanation for the inconsistencies in the literature regarding PTSD symptoms following exposure to Criterion A and other events.

Additionally, differences in psychopathology varied between groups depending on the Criterion A coding method. Specifically, differences between the Criterion A and Non-Criterion A groups on the DEP-C and DEP scales were more pronounced in Analysis 1 than Analyses 2 and 3. As groups became more rigorously defined in Analyses 2 and 3, the differences between groups on the DEP-C and DEP scales was reduced, though remained significant. Given that

Analysis 1 Criterion A groups are considered presumptive and do not include a narrative review, this pattern of shrinking differences in depression across the three analyses may allude to the confounding nature of depression with PTSD. The opposite is observed for the anxiety and anxiety-related disorders scales (ANX-A, ANX-P, ANX-C, ANX, and ARD), where differences between Criterion A and Non-Criterion A groups increase between Analysis 1 and Analysis 3, with the Criterion A group significantly greater. Given similarity in symptoms of anxiety and PTSD (e.g., conflation of reexperiencing and rumination, physiological arousal, avoidance of internal/external cues that create discomfort), these elevations are not unsurprising, especially when considering the increasingly well-defined Criterion A groups. Though this finding may suggest a confounding relationship between anxiety and PTSD, it also indicates distinct differences between those who have and have not experienced a Criterion A trauma.

Given that the Criterion A status rating method was most rigorous for Analysis 3, inferences about differences in PTSD and other clinical symptoms between groups were made based on analyses only using this subset of the data. First, it is notable that Criterion A and Non-Criterion A groups did not have different endorsement on primary NACM symptoms (negative beliefs, loss of interest, social withdrawal, anhedonia) with only one exception (irritable behavior). Given prior research examining the association between PTSD and depression (Bodkin et al., 2007; Byllesby et al., 2017) and the influence of non-specific general distress (Brewin et al., 2009; Byllesby et al., 2016; Hyland et al., 2021), it is possible the lack of differentiation between groups on the NACM items is related to the measurement of highly overlapping constructs (e.g., NACM and depression).

Further evidence of possible confounding depression is provided by the observation that Criterion A and Non-Criterion A groups also did not endorse different levels of affective

depression symptoms (DEP-A) on the PAI that greatly overlap in content with NACM item descriptions on the PCL-5. Given that this finding wasn't observed for the majority of AAR items despite high levels of reported anxiety on the PAI by participants, it is possible that AAR items may be more representative of trauma-related distress specifically. In contrast, NACM items in particular may be driving overall lack of differentiation between Criterion A trauma exposed and Non-Criterion A groups in the literature and further consideration of the utility of these items may be warranted. These findings are also consistent with calls to narrow the PTSD diagnostic criteria and eliminate items synonymous with symptoms of other disorders, the main aim of the *ICD-11* workgroup (Brewin et al., 2017; Hyland et al., 2021; Maercker et al., 2013).

Another proposed reason for lack of observed differences between Criterion A and Non-Criterion A is negative response bias, or the tendency to intentionally report unfavorable self-descriptions of psychopathology. Consistent with this hypothesis, a follow-up profile analysis on PAI scores between High- and Low-PCL-5 responders within the Non-Criterion A group showed that High-PCL-5 responders scored significantly higher on the negative impression management scale (NIM) which represents very infrequently endorsed symptoms not present in even clinically severe populations (Morey, 2007). Given this finding, it is possible that individuals with Non-Criterion A events who rate themselves as experiencing high levels of PTSD symptoms may have a tendency to present themselves in an overly negative light and may be over-reporting mental health problems across the board (PTSD, anxiety, depression).

Due to the disagreement in the literature regarding what should be included in the *DSM-5* definition of a traumatic experience, the current study also examined the effect of experiencing objectively stressful and difficult events that "just miss" the current *DSM-5* definition of Criterion A on PTSD symptom endorsement. The present study attempted to identify individuals

whose stressful index event fell in this "grey area" and explicitly compare them to Non-Criterion A and Criterion A individuals. The results of the profile analysis on PCL-5 scores between Criterion A, Non-Criterion A, and High Magnitude Stressors groups indicated that the High Magnitude Stressors group scored significantly higher than the Non-Criterion A group on 11 PCL-5 items and all PCL-5 clusters and lower than the Criterion A group on only two items: hypervigilance and exaggerated startle. Importantly, mean scores on most PTSD symptoms (reexperiencing, avoidance, and NACM items) and PAI scales (anxiety, depression) were similar between the High Magnitude Stressors group and Criterion A group, suggesting that participants with these Non-Criterion A life experiences are reporting similar levels of PTSD, depression, and anxiety symptoms overall. The higher endorsement of participants who experienced a Criterion A event compared to those who experienced a High Magnitude Stressor on hypervigilance and startle may suggest these symptoms are uniquely posttraumatic sequelae not as often caused by other types of stressful events, consistent with the rationale of the *ICD-11* workgroup to retain them as core PTSD symptoms (Maercker et al., 2013).

Given this finding, it is possible that previous studies that found no differences in PTSD symptoms between those with and without trauma may have been influenced by individuals with High Magnitude Stressors within the Non-Criterion A group. The High Magnitude Stressors group speaks both to the nuanced nature of Criterion A and the difficulty of interpreting self-rated PTSD symptoms measures. Future research is needed to determine whether individuals who have experienced objectively stressful and distressing events are experiencing symptoms of PTSD or other emotional distress. Future studies should use clinician administered interviews such as the CAPS-5 to better characterize participants' symptoms using behavioral examples and

clarification questions (e.g., intrusive and unwanted memories vs. rumination; trauma-related changes in mood vs. onset of depression).

To examine yet another potential factor that may be influencing PCL-5 profiles, sexually violent events were removed from the Criterion A group in a subsequent exploratory profile analysis. Interestingly, stark differences between the Criterion A and Non-Criterion A groups were no longer observed on the PCL-5 items or symptom clusters. The Non-Criterion A group scored significantly higher on negative beliefs and social withdrawal, whereas the Criterion A group without sexually violent events included scored significantly higher on hypervigilance and exaggerated startle. This is consistent with previous research demonstrating that directly experienced events and interpersonal traumas (such as sexual assault) are more likely than indirectly experienced events (e.g., learned about events) or non-interpersonal traumas (e.g., car accident) to result in PTSD (Anders et al., 2011; Breslau et al., 1999; Forbes et al., 2011; Thomas et al., 2021). This finding provided further evidence for the traumatic stressor criterion as it exists in *DSM-5*: when events are unequivocally traumatic and extreme, the differences in resulting symptoms are obvious. Future research studies should report the prevalence of trauma types within their sample given that sexually violent traumatic events may amplify the differences observed between groups. This finding also alludes to the unfortunate frequency of sexual violence among undergraduate students on college campuses, and the traumatic nature of such an experience.

Limitations to the current study include the use of an undergraduate sample, which may not be representative of a community sample. However, previous research has demonstrated that the prevalence of trauma is similar between college students and the general population (Bernat, Ronfeldt, Calhoun, & Arias, 1998). Further, the sample was lacking diversity, predominantly

composed of white and female respondents. The present study should be replicated in a community sample with greater demographic and event type diversity. In addition, symptoms of PTSD were self-rated by respondents, which may introduce biases commonly associated with self-report measures (e.g., response bias, negative impression management, misinterpretation of item prompts). However, the present study aimed to reduce the impact of respondent bias by excluding participants with careless or inattentive responding on the PAI. In addition, the use of multiple self-report measures may have introduced common method bias, where method-related variance is incorporated in the collective variance between variables from the PCL-5 and PAI, potentially inflating the observed correlational relationships. The present study should be replicated utilizing interview-based assessment for PTSD to address this limitation.

Since the preferred use of a specific type of multiple imputation for profile analysis was not applicable given the data analytic design to compare increasingly thorough, and therefore different, groups, listwise deletion was used for the present study. This could have potentially introduced sampling bias where individuals with shared characteristics correlated to missing data were removed from the present analyses. Lastly, another limitation is the lack of current research concerning the specific subset of Non-Criterion A events (labeled "High Magnitude Stressors" in the current study). Although this addition to the present study was warranted given the gap in the literature, there was no empirical guidance for the categorization and coding of these events. Future studies should replicate the high magnitude stressor coding from the present study to add to the literature on the consequences of Non-Criterion A events.

In summary, the present research yields strong recommendations that Criterion A be identified with a rigorous coding method involving a combination of preliminary group assignment based on responses to the self-report checklist, review of a narrative description of

the traumatic event, and confidence ratings to determine the sample for inclusion. Further, individuals who fail to provide sufficient details or appropriately respond to the event checklist should be removed from studies on PTSD. This method ensures greater accuracy in the identification of Criterion A and assists in appropriately categorizing nuanced events. Given the results of the present study, future implementation of this rigorous method for identifying those with and without traumatic events and removing data with insufficient information will yield clearer distinctions in clinical psychopathology and PTSD symptoms between Criterion A and Non-Criterion A groups.

The current study illuminated differences between Criterion A and Non-Criterion A groups, and indicated these differences in the literature were likely previously muddled by non-rigorous assessment of Criterion A. The present study showed that confounding psychopathology or intentional unfavorable responding may explain high endorsement of PCL-5 items among non-traumatized participants, and that some PTSD symptoms may be particularly vulnerable to endorsement despite the lack of a traumatic catalyst. Importantly, the current study provides evidence of the necessity of trauma for the development of PTSD, differences in severity of trauma-related sequelae following *DSM-5* Criterion A traumas vs. non-traumatizing events, and how the ambiguity of participant descriptions, rating procedures, and nuanced stressful events complicate the definition of Criterion A and the study of trauma-related psychopathology.

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Table 1

Summary of Literature Concerning Criterion A vs. Non-Criterion A Groups in PTSD Symptomatology

Study	Sample (*N*)	Method[1]	Result[2] (Cohen's *d*)
Hovens and van der Ploeg, 1993	Clinical sample (inpatient hospitalization; 53)	Open-ended interview question + ratings	Criterion A > Non-Criterion A (*d* = 1.29 [MMPI]; *d* = 1.37 [Mississippi])
Gold et al., 2005	Undergraduates (430)	Self-report checklist with brief narrative + ratings	Non-Criterion A > Criterion A (*d* = .21)
Mol et al., 2005	Community sample (832)	Unspecified[3] self-report checklist	Non-Criterion A > Criterion A*
Robinson et al., 2006	Undergraduates (111)	Self-report checklist	No difference (*d* = .37)
Erwin et al., 2006	Clinical sample (Social Anxiety Disorder; 45)	Open-ended interview question + ratings	Criterion A > Non-Criterion A control group (*d* = .71

[1] Refers to the assessment method utilized for the identification of the index event (traumatic or life stressor).

[2] Refers to the direction of their results. "Criterion A > Non-Criterion A" indicates a finding where those experiencing a *DSM* definition of trauma had greater PTSD prevalence or symptoms; "Non-Criterion A > Criterion A" indicates a finding where those experiencing a non-traumatic event or life stressor had greater PTSD prevalence or symptoms; "No differences" indicates no significant differences between Criterion A and Non-Criterion A groups in PTSD prevalence or symptoms. Cohen's *d* is not available for studies indicated by *.

[3] Indicates that the authors did not specify the checklist used, or that the authors generated a checklist for the purpose of the research study.

			[hyperarousal]; *d* = .8 [re-experiencing]; *d* = 1.26 [avoidance]
Bodkin et al., 2007	Clinical sample (Major Depressive Disorder; 103)	Open-ended interview question + ratings	No difference*
Long et al., 2008	Undergraduates (119)	Self-report checklist	Non-Criterion A > Criterion A (*d* = .25)
Boals and Schuettler, 2009	Undergraduates (558)	Self-report checklist + ratings	Criterion A > Non-Criterion A (*d* = .25)
Van Hooff et al., 2009	Clinical (victims of natural disaster) and community sample (860)	Self-report checklist with brief narrative + ratings	Non-Criterion A > Criterion A*
Lancaster et al., 2009	Undergraduates (668)	Self-report checklist + "additional questions"	Criterion A > Non-Criterion A (*d* = .26)
Waelde et al., 2010	Undergraduates (408)	Self-report checklist with brief narrative + dichotomous yes/no A1/A2 questions	Criterion A > Non-Criterion A (*d* = 1.1)
Robinson and Larson, 2010	Undergraduates (362)	Self-report checklist	No difference (*d* = .01)
Cameron et al., 2010	Undergraduates (248)	Unspecified	No difference (*d* = .09)
Anders et al., 2011	Adult women (844)	Self-report checklist	Non-Criterion A > Criterion A*
Wortmann et al., 2011	Undergraduates (142)	Self-report checklist	Criterion A > Non-Criterion A (*d* = .41 [Time 1], *d* = .54 [Time 2])
Anders et al., 2012	Undergraduates (181)	Self-report checklist with brief narrative + ratings	No difference*

Roberts et al., 2012	Female nurses (3,013)	Unspecified self-report checklist	No difference*
Alessi et al., 2013	Heterosexual and lesbian/gay/bisexual (LGB) community sample (508)	Self-report checklist with brief narrative + ratings	Non-Criterion A > Criterion A*
Dewey and Schuldberg, 2013	Undergraduates (152)	Self-report checklist	Criterion A > Non-Criterion A*
Mulder et al., 2013	Community sample (987)	Unspecified self-report checklist	No difference*
Hellmuth et al., 2014	Community sample (987)	Unspecified self-report checklist	Criterion A > Non-Criterion A*
Lancaster et al., 2014	Undergraduates (746)	Self-report checklist	Criterion A > Non-Criterion A (d = .43)
Lansing et al., 2017	Adjudicated adolescent females (118)	Clinical interview and self-report checklist	No difference*; Non-Criterion A > Criterion A on functional impairment
van den Berg et al., 2017	Clinical sample (depression and/or anxiety disorder; 1433)	Self-report checklist	Non-Criterion A > Criterion A (for men; d = .36); No difference (for women; d = .07)
Franklin et al., 2019	Veterans (212)	Self-report checklist	No difference (d = .13)
Rumball et al., 2020	Clinical sample (Autism Spectrum Disorder; 49)	Self-report checklist with brief narrative + ratings	No difference*
Hyland et al., 2021	Community sample (1020)	Self-report checklist	No difference*

Table 2

Demographic and index event information

Demographic Characteristic	*M* (*SD*) or %
Mean Age	19.8 (1.6)
Female Gender (%)	74.5%
Race (%)	
White	88.1%
African American/Black	5.9%
Asian American	3.7%
American Indian/Alaskan Native	0.4%
Native Hawaiian/Pacific Islander	0.2%
Other	1.7%
Ethnicity (%)	
Hispanic or Latino	3.8%
Index Event (%)	
Transportation accident	14.5%
Suicide	8.8%
Sexual assault	7.9%
Natural disaster	6.4%
Serious accident at work, home, or during recreational activity	4.3%
Physical assault	2.9%
Sudden, unexpected death of someone close to you	2.2%
Assault with a weapon	1.8%
Other unwanted or uncomfortable sexual experience	1.7%
Life-threatening illness or injury (not cancer or heart problems)	1.7%
Fire or explosion	1.6%

Note. $N = 1872$ for age, gender, race, and ethnicity, and $N = 1050$ for Index Event; Criterion A events endorsed by less than 1% of the current sample included sudden and violent death; exposure to toxic substance; captivity; combat or war-zone exposure; severe human suffering; or causing serious injury, harm, or death to someone else.

Table 3

Follow-up PCL-5 item mean pairwise results for Non-Criterion A vs. Criterion A groups across three rating methods

	Analysis 1 – LEC Syntax					Analysis 2 – Narrative Rating					Analysis 3 – Confidence Rating				
	Non-Crit. A		Crit. A			Narr. Non-Crit. A		Narr. Crit. A			High Conf. Non-Crit. A		High Conf. Crit. A		
PCL-5 Item	*M*	*SD*	*M*	*SD*	*F*	*M*	*SD*	*M*	*SD*	*F*	*M*	*SD*	*M*	*SD*	*F*
1. B1	0.8	1.1	1.0	1.1	8.49*	0.9	1.0	1.0	1.1	2.62	0.9	1.1	1.1	1.2	6.08*
2. B2	0.4	0.8	0.5	1.0	10.26*	0.4	0.8	0.6	1.0	13.19*	0.4	0.9	0.7	1.1	16.06*
3. B3	0.4	0.9	0.5	0.9	0.87	0.4	0.9	0.5	1.0	2.87	0.4	0.9	0.6	1.0	4.43*
4. B4	1.1	1.3	1.3	1.3	11.74*	1.2	1.3	1.3	1.3	3.50	1.3	1.3	1.5	1.3	7.07*
5. B5	0.6	1.0	0.8	1.2	11.81*	0.6	1.0	0.8	1.2	15.76*	0.7	1.1	1.0	1.3	20.07*
6. C1	1.0	1.2	1.3	1.4	23.28*	1.1	1.3	1.2	1.3	3.82	1.2	1.3	1.5	1.4	10.06*
7. C2	0.8	1.2	1.0	1.3	15.08*	0.8	1.2	1.0	1.3	7.25*	0.9	1.3	1.2	1.4	10.40*
8. D1	0.5	0.9	0.7	1.1	15.48*	0.6	1.0	0.8	1.1	6.53*	0.6	1.0	0.9	1.2	16.28*
9. D2	0.7	1.1	0.7	1.2	1.04	0.6	1.1	0.7	1.2	3.09	0.7	1.2	0.9	1.3	3.03
10. D3	0.8	1.2	0.8	1.3	0.78	0.7	1.2	0.9	1.3	14.57*	0.7	1.2	1.1	1.4	22.45*
11. D4	0.9	1.2	1.0	1.3	3.25	0.9	1.2	1.0	1.3	4.74*	1.0	1.3	1.2	1.4	8.03*
12. D5	0.5	0.9	0.5	1.0	1.48	0.5	1.0	0.5	1.0	0.12	0.6	1.1	0.6	1.1	0.01
13. D6	0.6	1.1	0.7	1.1	0.14	0.7	1.1	0.7	1.1	0.15	0.8	1.2	0.8	1.2	0.04
14. D7	0.5	1.0	0.6	1.0	1.34	0.6	1.0	0.6	1.0	0.03	0.7	1.1	0.7	1.1	0.08
15. E1	0.4	0.8	0.5	0.9	3.44	0.4	0.8	0.5	0.9	1.69	0.5	0.9	0.6	1.0	2.05
16. E2	0.2	0.6	0.3	0.8	9.31*	0.2	0.7	0.3	0.8	2.97	0.3	0.7	0.4	0.9	4.99*
17. E3	0.6	1.1	0.9	1.2	20.55*	0.6	1.0	0.9	1.3	24.88*	0.7	1.1	1.1	1.3	26.38*
18. E4	0.4	0.9	0.6	1.1	16.52*	0.4	0.9	0.7	1.1	27.21*	0.4	0.9	0.8	1.2	31.43*
19. E5	0.7	1.1	0.8	1.2	7.10*	0.7	1.1	0.8	1.2	5.69*	0.8	1.2	1.0	1.3	4.24*
20. E6	0.7	1.1	0.8	1.3	9.40*	0.7	1.1	0.9	1.3	12.71*	0.7	1.2	1.0	1.3	8.79*

Note. N = 1872 for Profile Analysis 1; N = 1740 for Profile Analysis 2; N = 1033 for Profile Analysis 3. PCL-5 = PTSD Checklist for *DSM-5*; LEC-5 = Life Events Checklist for *DSM-5*; B1 = Memories; B2 = Nightmares; B3 = Flashbacks; B4 = Psychological Distress; B5 = Physiological Reactivity; C1 = Internal Avoidance; C2 = External Avoidance; D1 = Amnesia; D2 = Negative Beliefs; D3 = Blame; D4 = Negative Feelings; D5 = Loss of Interest; D6 = Social Withdrawal; D7 = Anhedonia; E1 = Irritable Behavior; E2 = Risky Behavior; E3 = Hypervigilance; E4 = Exaggerated Startle; E5 = Concentration Problems; E6 = Sleep Problems.

*Indicates statistically significant difference using Scheffe's adjusted F. Profile Analysis 1: $F(1, 1870) = 3.85$, $\alpha = .05$. Profile Analysis 2: $F(1, 1738) = 3.85$, $\alpha = .05$. Profile Analysis 3: $F(1, 1031) = 3.85$, $\alpha = .05$.

Table 4

PCL-5 symptom cluster profile analysis for Non-Criterion A vs. Criterion A groups across three rating methods

	Analysis 1 – LEC Syntax					Analysis 2 – Narrative Rating					Analysis 3 – Confidence Rating				
	Non-Crit. A		Crit. A			Narr. Non-Crit. A		Narr. Crit. A			High Conf. Non-Crit. A		High Conf. Crit. A		
PCL-5 Cluster	*M*	*SD*	*M*	*SD*	*F*	*M*	*SD*	*M*	*SD*	*F*	*M*	*SD*	*M*	*SD*	*F*
1. REX	3.4	4.3	4.1	4.6	11.49*	3.5	4.1	4.1	4.8	9.11*	3.7	4.4	4.9	5.2	13.77*
2. AV	1.8	2.3	2.3	2.5	21.47*	1.9	2.3	2.2	2.5	6.05*	2.1	2.4	2.7	2.7	11.43*
3. NACM	4.4	5.9	5.0	6.3	3.52	4.5	5.9	5.1	6.3	4.08*	5.1	6.4	6.2	6.8	6.84*
4. AAR	2.9	4.6	3.9	5.1	16.94*	3.0	4.5	4.0	5.3	17.93*	3.4	4.7	4.8	5.6	17.85*

Note. $N = 1872$ for Profile Analysis 1; $N = 1740$ for Profile Analysis 2; $N = 1033$ for Profile Analysis 3. PCL-5 = PTSD Checklist for *DSM-5*. REX = Reexperiencing symptom cluster. AV = Avoidance symptom cluster. NACM = Negative Alterations in Cognition and Mood symptom cluster. AAR = Arousal and Reactivity symptom cluster.

*Indicates statistically significant difference using Scheffe's adjusted *F*. Profile Analysis 1: $F(1, 1870) = 3.85$, $\alpha = .05$. Profile Analysis 2: $F(1, 1738) = 3.85$, $\alpha = .05$. Profile Analysis 3: $F(1, 1031) = 3.85$, $\alpha = .05$.

Table 5

PAI subscale profile analysis for Non-Criterion A vs. Criterion A groups across three rating methods

	Analysis 1 – LEC Syntax					Analysis 2 – Narrative Rating					Analysis 3 – Confidence Rating				
	Non-Crit. A		Crit. A			Narr. Non-Crit. A		Narr. Crit. A			High Conf. Non-Crit. A		High Conf. Crit. A		
PAI Scale	*M*	*SD*	*M*	*SD*	*F*	*M*	*SD*	*M*	*SD*	*F*	*M*	*SD*	*M*	*SD*	*F*
1. NIM	50.5	10.6	51.6	10.4	3.90*	51.0	10.8	51.6	10.5	1.0	51.7	11.3	52.4	10.8	0.80
2. DEP-C	55.1	13.2	57.1	14.0	8.09*	55.5	13.5	57.2	13.9	5.77*	56.2	14.1	58.7	14.3	6.96*
3. DEP-A	52.0	12.2	53.9	13.4	8.11*	52.7	13.0	54.0	13.2	3.65	53.4	13.6	55.1	13.7	3.42
4. DEP	53.3	12.5	55.7	13.5	13.39*	53.8	12.9	55.9	13.4	9.51*	54.5	13.5	57.4	13.9	10.62*
5. ANX-A	55.3	12.1	57.4	13.4	10.17*	55.4	12.3	57.7	13.4	11.90*	55.6	12.9	58.9	14.1	13.54*
6. ANX-P	55.8	12.4	58.1	13.7	11.21*	55.9	12.3	58.4	13.9	13.45*	56.3	12.7	59.8	14.6	15.01*
7. ANX-C	57.7	12.4	59.1	13.3	4.62*	58.0	12.5	59.3	13.3	3.43	58.4	13.1	60.5	13.7	5.66*
8. ANX	57.0	12.5	59.1	13.9	9.50*	57.2	12.5	59.4	14.0	10.03*	57.5	13.2	60.8	14.6	12.30*
9. ARD	53.4	11.3	55.2	12.5	8.52*	53.7	10.9	55.3	12.9	6.58*	54.0	11.4	56.8	13.4	11.38*

Note. $N = 1656$ for Profile Analysis 1; $N = 1548$ for Profile Analysis 2; $N = 922$ for Profile Analysis 3. PAI = Personality Assessment Inventory. NIM = Negative Impression Management subscale. DEP-C = Depression – Cognitive subscale. DEP-A = Depression – Affective subscale. DEP = Depression – Full Scale. ANX-A = Anxiety – Affective subscale. ANX-P = Anxiety – Physiological subscale. ANX-C = Anxiety – Cognitive subscale. ANX = Anxiety – Full Scale. ARD = Anxiety Related Disorders – Full Scale .

*Indicates statistically significant difference using Scheffe's adjusted *F*. Profile Analysis 1: $F(1, 1654) = 3.85$, $\alpha = .05$. Profile Analysis 2: $F(1, 1546) = 3.85$, $\alpha = .05$. Profile Analysis 3: $F(1, 920) = 3.85$, $\alpha = .05$.

Table 6

PCL-5 item-level profile analysis results for High Magnitude stressors group compared to high confidence Non-Criterion A and Criterion A groups

	High Magnitude Stressors		High Confidence Non-Criterion A			High Confidence Criterion A		
PCL-5 Item	*M*	*SD*	*M*	*SD*	*F*	*M*	*SD*	*F*
1. B1	1.1	1.2	0.8	1.0	10.93*	1.1	1.2	0.18
2. B2	0.5	1.0	0.4	0.8	3.82	0.7	1.1	2.02
3. B3	0.6	1.0	0.4	0.8	4.42*	0.6	1.0	0.05
4. B4	1.6	1.4	1.1	1.2	15.95*	1.5	1.3	1.03
5. B5	1.0	1.3	0.6	1.0	11.39*	1.0	1.3	0.48
6. C1	1.6	1.4	1.0	1.2	18.01*	1.5	1.4	0.53
7. C2	1.2	1.4	0.8	1.2	10.82*	1.2	1.4	0.00
8. D1	0.7	1.1	0.6	1.0	2.32	0.9	1.2	2.41
9. D2	0.9	1.2	0.7	1.2	1.79	0.9	1.3	0.08
10. D3	0.9	1.3	0.6	1.1	3.71	1.1	1.4	3.20
11. D4	1.2	1.4	0.9	1.2	5.79*	1.2	1.4	0.11
12. D5	0.7	1.2	0.5	1.0	3.13	0.6	1.1	0.86
13. D6	1.0	1.3	0.7	1.1	7.63*	0.8	1.2	3.43
14. D7	0.9	1.2	0.6	1.1	6.66*	0.7	1.1	2.74
15. E1	0.6	1.0	0.4	0.9	3.75	0.6	1.0	0.16
16. E2	0.4	0.8	0.2	0.6	4.83*	0.4	0.9	0.02
17. E3	0.8	1.2	0.6	1.1	3.39	1.1	1.3	5.06*
18. E4	0.6	1.0	0.4	0.9	2.29	0.8	1.2	7.32*
19. E5	1.0	1.3	0.7	1.2	4.29*	1.0	1.3	0.02
20. E6	0.9	1.3	0.7	1.1	3.62	1.0	1.3	0.61

Note. N = 1016. PCL-5 = PTSD Checklist for *DSM-5*; LEC-5 = Life Events Checklist for *DSM-5*; B1 = Memories; B2 = Nightmares; B3 = Flashbacks; B4 = Psychological Distress; B5 = Physiological Reactivity; C1 = Internal Avoidance; C2 = External Avoidance;

D1 = Amnesia; D2 = Negative Beliefs; D3 = Blame; D4 = Negative Feelings; D5 = Loss of Interest; D6 = Social Withdrawal; D7 = Anhedonia; E1 = Irritable Behavior; E2 = Risky Behavior; E3 = Hypervigilance; E4 = Exaggerated Startle; E5 = Concentration Problems; E6 = Sleep Problems.

*Indicates statistically significant difference using Scheffe's adjusted *F*. High Magnitude Stressors versus high confidence Non-Criterion A: $F(1, 442) = 3.86$, $\alpha = .05$. High Magnitude Stressors versus high confidence Criterion A: $F(1, 773) = 3.85$, $\alpha = .05$.

Table 7

PCL-5 symptom cluster profile analysis for High Magnitude Stressors group compared to high confidence Non-Criterion A and Criterion A groups

	High Magnitude Stressors		High Confidence Non-Criterion A			High Confidence Criterion A		
PCL-5 Cluster	*M*	*SD*	*M*	*SD*	*F*	*M*	*SD*	*F*
1. REX	4.8	4.8	3.2	4.0	13.88*	4.9	5.2	0.03
2. AV	2.8	2.7	1.8	2.2	16.13*	2.7	2.7	0.16
3. NACM	6.2	6.8	4.5	5.9	7.06*	6.2	6.8	0.00
4. AAR	4.1	5.2	3.0	4.3	6.12*	4.8	5.6	1.64

Note. $N = 1016$. PCL-5 = PTSD Checklist for *DSM-5*. REX = Reexperiencing symptom cluster. AV = Avoidance symptom cluster. NACM = Negative Alterations in Cognition and Mood symptom cluster. AAR = Arousal and Reactivity symptom cluster.

*Indicates statistically significant difference using Scheffe's adjusted *F*. High Magnitude Stressors versus high confidence Non-Criterion A: $F(1, 442) = 3.86$, $\alpha = .05$. High Magnitude Stressors versus high confidence Criterion A: $F(1, 773) = 3.85$, $\alpha = .05$.

Table 8

PAI subscale profile analysis for High Magnitude Stressors compared to high confidence Non-Criterion A vs. Criterion A groups

	High Magnitude Stressors		High Confidence Non-Criterion A			High Confidence Criterion A		
PAI Scale	*M*	*SD*	*M*	*SD*	*F*	*M*	*SD*	*F*
1. NIM	52.2	11.7	51.4	11.2	0.43	52.4	10.8	0.04
2. DEP-C	57.7	15.6	55.2	13.1	2.74	58.7	14.3	0.58
3. DEP-A	54.8	15.4	52.2	12.4	3.24	55.1	13.7	0.05
4. DEP	56.3	15.1	53.1	12.2	5.45*	57.4	13.9	0.69
5. ANX-A	57.2	12.8	54.9	13.1	3.07	58.9	14.1	1.72
6. ANX-P	58.4	13.1	55.2	12.5	6.02*	59.8	14.6	1.12
7. ANX-C	60.6	12.4	57.3	13.4	6.06*	60.5	13.7	0.01
8. ANX	59.8	13.1	56.4	12.3	5.75*	60.8	14.6	0.61
9. ARD	55.9	11.9	53.1	10.8	5.97*	56.8	13.4	0.48

Note. $N = 657$ for High Magnitude versus high confidence Criterion A analyses. $N = 396$ for High Magnitude versus high confidence Non-Criterion A analyses. PAI = Personality Assessment Inventory. NIM = Negative Impression Management subscale. DEP-C = Depression – Cognitive subscale. DEP-A = Depression – Affective subscale. DEP = Depression – Full Scale. ANX-A = Anxiety – Affective subscale. ANX-P = Anxiety – Physiological subscale. ANX-C = Anxiety – Cognitive subscale. ANX = Anxiety – Full Scale. ARD = Anxiety Related Disorders – Full Scale.

*Indicates statistically significant difference using Scheffe's adjusted *F*. High Magnitude Stressors versus high confidence Non-Criterion A: $F(1, 394) = 3.87$, $\alpha = .05$. High Magnitude Stressors versus high confidence Criterion A: $F(1, 655) = 3.86$, $\alpha = .05$.

Table 9

PAI subscale profile analysis for Low-PCL vs. High-PCL respondents within the high confidence Non-Criterion A group

	Low-PCL		High-PCL		
PCL-5 Item	*M*	*SD*	*M*	*SD*	*F*
1. NIM	49.4	8.5	64.6	15.8	123.71*
2. DEP-C	53.3	11.6	72.7	15.7	131.43*
3. DEP-A	50.4	10.8	70.4	15.4	156.54*
4. DEP	51.3	10.8	72.0	13.9	176.13*
5. ANX-A	53.0	11.0	70.2	13.2	119.98*
6. ANX-P	53.7	10.7	70.8	13.4	123.93*
7. ANX-C	56.1	11.9	71.2	11.7	85.78*
8. ANX	54.8	11.3	73.0	13.0	131.45*
9. ARD	51.6	9.7	67.5	10.8	137.96*

Note. N = 410. PAI = Personality Assessment Inventory. PCL-5 = PTSD Checklist for DSM-5. NIM = Negative Impression Management subscale. DEP-C = Depression – Cognitive subscale. DEP-A = Depression – Affective subscale. DEP = Depression – Full Scale. ANX-A = Anxiety – Affective subscale. ANX-P = Anxiety – Physiological subscale. ANX-C = Anxiety – Cognitive subscale. ANX = Anxiety – Full Scale. ARD = Anxiety Related Disorders – Full Scale.

*Indicates statistically significant difference using Scheffe's adjusted F. Low-PCL versus High-PCL Non-Criterion A respondents: $F(1, 408) = 3.86$, $\alpha = .05$.

Table 10

PCL-5 item-level profile analysis results for high confidence Non-Criterion A vs. high confidence Non-Sexually Violent Criterion A groups

	High Confidence Non-Criterion A		High Confidence Non-Sexually Violent Criterion A		
PCL-5 Item	*M*	*SD*	*M*	*SD*	*F*
1. Memories	0.9	1.1	0.9	1.1	0.17
2. Nightmares	0.4	0.9	0.5	1.0	2.18
3. Flashbacks	0.4	0.9	0.5	0.9	0.02
4. Psychological Distress	1.3	1.3	1.3	1.2	0.04
5. Physiological Reactivity	0.7	1.1	0.8	1.2	2.25
6. Internal Avoidance	1.2	1.3	1.2	1.3	0.05
7. External Avoidance	0.9	1.3	0.9	1.3	0.04
8. Amnesia	0.6	1.0	0.7	1.1	2.60
9. Negative Beliefs	0.7	1.2	0.6	1.0	4.40*
10. Blame	0.7	1.2	0.8	1.2	1.74
11. Negative Feelings	1.0	1.3	0.9	1.2	0.41
12. Loss of Interest	0.6	1.1	0.4	0.9	5.61*
13. Social Withdrawal	0.8	1.2	0.6	1.1	5.57*
14. Anhedonia	0.7	1.1	0.5	1.0	3.84
15. Irritable Behavior	0.5	0.9	0.5	0.9	0.00
16. Risky Behavior	0.3	0.7	0.3	0.7	0.02
17. Hypervigilance	0.7	1.1	0.8	1.2	5.33*
18. Exaggerated Startle	0.4	0.9	0.7	1.1	9.90*
19. Concentration Problems	0.8	1.2	0.8	1.2	0.08
20. Sleep Problems	0.7	1.2	0.8	1.2	0.08

Note. N = 887. PCL-5 = PTSD Checklist for *DSM-5*.

*Indicates statistically significant difference using Scheffe's adjusted *F*. High confidence Non-Criterion A versus high confidence Non-Sexually Violent Criterion A: $F(1, 885) = 3.85$, $\alpha = .05$.

T**able 11**

PCL-5 symptom cluster profile analysis for high confidence Non-Criterion A vs. high confidence Non-Sexually Violent Criterion A groups

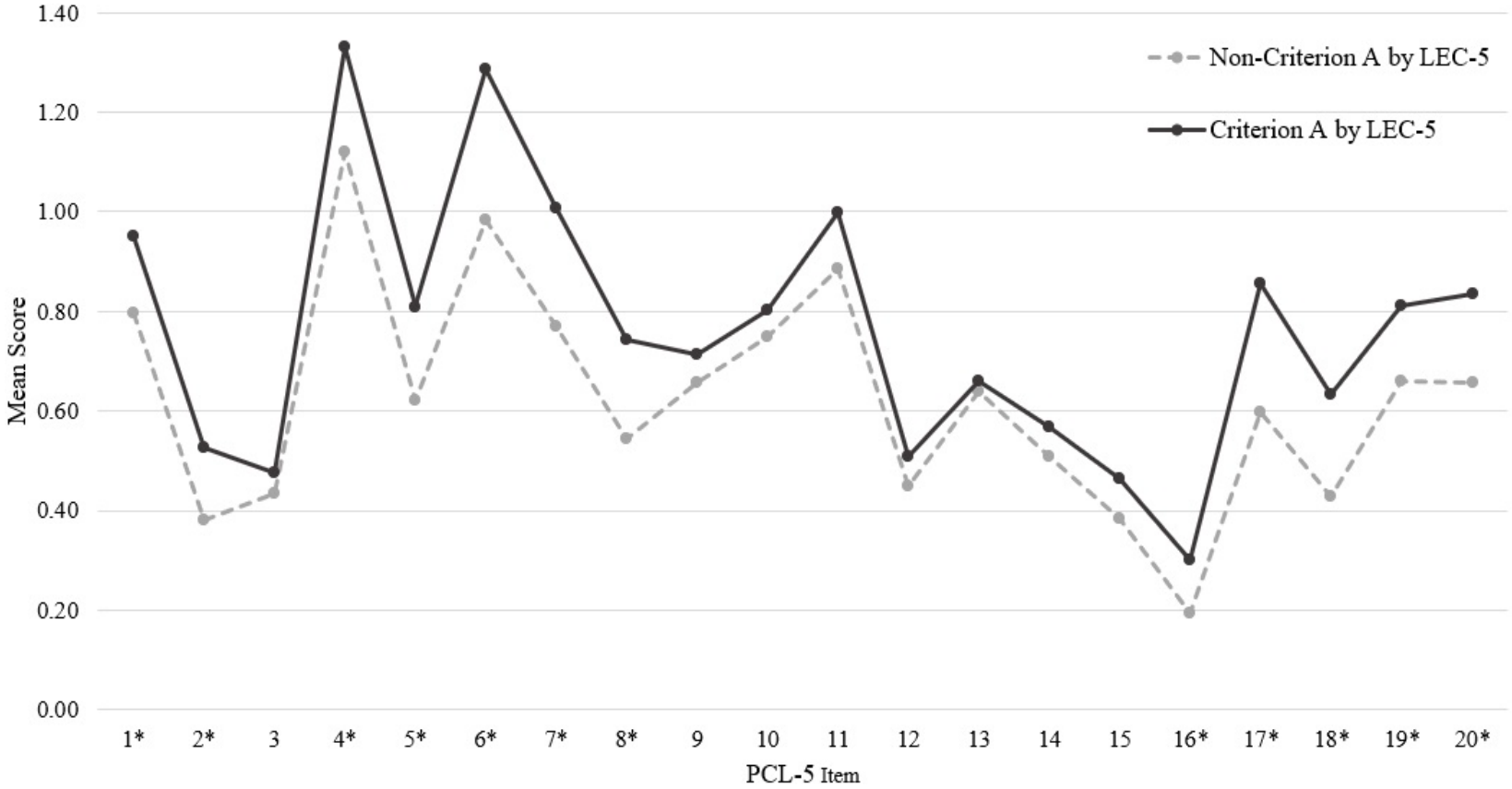
	High Confidence Non-Criterion A		High Confidence Non-Sexually Violent Criterion A		
PCL-5 Symptom Cluster	*M*	*SD*	*M*	*SD*	*F*
1. REX	3.7	4.4	3.9	4.6	0.30
2. AV	2.1	2.4	2.1	2.4	0.05
3. NACM	5.1	6.4	4.6	5.7	1.42
4. AAR	3.4	4.7	3.8	5.0	1.91

Note. N = 887. PCL-5 = PTSD Checklist for *DSM-5*. REX = Reexperiencing symptom cluster. AV = Avoidance symptom cluster. NACM = Negative Alterations in Cognition and Mood symptom cluster. AAR = Arousal and Reactivity symptom cluster.

*Indicates statistically significant difference using Scheffe's adjusted *F*. High confidence Non-Criterion A versus high confidence Non-Sexually Violent Criterion A: $F(1, 885) = 3.85$, $\alpha = .05$.

Figure 1

Profiles of PCL-5 item-level responding for Non-Criterion A vs. Criterion A groups as determined by LEC-5

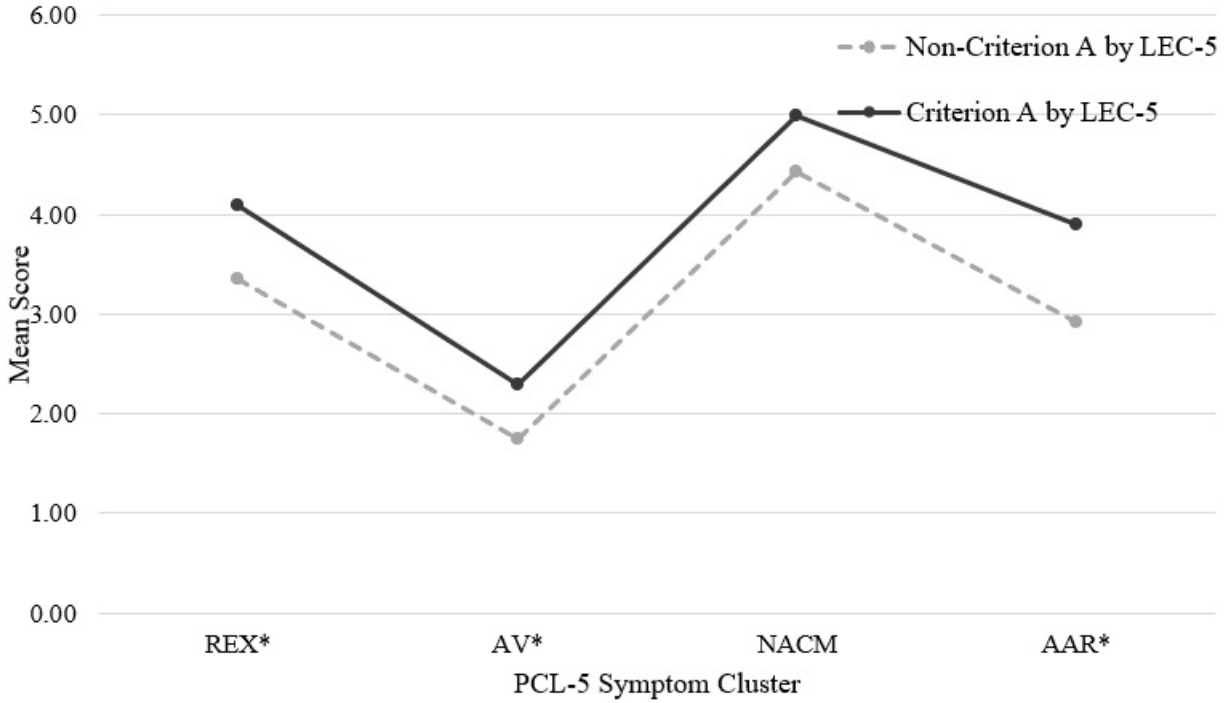


Note. $N = 1872$. Mean PCL-5 item scores range from 0-4.

*Indicates statistically significant difference using Scheffe's adjusted F. Profile Analysis 1: $F(1, 1870) = 3.85$, $\alpha = .05$.

Figure 2

Profiles of PCL-5 symptom cluster responding for Non-Criterion A vs. Criterion A groups as determined by LEC-5

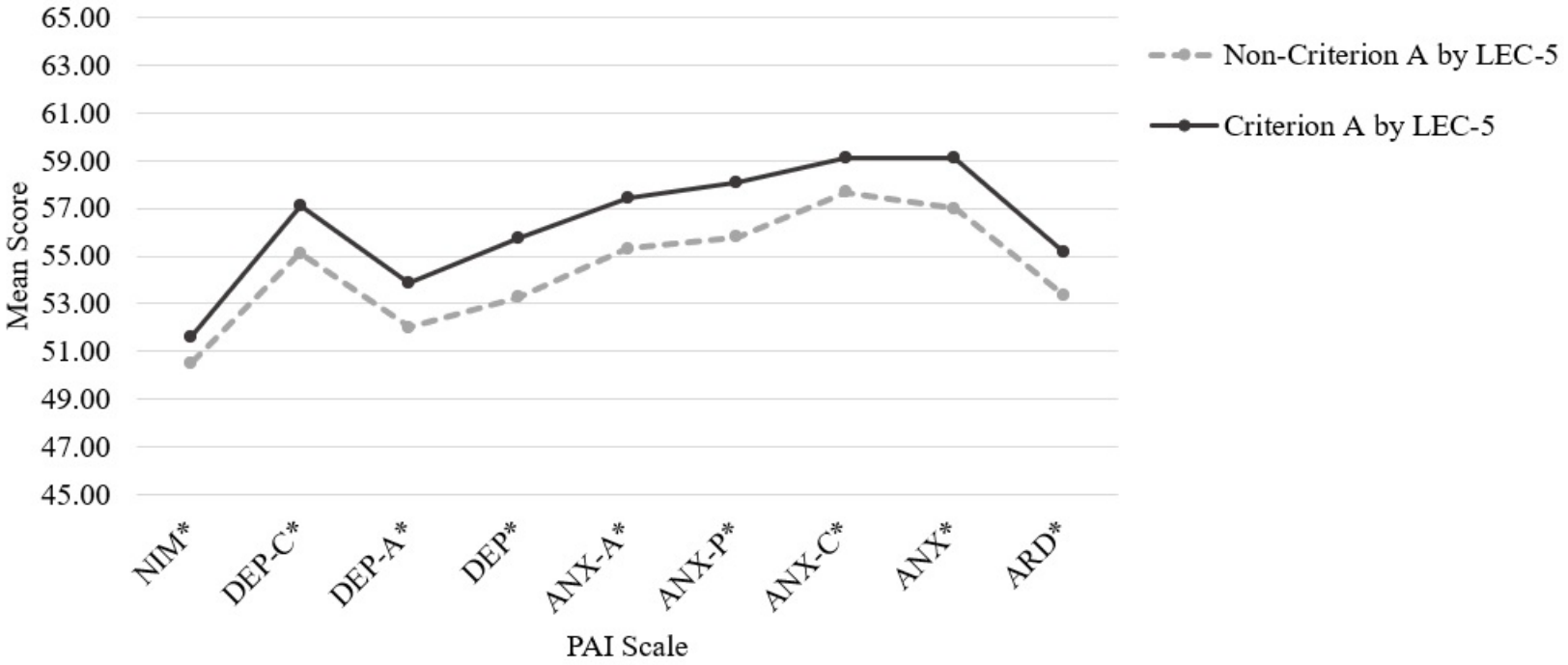


Note. $N = 1872$. Mean PCL-5 symptom cluster scores.

*Indicates statistically significant difference using Scheffe's adjusted F. Profile Analysis 1: $F(1, 1870) = 3.85$, $\alpha = .05$.

Figure 3

Profiles of PAI scale score responding for Non-Criterion A vs. Criterion A groups as determined by LEC-5

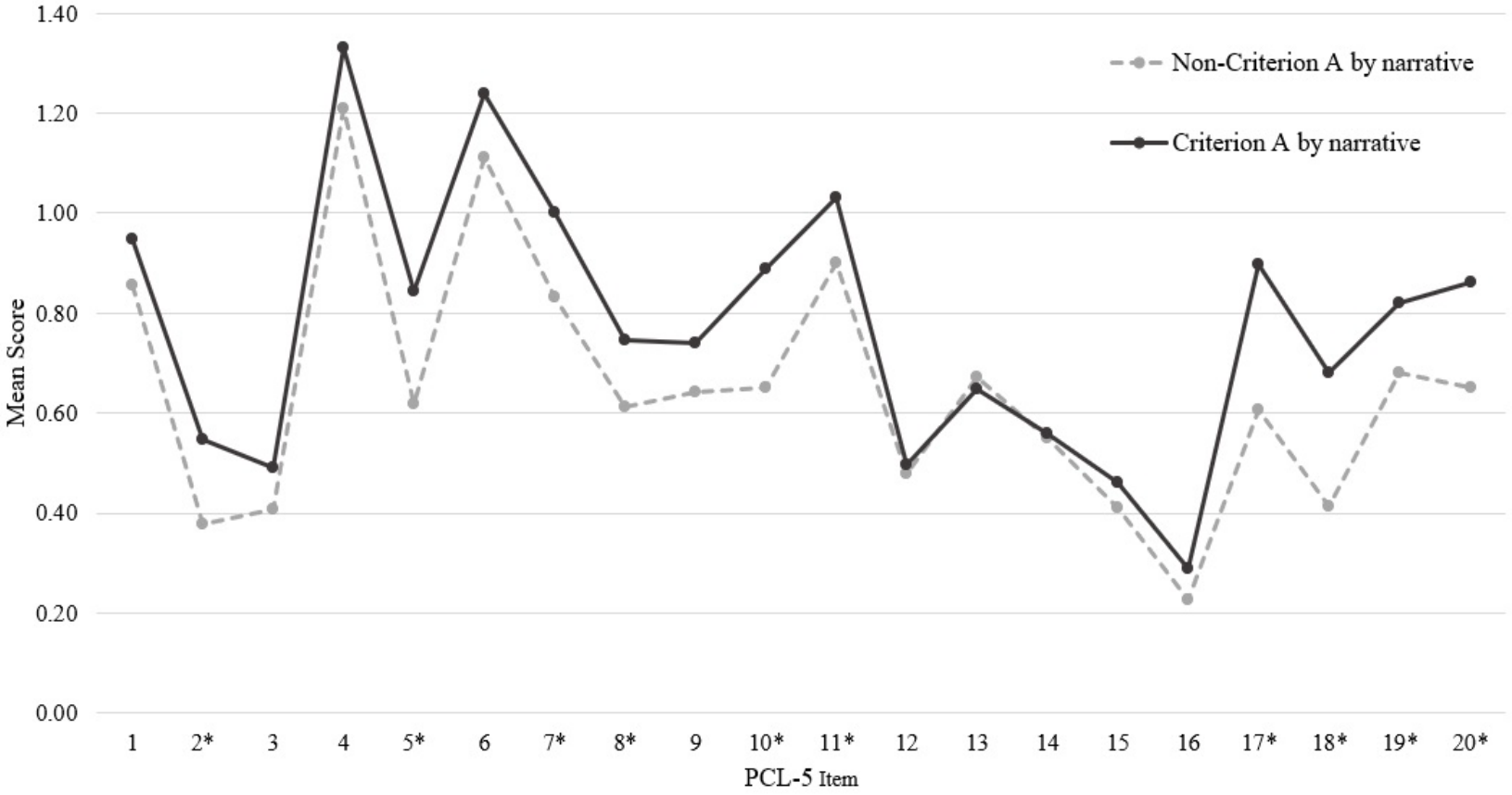


Note. $N = 1656$. Mean PAI scale scores.

*Indicates statistically significant difference using Scheffe's adjusted F. Profile Analysis 1: $F(1, 1654) = 3.85$, $\alpha = .05$.

Figure 4

Profiles of PCL-5 item-level responding for Non-Criterion A vs. Criterion A groups as determined by narrative review

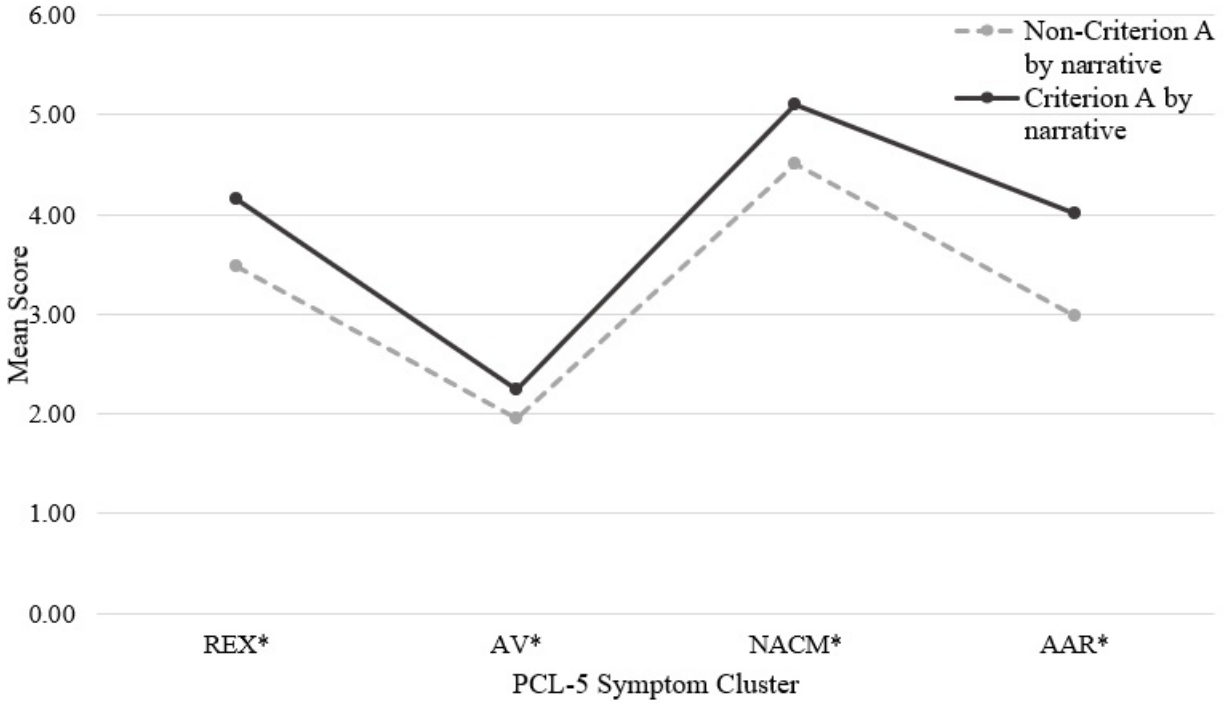


Note. $N = 1740$. Mean PCL-5 item scores range from 0-4.

*Indicates statistically significant difference using Scheffe's adjusted F. Profile Analysis 2: $F(1, 1738) = 3.85$, $\alpha = .05$.

Figure 5

Profiles of PCL-5 symptom cluster responding for Non-Criterion A vs. Criterion A groups as determined by narrative review

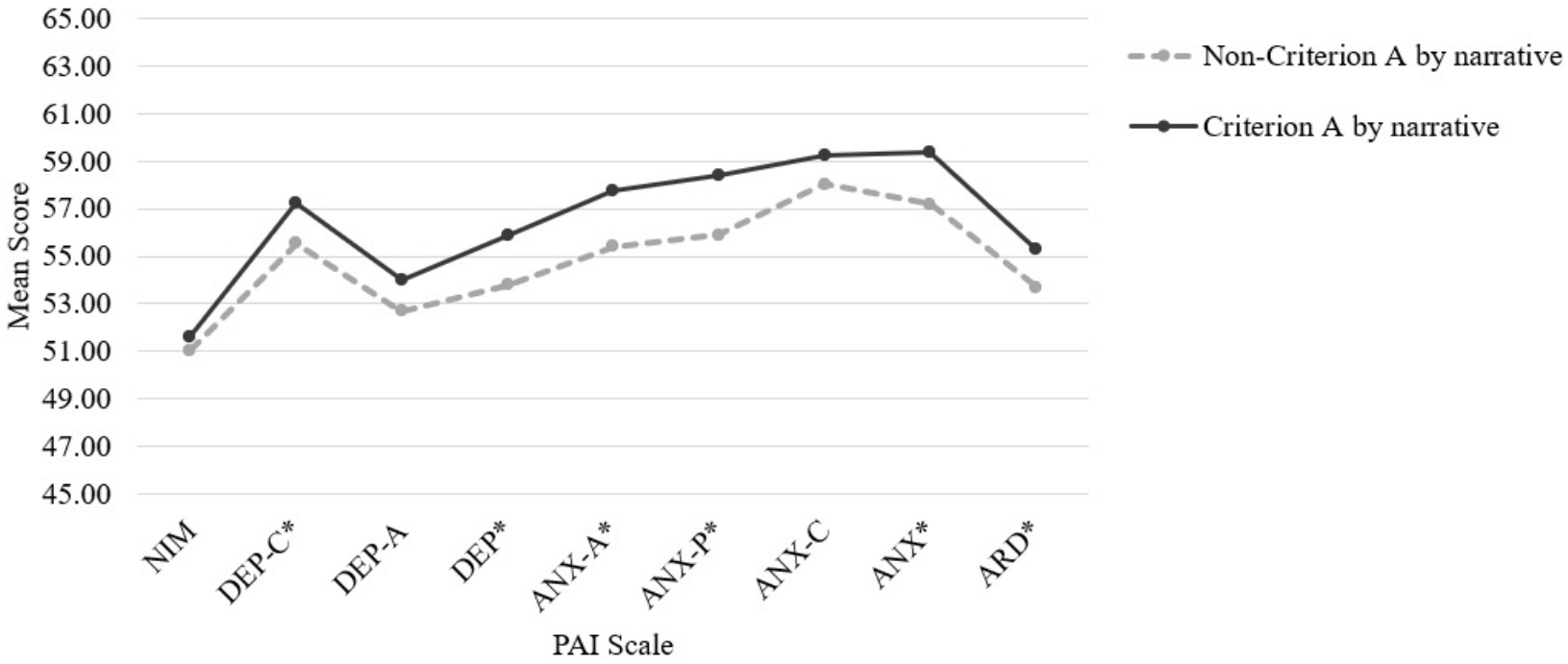


Note. $N = 1740$. Mean PCL-5 symptom cluster scores.

*Indicates statistically significant difference using Scheffe's adjusted F. Profile Analysis 2: $F(1, 1738) = 3.85$, $\alpha = .05$.

Figure 6

Profiles of PAI scale score responding for Non-Criterion A vs. Criterion A groups as determined by narrative review

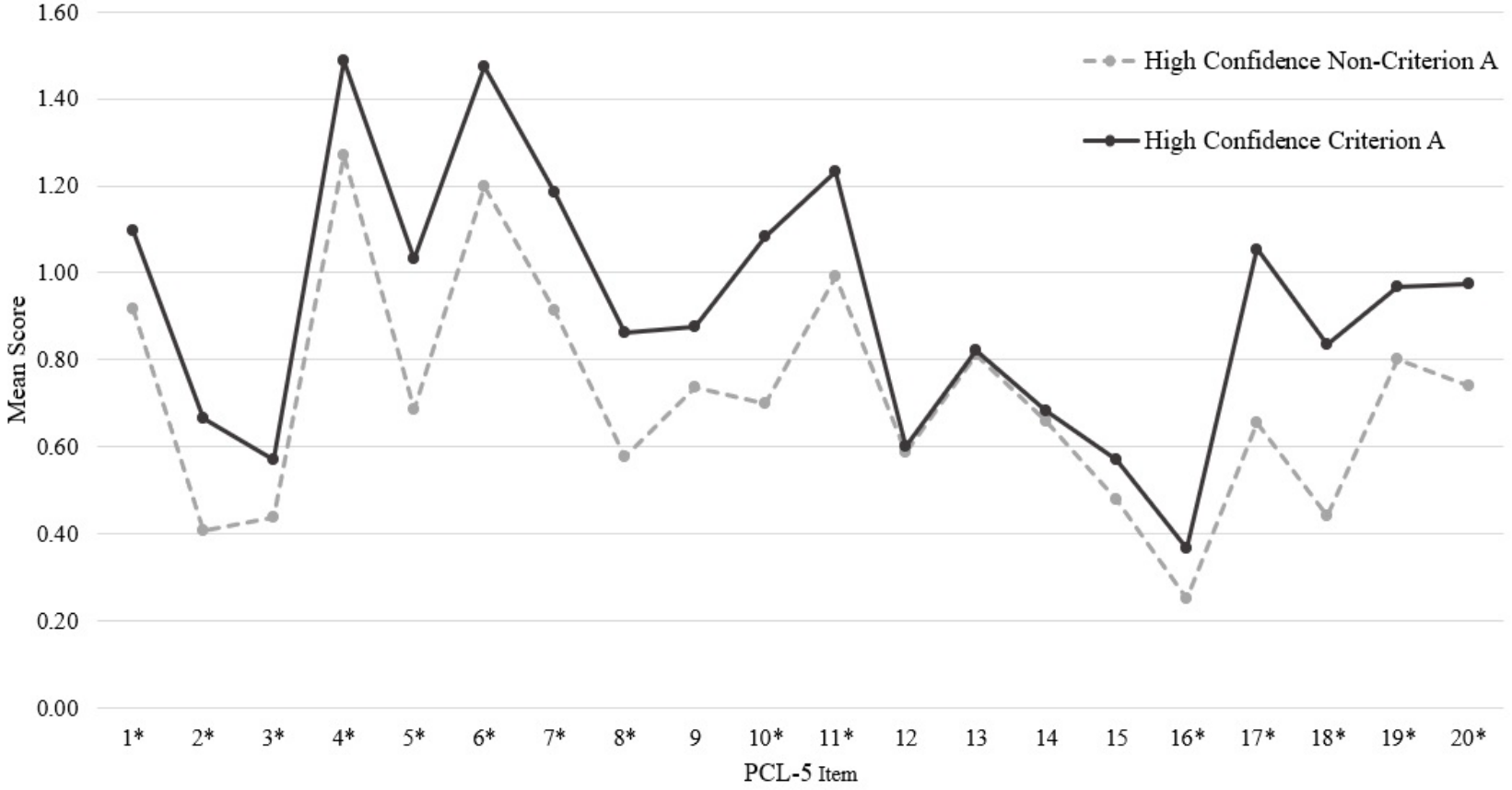


Note. $N = 1548$. Mean PAI scale scores.

*Indicates statistically significant difference using Scheffe's adjusted F. Profile Analysis 2: $F(1, 1546) = 3.85$, $\alpha = .05$.

Figure 7

Profiles of PCL-5 item-level responding for high confidence Non-Criterion A vs. Criterion A groups

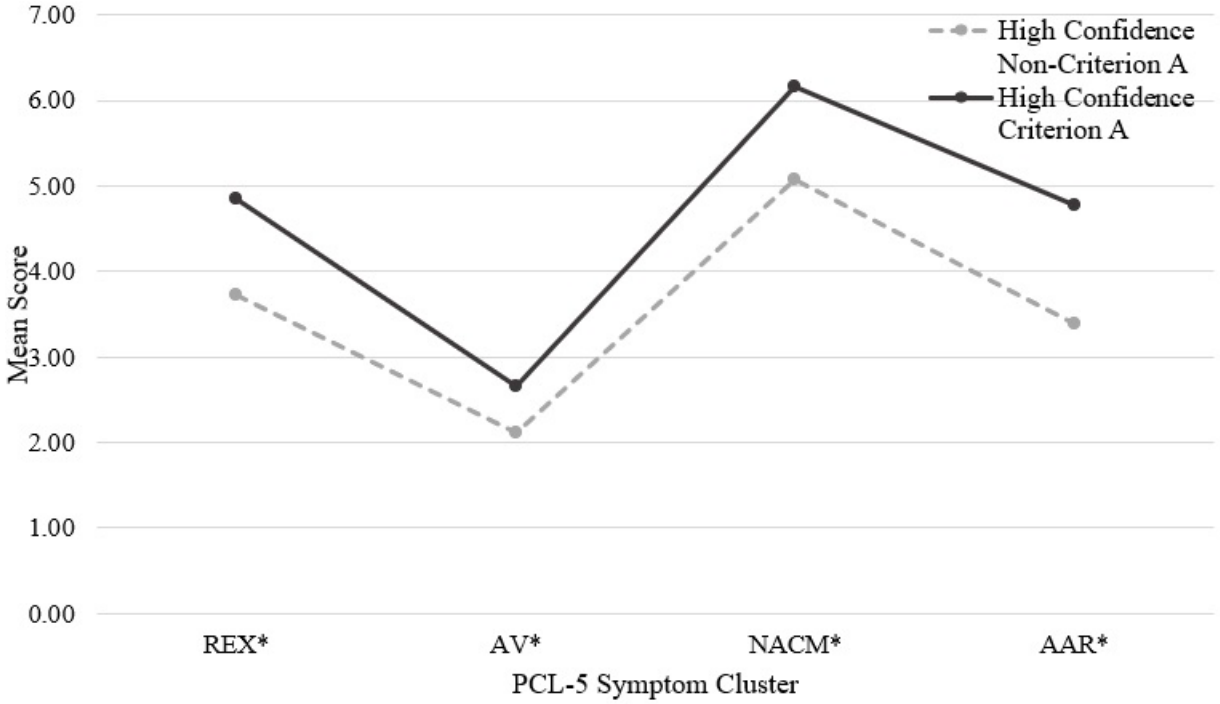


Note. $N = 1033$. Mean PCL-5 item scores range from 0-4.

*Indicates statistically significant difference using Scheffe's adjusted F. Profile Analysis 3: $F(1, 1031) = 3.85$, $\alpha = .05$.

Figure 8

Profiles of PCL-5 symptom cluster responding for high confidence Non-Criterion A vs. Criterion A groups

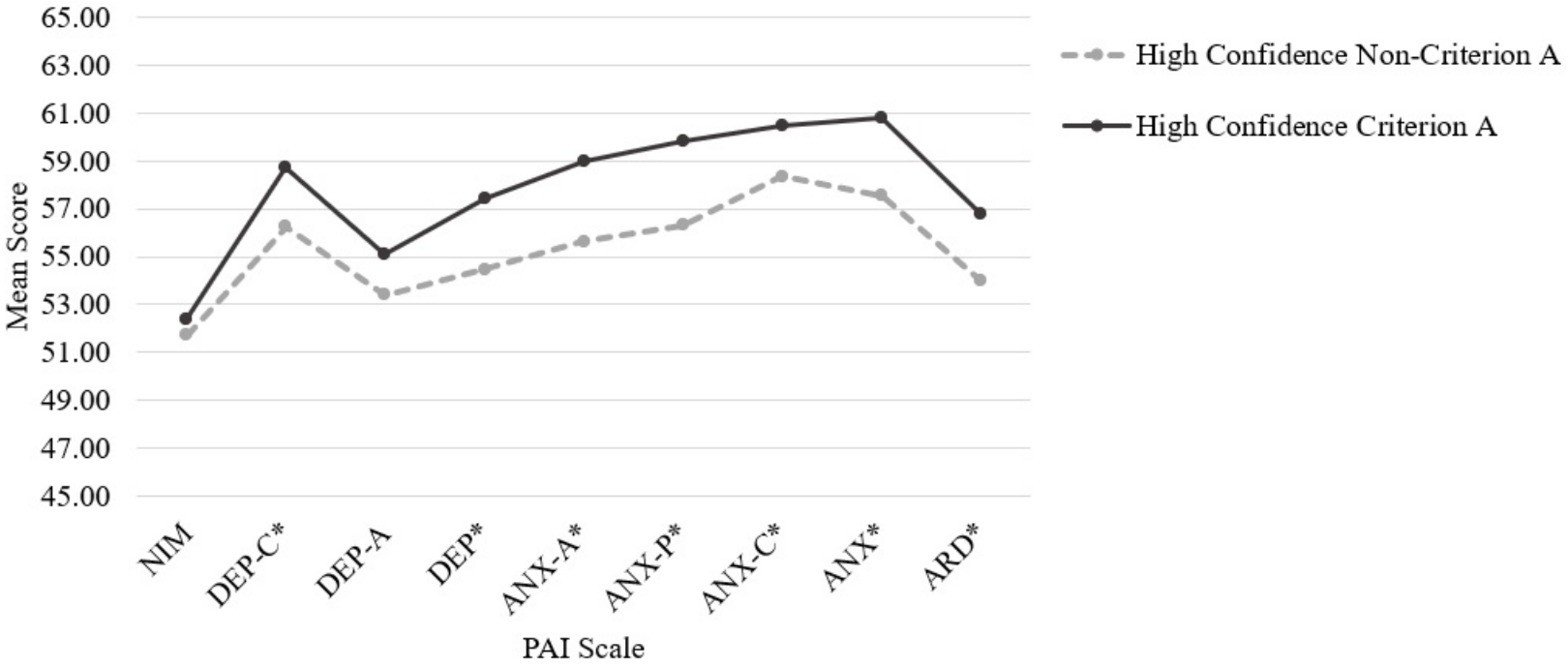


Note. $N = 1033$. Mean PCL-5 symptom cluster scores.

*Indicates statistically significant difference using Scheffe's adjusted F. Profile Analysis 3: $F(1, 1031) = 3.85$, $\alpha = .05$.

Figure 9

Profiles of PAI scale score responding for high confidence Non-Criterion A vs. Criterion A groups

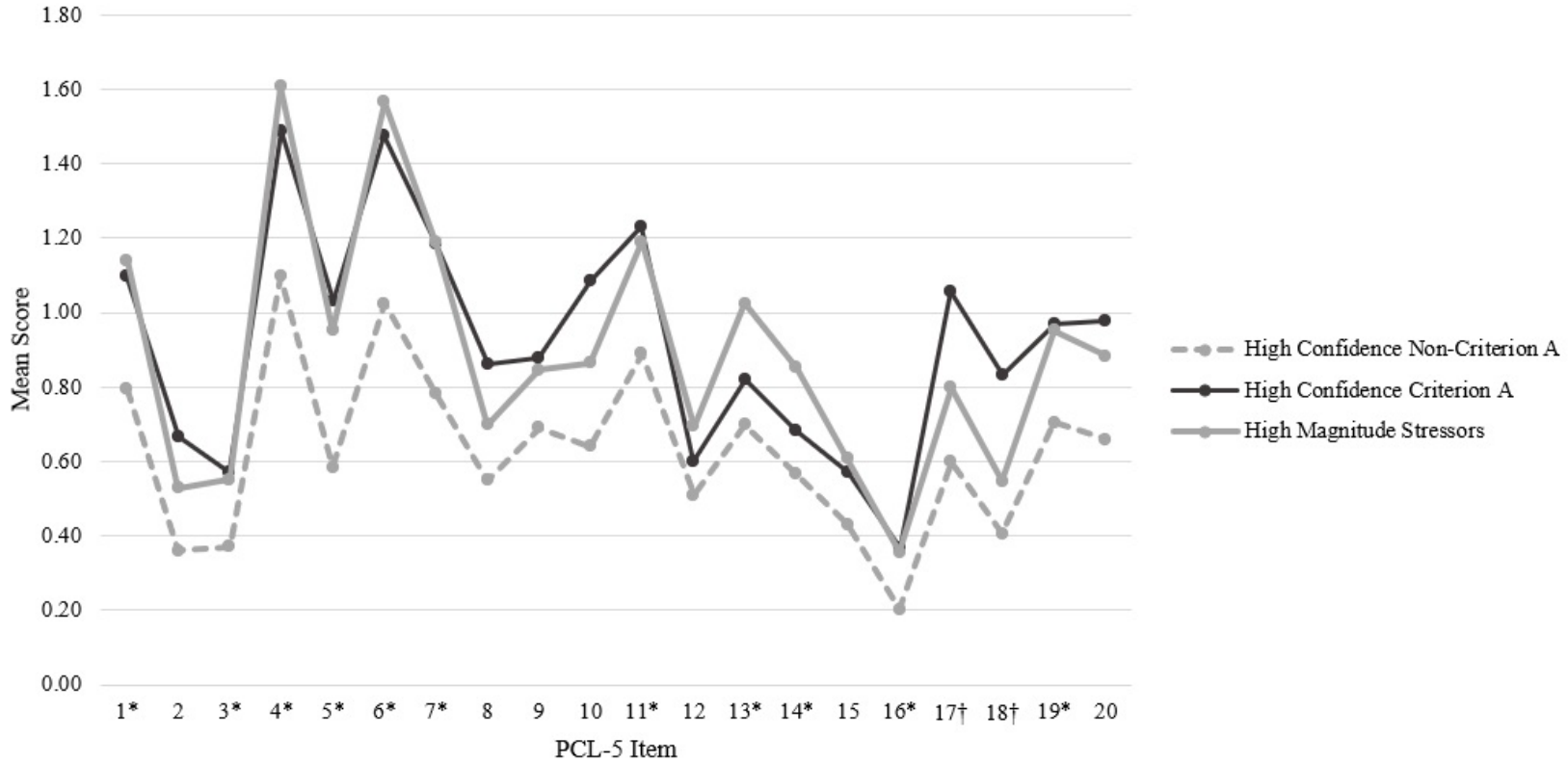


Note. $N = 922$. Mean PAI scale scores.

*Indicates statistically significant difference using Scheffe's adjusted F. Profile Analysis 3: $F(1, 920) = 3.85$, $\alpha = .05$.

Figure 10

Profiles of PCL-5 item-level responding for high confidence Non-Criterion A vs. High Magnitude Stressors vs. high confidence Criterion A groups



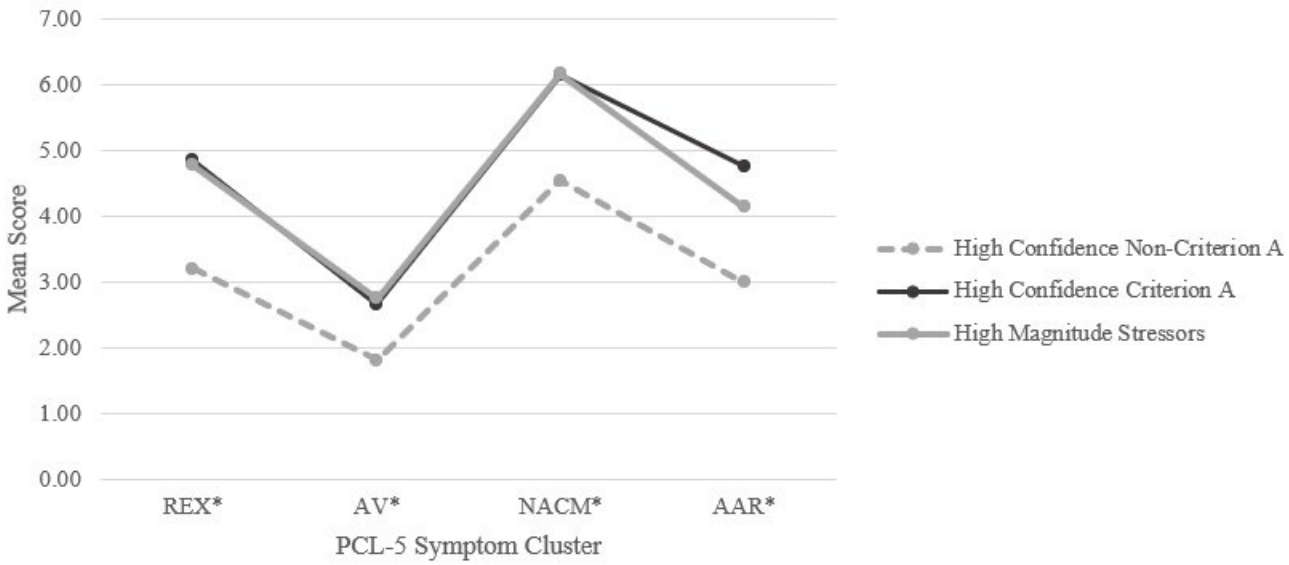
Note. $N = 1016$. Mean PCL-5 item scores range from 0-4.

*Indicates statistically significant difference using Scheffe's adjusted F. High Magnitude Stressors versus high confidence Non-Criterion A: $F(1, 442) = 3.86$, $\alpha = .05$.

†Indicates statistically significant difference using Scheffe's adjusted F. High Magnitude Stressors versus high confidence Criterion A: $F(1, 773) = 3.85$, $\alpha = .05$.

Figure 11

Profiles of PCL-5 cluster-level responding for high confidence Non-Criterion A vs. High Magnitude Stressors vs. high confidence Criterion A groups

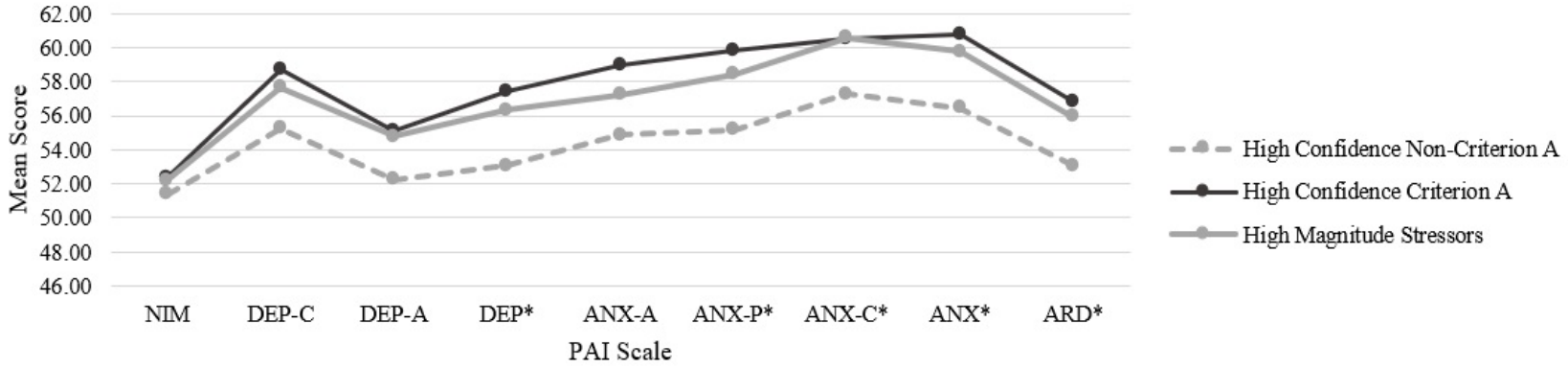


Note. $N = 1016$. Mean PCL-5 symptom cluster scores.

*Indicates statistically significant difference using Scheffe's adjusted F. High Magnitude Stressors versus high confidence Non-Criterion A: $F(1, 442) = 3.86$, $\alpha = .05$.

Figure 12

Profiles of PAI scale score responding for high confidence Non-Criterion A vs. High Magnitude Stressors vs. high confidence Criterion A groups

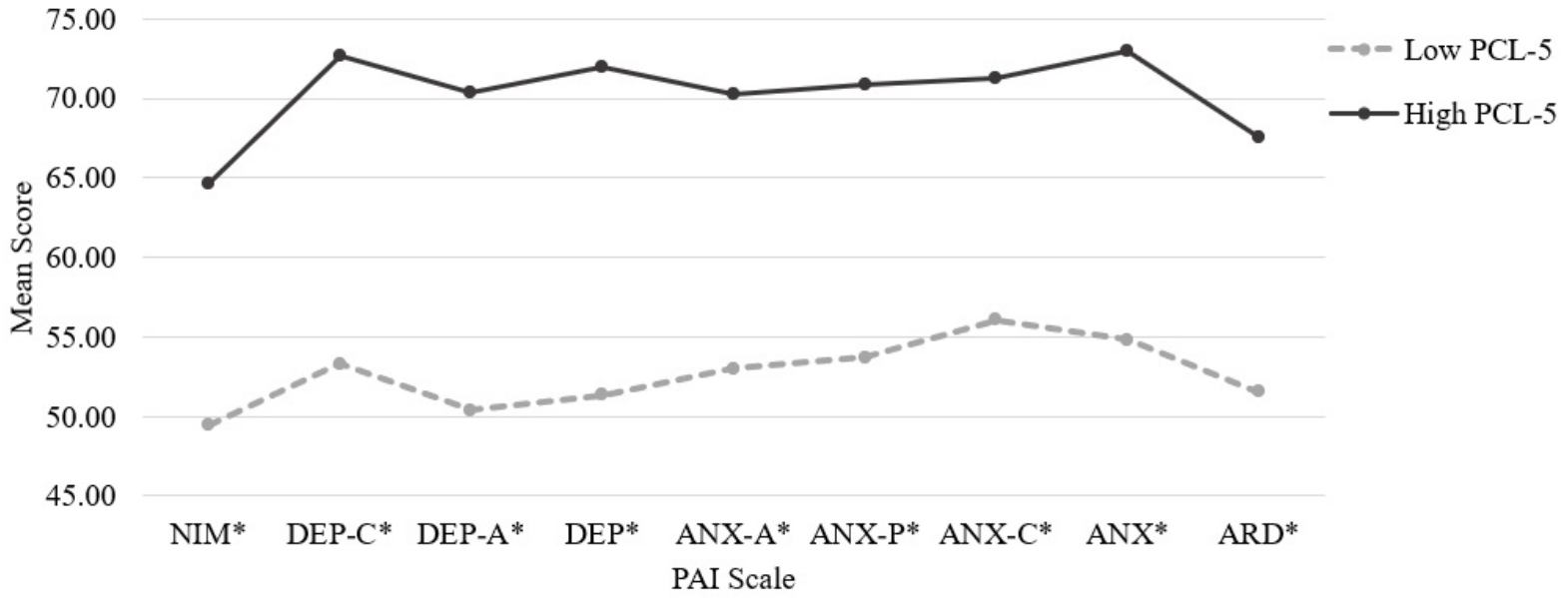


Note. $N = 908$. Mean PAI scale scores.

*Indicates statistically significant difference using Scheffe's adjusted F. High Magnitude Stressors versus high confidence Non-Criterion A: $F(1, 394) = 3.87$, $\alpha = .05$.

Figure 13

Profiles of PAI scale score responding for Low-PCL vs. High-PCL responding within the high confidence Non-Criterion A group

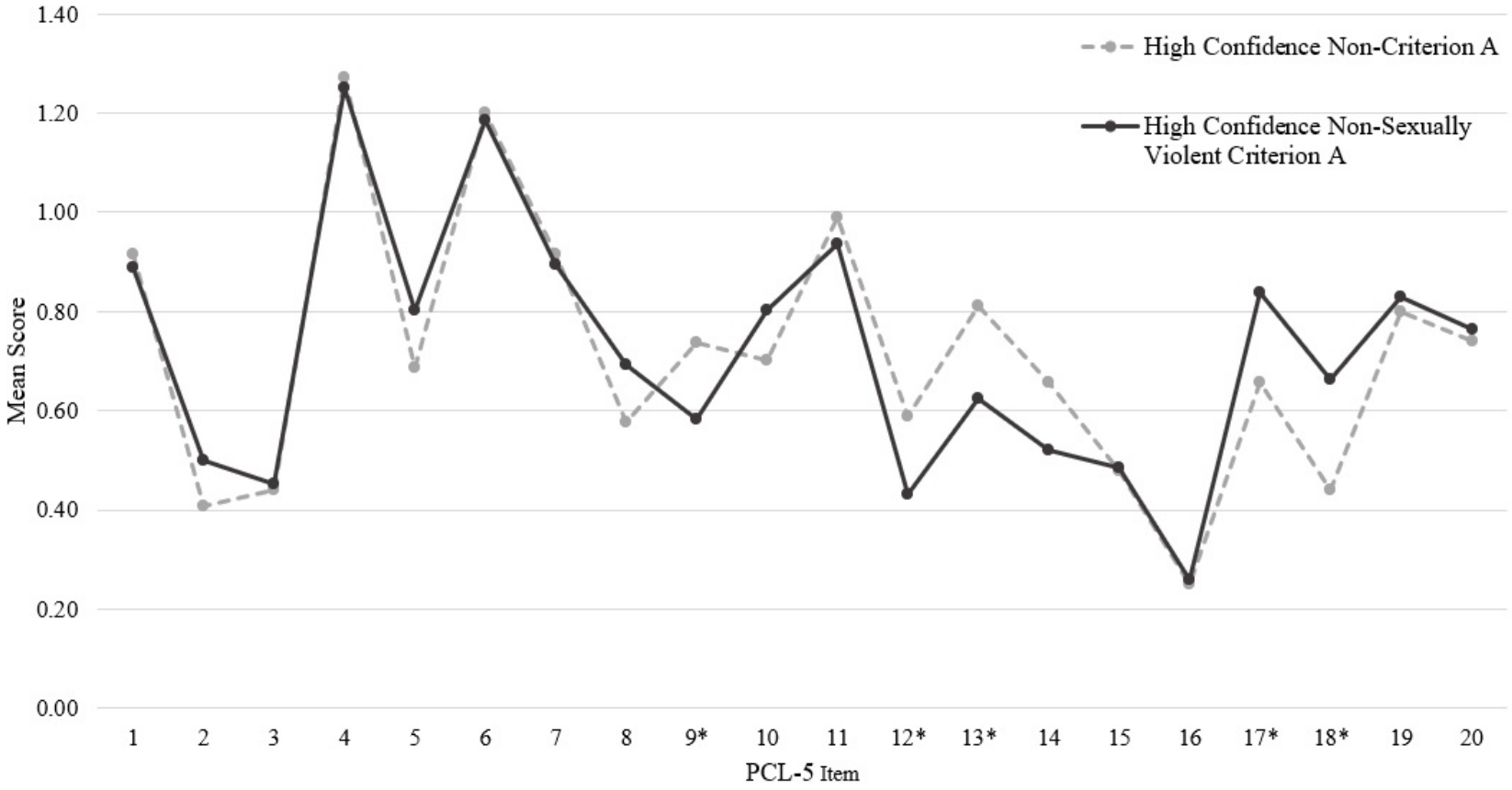


Note. $N = 410$. Mean PAI scale scores among High-PCL vs. Low-PCL respondents in Non-Criterion A high confidence group.

*Indicates statistically significant difference using Scheffe's adjusted F. Low-PCL versus High-PCL Non-Criterion A respondents: $F(1, 408) = 3.86$, $\alpha = .05$.

Figure 14

Profiles of PCL-5 item-level responding for high confidence Non-Criterion A vs. Criterion A groups with sexual violence events removed

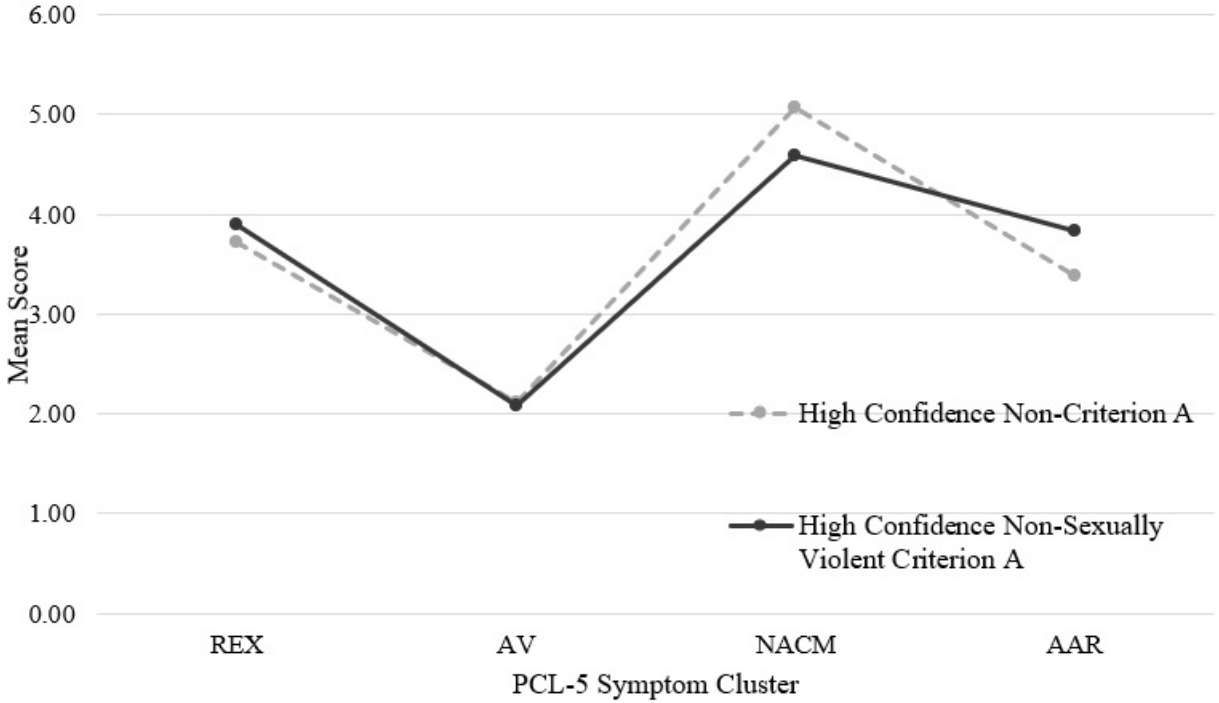


Note. $N = 887$. Mean PCL-5 item scores range from 0-4.

*Indicates statistically significant difference using Scheffe's adjusted F. High confidence Non-Criterion A versus high confidence Non-Sexually Violent Criterion A: $F(1, 885) = 3.85$, $\alpha = .05$.

Figure 15

Profiles of PCL-5 cluster-level responding for high confidence Non-Criterion A vs. Criterion A groups with sexual violence events removed



Note. $N = 887$. Mean PCL-5 symptom cluster scores.

*Indicates statistically significant difference using Scheffe's adjusted F. High confidence Non-Criterion A versus high confidence Non-Sexually Violent Criterion A: $F(1, 885) = 3.85$, $\alpha = .05$.

Appendix A

Coding Criterion A Traumatic Events

DSM-5 Criterion A
Exposure to actual or threatened (**realistic/imminent threat**) death, serious injury, or sexual violence in one (or more) of the following ways:

1. Directly experiencing the traumatic event(s)
2. Witnessing, in person, the event(s) as it occurred to others.
3. Learning that the traumatic event(s) occurred to a close family member or close friend. In cases of actual or threatened death of a family member or friend, the event(s) must have been violent or accidental.
4. Experiencing repeated or extreme exposure to aversive details of the traumatic event(s) (e.g., first responders collecting human remains, police officers repeatedly exposed to details of child abuse)

Traumatic Events According to DSM-5:

- Directly experienced traumatic events include (but are not limited to):
    - Exposure to war (combatant or civilian)
    - Threated or actual physical assault (e.g., physical attack, robbery, mugging, childhood physical abuse)
    - Threatened or actual sexual violence (e.g., forced sexual penetration, alcohol/drug-facilitated sexual penetration, abusive sexual contact noncontact sexual abuse, sexual trafficking)
    - Being kidnapped
    - Being taken hostage
    - Terrorist attack
    - Torture
    - Incarceration as a POW
    - Natural/human-made disasters
    - Severe motor vehicle accidents

Note: A life-threatening illness or debilitating medical condition is not necessarily a traumatic event. Medical incidents that qualify as traumatic events involve sudden, catastrophic events (e.g., waking during surgery, anaphylactic shock).

- Witnessed events include (but are not limited to) observing:
    - Threatened or serious injury
    - Unnatural death
    - Physical or sexual abuse of another person due to violent assault, domestic violence, accident
    - War or disaster
    - Medical catastrophe in one's childhood (e.g., life threatening hemorrhage)

- Indirect exposure through learning about an event is limited to experiences affecting close relatives or friends and experiences that are violent or accidental (e.g., death due to

natural causes does not qualify). Such events include violent personal assault, suicide, serious accident, and serious injury.

Writing SPSS Syntax

- You will need to plug in the correct variables for your study
- The following is a template for how to write criterion A syntax in SPSS:

COMPUTE critA=0.
if (((HowEventExperienced=directly **OR** HowEventExperienced=witnessed) **AND** (LifeInDanger=my life was in danger **OR** LifeInDanger=someone else's life was in danger **OR** SexualViolence=yes **OR** InjuredOrKilled=I was injured/killed **OR** InjuredOrKilled=someone else was injured **OR** killed **OR** ThreatPhysicalHarm =I was threatened with physical harm **OR** ThreatPhysicalHarm=someone else was threatened with physical harm)) **OR** ((HowEventExperienced=learned about it) **AND** (AccViolNatural=yes **OR** SexualViolence=yes))) critA=1.
execute.

The following is a syntax example:
Variables:
HowEventExperienced=1: happened to me
HowEventExperienced=2: witnessed
HowEventExperienced=3: learned about it happening to a close friend
LifeInDanger_1=1: my life was in danger
LifeInDanger_2=1: someone else's life in danger
InjuredOrKilled_1=1 I was seriously injured/killed
InjuredOrKilled_2=1 someone else was seriously injured/killed
ThreatPhysicalHarm_1 =1 I was threatened with physical harm
ThreatPhysicalHarm_2 =1 Someone else was threatened with physical harm
SexualViolence=1: sexual violence
AccViolNatural=1: accident or violence (reason for death of a close family member or friend)

Syntax:
COMPUTE critA=0.
if (((HowEventExperienced=1 **OR** HowEventExperienced=2) **AND** (LifeInDanger_1=1 **OR** LifeInDanger_2=1 **OR** SexualViolence=1 **OR** InjuredOrKilled_1=1 **OR** InjuredOrKilled_2=1 **OR** ThreatPhysicalHarm_1 =1 **OR** ThreatPhysicalHarm_2=1)) **OR** ((HowEventExperienced=3) **AND** (AccViolNatural=1 **OR** SexualViolence=1))) critA=1.
execute.

Coding Criterion A: The Logistics

- Run syntax
- Bring over variables to Excel, creating a separate spreadsheet for each coder
    - ID
    - Syntax
    - Worst event description
    - Worst event label

    - Learned about how (if event is "learned about, how did participant learn about it: natural causes, accident/violence, N/A)
    - Level of exposure (i.e., direct, witness, etc.)
    - You might also want to bring over "worst response" variable: sometimes this gives additional information about event
- Each coder independently rates Criterion A status
    - Enter agreement with syntax, Criterion A, confidence in your decision, and trauma type (see end of this document for trauma types)
    - Compare with the other rater after every few 100 or so, to make sure that you are both on the same page with your ratings
- Compare ratings (Criterion A and confidence) from each coder in a separate sheet (use command Exact(rating1, rating2))
    - Resolve any discrepancies (Note: **do not** change any of your original ratings, create a new column for your consensus rating, you will need raw ratings to calculate inter rater reliability)
- After you have consensus Criterion A ratings, bring variables back to SPSS
    - Create variables in SPSS for: Rater 1 Criterion A, Rater 1 Confidence, Rater 2 Criterion A, Rater 2 Confidence, Consensus Criterion A, Consensus Confidence

Coding Criterion A: Reviewing Narratives

- Check both the syntax and the narrative
    - If syntax and narrative match (both criterion A or both non-criterion A), you AGREE with syntax with HIGH CONFIDENCE
    - If syntax and narrative don't match, typically you will default to the narrative (see below)

- Syntax = 0 (i.e., event is non-criterion A according to the syntax)
    - Criterion A/High Confidence: If you are highly confident that the narrative is criterion A, DISAGREE with syntax with HIGH CONFIDENCE
    - Criterion A/Low Confidence: If you are only somewhat confident (vague story, multiple possibilities) that the narrative describes a criterion A event, DISAGREE with syntax with LOW CONFIDENCE
        - Note: this case wouldn't be included in strictly criterion A samples
        - This is a default to the narrative
    - NOT Criterion A/High Confidence: If you are highly confident that the narrative is not criterion A, AGREE with the syntax with HIGH CONFIDENCE
    - NOT Criterion A/Low Confidence: If you are only somewhat confident that the narrative does not describe a criterion A event (vague narrative), AGREE with the syntax, with LOW CONFIDENCE

- Syntax = 1 (i.e., the event is criterion A according to the syntax)
    - Criterion A/High Confidence: If you are highly confident that the narrative clearly does describe a criterion A event, AGREE with the syntax with HIGH CONFIDENCE

    - Criterion A/Low Confidence: If you are only somewhat confident that the narrative describes a criterion A event (narrative is vague) AGREE with the syntax with LOW CONFIDENCE
    - NOT Criterion A/High Confidence: If you are highly confident that the narrative clearly does not describe a criterion A event (syntax comes back 1, but the event is falling off a bike or grandparent cancer death, etc.), DISGREE with syntax with HIGH CONFIDENCE
    - NOT Criterion A/Low Confidence: If you are only somewhat confident (vague story) that the narrative doesn't describe the criterion A event, DISAGREE with syntax with LOW CONFIDENCE
        - This is a default to the narrative

- Unclear narratives
    - If you are really unsure (extremely vague story, no story, incomprehensible story), default to AGREE with syntax with LOW CONFIDENCE
    - This is the only case in which you default to the syntax

Learning About Events

- For "learning about" events/indirect exposure, follow the above procedure with this additional step: participant must specify closeness in the narrative by stating "best," "close," or other language that suggests a close relationship with the victim. As a general rule, parents, siblings, or children are assumed to be "close" to the individual. For other relatives (e.g., cousins, aunts/uncles, grandparents, etc.) the individual must specify a close relationship with this individual.
    - If closeness is not specified in either of the above sources, you AGREE with syntax with LOW CONFIDENCE
    - If closeness is specified in either of the above source, you AGREE with syntax with HIGH CONFIDENCE
    - General rule: it must be *close* to know *for sure*, even if the event is Criterion A (i.e., if the individual does not mention closeness in their narrative, code low confidence)
- If the index event is having a heart attack/dying suddenly of a natural cause (not prolonged illness, not old age, not cancer)
    - If the individual WITNESSED: Criterion A
    - If the individual LEARNED ABOUT: NOT Criterion A
- The syntax *does* take into account if the "learned about event" was violent or accidental
    - Syntax = 1: event was violent or accidental
    - Syntax = 0: event was NOT violent or accidental

Coding Natural Disasters

- Criterion A, high confidence
    - Tornados/hurricanes hitting the individual's house while they are home
    - Disaster causing damage to individual's house and mom/dad/sister/close family or friend was home
    - Individual saw the disaster happen to their house or to other people/feared for their life as it was approaching

- NOT Criterion A, high confidence
    - Learned about tornado/hurricane/natural disaster in general, did not happen to anyone they knew or their area e.g., "hurricane hit my state, but no one I knew was affected," learned about "Hurricane Katrina"
- General mention of a natural disaster (e.g., "tornado") is NOT enough to qualify for criterion A, there must be some specific mention that the individual experienced the event, or learned about it happening to someone else who was there. There must be some specific mention of threat/danger. The following (or similar) would be coded NOT criterion A, low confidence:
    - General mention of natural disaster in their neighborhood, street, general city/area with no written indication of threat level directly to the person e.g., "A bad tornado came through my city;" "Tornado in my neighborhood," "Hurricane Katrina damaged my city"
    - General mention of a natural disaster that participant marked "witnessed" but did not provide a narrative of how they witnessed it other than e.g., "Hurricane Harvey"
- Evacuating and returning to a damaged home: e.g., "A tornado destroyed my beach house," "It was really stressful – we evacuated and didn't know what the damage would be until we got home"
    - If there is direct threat during evacuation: criterion A
    - Coming back and witnessing gruesome details (e.g., dead bodies still being recovered): criterion A
    - Coming home to property damage, with no mention of life threat or serious injury: NOT criterion A

<u>Coding MVA's</u>

- For an MVA to be Criterion A you should look for buzzwords such as: T-bone, head on, high speed, the car flipped, major accident, mention of someone being killed/seriously injured, life flight, totaled, etc.
- Non-Criterion A accidents likely include words like: minor accident, fender bender, another car tapped us, etc.
- Transportation accident vs. serious accident during a recreational activity
    - The difference is sometimes unclear and there is likely overlap
    - In general: cars or other vehicles that are typically used to transport people/things are considered transportation accidents: cars, planes, trains, boats, etc.
    - Accidents that are more likely to be considered a "serious accident during a recreational activity," as these are primarily used for recreation and not transportation: ATV, 4-wheeler, jet-ski, etc.
    - This is often a judgment call on your part, be consistent and consider including a description of your definitions in your paper.

<u>Coding Trauma Types</u>

- Below is the list of trauma types that we use and their most likely Criterion A (yes or no) category and most likely trauma type category (interpersonal or noninterpersonal). Note that you really only need to code the trauma type, Criterion A status is listed as a guide, and the interpersonal nature of the trauma can be created as a new variable using the

"compute variable" option in SPSS. Note that there are exceptions to the Criterion A status and interpersonal/noninterpersonal nature of the trauma – the categories listed below are simply the *most likely*.

Crit. A?	Event	Code	IPT/NonIPT
1	Natural disaster	1	0
1	Fire or explosion	2	0
1	Transportation accident	3	0
1	Serious accident at work, home, or during recreational activity	4	0
1	Exposure to toxic substance	5	0
1	Physical assault	6	1
1	Assault with a weapon	7	1
1	Sexual assault	8	1
1	Other unwanted or uncomfortable sexual experience	9	1
1	Combat or exposure to a war-zone	10	0
1	Captivity	11	1
1	Life-threatening illness or injury (not cancer or heart problems)	12	0
1	Severe human suffering	13	0
1	Suicide	13.5	0
1	Sudden, violent death (doesn't fit in any of above categories)	14	0
1	Sudden, unexpected death of someone close to you (doesn't fit in any of above categories)	15	0
1	Serious injury, harm, or death you caused to someone else	16	0
1	Any other very stressful event or experience (Crit A that doesn't fit in any other category)	17	0
0	Death (expected) due to serious illness/Serious illness/Medical problems	18	0
0	Cancer	19	0
0	Heart problems	20	0
0	Death of a grandparent	21	0
0	Divorce	22	0
0	Family relationship problems	23	1
0	Romantic relationship problems	24	1
0	Racism, harassment, teasing, bullying	25	1
0	Bad grades	26	0
0	Moving/Transferring schools	27	0

0	Any other stressful event or experience (non Crit A that doesn't fit in any other category)	29	0
0	Money problems	30	0
0	Arrest	31	0

Appendix B

High Magnitude Stressors Coding Guide

	HIGH Magnitude Items	**NOT** High Magnitude Items (not an exhaustive list)
Terminal Illness	Terminal illnesses (e.g., cancer, tumor) of self/immediate family member/close friend or family member	Terminal illnesses of grandparent, extended family, or friends due to natural causes when closeness NOT specified
	Death of immediate family member or close friend/family member due to terminal illness	Death of grandparent, extended family, or friends due to natural causes when closeness NOT specified
Medical Illness	Serious medical illness (e.g., infections, kidney disease), but not so severe to result in death	Minor medical illnesses or surgical procedures with little information to suggest it is severe (e.g., heart palpitations, "mom had multiple surgeries", complications with their birth, broken bone)
Mental Health	Severe mental health illness of self, immediate family member, or close friend (e.g. Suicidal ideation, substance use, eating disorders)	Mention of struggle with mental health disorder without information to suggest severe suffering (e.g., depression, anxiety)
Natural Disasters	Exposure to natural disaster involving resource loss, but no life threat or serious injury to self, family, or close friends (e.g., coming back to damaged home, but there was no threat to life due to evacuation)	Natural disasters with NO threat of resource loss, death or injury
Other	Unexpected death of pet (e.g., if sub "human" into event involving an animal and would meet Criterion A)	Adjustment difficulties (e.g., moving, starting college, academic distress)
	Bullying	Arrest (self, family member)
		MVAs with no life threat or injuries
		Interpersonal difficulties (e.g., divorce of parents, break up, roommates causing sleep deprivation)