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Does requiring trauma exposure affect rates of ICD-11 PTSD and complex PTSD?

Implications for DSM-5

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Declaration of interests

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Abstract

Objective: There is little evidence that posttraumatic stress disorder (PTSD) is more likely to follow traumatic events defined by Criterion A than non-Criterion A stressors. Criterion A events might have greater predictive validity for ICD-11 PTSD which is a condition more narrowly defined by core features. We evaluated the impact of using Criterion A, an 'expanded' trauma definition in line with ICD-11 guidelines, and no exposure criterion on rates of ICD-11 PTSD and Complex PTSD (CPTSD). We also assessed if five psychologically threatening events included in the expanded definition were as strongly associated with PTSD and CPTSD as 'standard' Criterion A events. ***Method***: A nationally representative sample from Ireland (N = 1,020) completed self-report measures. ***Results***: Most participants were trauma-exposed based on Criterion A (82%) and the 'expanded' (88%) criterion. When no exposure criterion was used, 13.7% met diagnostic requirements for PTSD or CPTSD; 13.2% when the expanded criterion was used, and 13.2% when Criterion A was used. The five psychologically threatening events were as strongly associated with PTSD and CPTSD as the Criterion A events. In a multivariate analysis, only the psychologically threatening events were significantly associated with PTSD (stalking) and CPTSD (bullying, emotional abuse, and neglect). ***Conclusions***: Certain non-Criterion A events involving extreme fear and horror should be considered traumatic. The ICD-11 approach of providing clinical guidance rather than a formal definition offers a viable solution to some of the problems associated with the current and previous attempts to define traumatic exposure.

Clinical Impact Statement

A diagnosis of posttraumatic stress disorder (PTSD) requires that a person has experienced a 'traumatic' life event, however, difficulties in defining what is, and what is not, a trauma has threatened the construct validity of PTSD. The newly released 11th version of the International Classification of Diseases (ICD-11: World Health Organization, 2018) provides clinicians with guidance, rather than a formal definition, for what constitutes a traumatic event. In this study, we show that psychologically threatening events such as emotional abuse, neglect, bullying, and stalking that would not normally be considered 'traumatic' were uniquely associated with meeting the diagnostic requirements for PTSD and Complex PTSD. The ICD-11 approach of considering an event as traumatic if it is extremely threatening or horrific is helpful because it provides a context to understand trauma-related symptoms while allowing clinicians flexibility in determining what is a potentially traumatic experience.

Keywords: trauma exposure, Criterion A, PTSD, Complex PTSD.

Does requiring trauma exposure affect rates of ICD-11 PTSD and complex PTSD? Implications for DSM-5

Posttraumatic stress disorder (PTSD) is a distinctive psychiatric condition as it requires an etiologic event - traumatic exposure – for a diagnosis to be made (Bryant, 2019). How researchers define 'traumatic exposure', and their subsequent fidelity to this definition, has implications for determining the epidemiology of PTSD, identifying risk and protective factors, providing access to mental health services and insurance reimbursement, and planning and assessing treatment interventions. Although central to PTSD, the traumatic exposure criterion (usually termed 'Criterion A') has repeatedly changed since its introduction in the third edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-III; American Psychiatric Association [APA], 1980).

In DSM-III, an event was considered traumatic if it was outside the realm of normal human experience. Initial epidemiological surveys from the early 1990s in the United States (U.S.) showed that between 39% (Breslau, Davis, Andreski, & Peterson 1991) and 69% (Norris, 1992) of the general population experienced a traumatic event during their lifetime. Consequently, trauma was redefined in DSM-IV (APA, 1994) to reflect events where direct or indirect exposure to actual or threatened death or serious injury had occurred, as well as learning about such events that occurred to others. In DSM-5 (APA, 2013), the definition was expanded again to explicitly recognize sexual violence, and to include indirect and repeated exposure to details of trauma through work-related activities. These changes appear to have had little effect on the proportion of people in the general population deemed to be 'trauma exposed'. For example, in the 2012–2013 National Epidemiologic Survey on Alcohol and Related Conditions-III, 69% of U.S. adults had a lifetime exposure to a trauma, based on the DSM-5's Criterion A definition (Goldstein et al., 2016).

These expanding definitions of ‘trauma exposure’ provoked concerns that the construct validity of PTSD might be compromised (McNally, 2003). In a review, Rosen and Lilienfeld (2008) suggested that ‘the full range of PTSD reactions’ (p. 839) followed exposure to events that do not typically involve extreme fear and horror such as employment stressors, loss of farm animals, and watching frightening Halloween television programs. However, inspection of the cited studies showed that responses to these events did not reach diagnostic criteria for PTSD (Brewin, Lanius, Novac, Schnyder, & Galea, 2009). A contrary argument has been made that the full constellation of PTSD symptoms is unlikely to be present unless exposure to a very significant stressor has taken place, meaning that the exposure criterion is unnecessary (Brewin et al., 2009; Solomon & Canino, 1990). Others have called for Criterion A to be retained but substantially revised to acknowledge that events not typically considered ‘traumatic’ can, in rare cases, precipitate PTSD (Kilpatrick, Resnick, Freedy, Pelcovitz, Resick, & Roth, 2009).

An emerging body of evidence has investigated whether PTSD symptoms are more common following ‘traumatic’ (i.e., Criterion A) versus ‘stressful’ (i.e., non-Criterion A) life events. A meta-analysis of 22 studies found that experiencing a DSM-III/DSM-IV Criterion A event was associated with slightly higher levels of PTSD symptoms compared to experiencing a non-Criterion A event (Larsen & Pacella, 2016). The difference in PTSD symptoms, however, was contingent on self-report of event impact: When event type was used as the sole basis for meeting the criterion, without considering self-report of impact, the difference in symptoms disappeared. Regarding Criterion A in DSM-5, no significant difference in PTSD symptoms was observed between individuals who reported a DSM-5 Criterion A event and those who did not (Franklin et al., 2019; Larsen & Berenbaum, 2017). Most recently, Frewen, Zhu, and Lanius (2019) reported a significant multivariate association between PTSD symptoms and number of lifetime DSM-5 Criterion A events but no

significant association between PTSD symptoms and number of non-Criterion A events in the past year. They also found that adverse childhood experiences, including events such as neglect and emotional abuse that are not conventionally classified as traumatic, were even more predictive of PTSD than traumatic events themselves. Cloitre et al. (2019) also found that these types of childhood adversities were positively associated with meeting diagnostic criteria for ICD-11 PTSD and Complex PTSD (described below). Collectively, these findings provide limited support for the predictive validity of the set of 'traumatic' events relative to the set of merely 'stressful' events, and indicate that there may be important events that are traumatic but that do not currently fit the Criterion A definition in DSM-5.

Other threatening events such as stalking (Pathé & Mullen, 1997) and bullying (Nielsen, Tangen, Idsoe, Matthiesen, & Magerøy, 2015) have been shown to increase the risk of reporting the clinical features of PTSD, but these events also do not meet the Criterion A definition in DSM-5. These data might give researchers and clinicians pause to wonder if there are individuals who would receive a PTSD diagnosis except for the fact that their exposure event does not fit with the current Criterion A definition. Each of these non-Criterion A events share in common a perceived risk to survival. While the sense of threat to survival may be self-evident in situations such as stalking or bullying, emotional abuse and neglect (the absence of care), especially during childhood, may be experienced as threats to survival as children are completely dependent on their caregivers. Frewen et al. (2019) and Cloitre et al.'s (2019) data suggest that these types of events may be at least as important to PTSD and CPTSD as events that pose a more obvious threat to life, physical or sexual safety.

The DSM is not the only diagnostic manual used in psychiatry. The World Health Organization's (WHO) *International Classification of Diseases* (ICD) is the diagnostic manual used by all United Nations member states. ICD-11 (WHO, 2018) marked an important development in traumatic stress research as it provided a refined description of

PTSD focused on 'core' symptoms of 'Re-experiencing in the here and now', 'Avoidance of Traumatic Reminders', and a 'Sense of Current Threat'; and formally introduced Complex PTSD (CPTSD); a disorder defined by the core PTSD symptoms plus problems with affect regulation, self-concept, and interpersonal relationships (Cloitre et al., 2018). It should be noted that this more specific definition contrasts with alternative formulations of complex PTSD which argue for the inclusion of a much wider range of symptoms (Courtois & Ford, 2009). ICD-11 does not contain a formal stressor criterion like DSM-5 but instead provides clinical guidance that PTSD and CPTSD *"may develop following exposure to an extremely threatening or horrific event or series of events."*

Providing guidance rather than a formal criterion offers a potential solution to some of the problems associated with the current and previous attempts to define traumatic exposure in Criterion A. By operationalizing trauma in a manner that simply highlights the saliency of threat or horror, whether experienced during exposure or later (Brewin, Cloitre, Maercker, & Chu, in press), ICD-11 ensures that diagnosis depends primarily on symptom presentation and impairments (Brewin et al., 2009). This means that psychologically threatening events such as emotional abuse and neglect, or less commonly recognized events such as hallucinations or those that can arise in the context of neurodevelopmental conditions such as autism spectrum disorder (Brewin, Rumball, & Happé, 2019), qualify as potentially traumatic experiences. Thus, individuals manifesting symptoms of PTSD or CPTSD in response to these types of experiences need not be precluded from the consideration of a diagnosis.

Determining how to most effectively conceptualize traumatic exposure, and the predictive validity of such a criterion for diagnosis of PTSD (and now also CPTSD), are important empirical questions to address. ICD-11 arguably enables a more precise test of predictive validity because the diagnoses of PTSD and CPTSD are more narrowly defined in terms of core symptoms and may be associated with reduced comorbidity with disorders such

as depression relative to DSM-IV/DSM-5 PTSD (Brewin et al., 2017). This should reduce the probability that individuals exposed to a non-traumatic stressor receive a PTSD diagnosis based on symptoms that are actually more characteristic of other disorders such as depression, thereby reducing apparent predictive validity.

The current study addressed these issues using data from a nationally representative sample of Irish adults. The first objective was to compare rates of trauma exposure based on the DSM-5 Criterion A definition (i.e., events unambiguously posing direct or indirect threat to life, to physical safety, or involving sexual violence) and an 'expanded' definition of trauma consistent with ICD-11 guidelines (i.e., Criterion A events plus five psychologically threatening events reflecting bullying, stalking, emotional abuse, rejection, and neglect). Additionally, rates of ICD-11 PTSD and CPTSD were compared using (1) the DSM-5 Criterion A definition, (2) the 'expanded' trauma definition, and (3) no trauma criterion.

The second objective was to assess the bivariate associations between PTSD and CPTSD diagnostic status, respectively, and lifetime exposure to 21 potentially traumatic (sixteen events reflecting the DSM-5 Criterion A definition and five reflecting psychologically threating experiences). Under the assumption that psychologically threatening events are at least as important as traditional Criterion A events for PTSD and CPTSD, it was hypothesized that each would be significantly and positively associated with meeting symptom and impairment requirements for a diagnosis of PTSD and CPTSD.

The third objective was to determine if any of the five psychologically threatening events were associated with meeting symptom and impairment requirements for PTSD and CPTSD whilst controlling for all other events. Based on the assumption that the psychologically threatening events confer unique risk above and beyond standard Criterion A events, it was hypothesized that at least one of the psychologically threatening events would have a significant, positive, and multivariate association with PTSD and CPTSD.

Methods

Participants and procedures

This study was based on a nationally representative sample of non-institutionalized Irish adults aged 18 years and older (N = 1,020). Participants were recruited by a survey company called Qualtrics who selected participants from a panel of research participants that is representative of the adult population of the Republic of Ireland. Panel members are selected to ensure consistency with the most recent Irish census data from 2016. Participants in this study were recruited from the nationally representative panel using stratified, random probability sampling methods to ensure that the sample was representative of the general population in terms of three demographic variables: sex (male and female), age (18-24, 25-34, 35-44, 45-54, 55-64, and 65+), and geographical distribution (Dublin city and county, Leinster (not including Dublin), Munster, Connaught, and Ulster (not including counties in Northern Ireland)). Comparisons with 2016 census data confirmed that these three characteristics of the sample matched the population parameters. Ethical approval for this project was provided by the Social Research Ethics Committee at Maynooth University in Ireland.

Panel members were contacted via email by Qualtrics, provided with information about the nature of this study, and asked to participate. Panel members were not obliged to take part in this study and no inducements were used to recruit participants. Panel members are, however, reimbursed for their time on a general basis by Qualtrics. Those who chose to participate followed a link to a secure website and completed all surveys online. Because of ethical concerns regarding the collection of potentially identifiable personal data from non-respondents, we were not permitted to collect information about rates of non-participation. Informed consent was provided prior to participants completing any measures. The median time of completion of the survey was 22 minutes and Qualtrics employed checks to identify

and remove any responses where participants completed the survey in a time that was deemed to be too fast to be confident that responses were trustworthy (i.e., less than 7 minutes). All data were collected in February 2019.

The mean age was 43.10 years (*Mdn* = 42.00, *SD* = 15.12, range 18-87), and 51.0% were female. The majority of participants (53.9%) resided in Leinster (east of the country including the capital city of Dublin), 26.9% resided in Munster (south of the country), 13.5% resided in Connaught (west of the country), and 5.7% resided in Ulster (north of the country). Most participants were in a committed relationship (69.5%), and had children (59.4%). Secondary school completion was the highest educational attainment for 39.2% of participant, 36.9% completed an undergraduate degree, 16.9% completed a postgraduate degree, and 7.1% did not complete secondary school (equivalent to high school in the U.S.). Nearly half of participants were in full-time employment (45.8%), 17.8% were in part-time employment, 27.7% were retired, homemaking, or a student, and 8.6% were unemployed.

Measures

Traumatic exposure

Traumatic exposure was assessed using the International Trauma Exposure Measure (ITEM: Hyland, Shevlin, Karatzias, & Cloitre, 2019) which is a freely available checklist measuring 21 threatening life events (see Table 1). Sixteen events reflect the DSM-5 definition of trauma exposure (i.e., direct or indirect threat to life, or to physical or sexual safety). The other five events are psychologically threatening events that can be considered traumatic in line with ICD-11 guidelines. Respondents indicate if they experienced each event during three developmental periods (0-12 years, 13-18 years, and older than 18 years). Lifetime exposure to each event is indicated by a positive response in any of the developmental periods. Respondents identify their most distressing event (their ‘index trauma’), how many times this event occurred, and how long ago it first occurred.

ICD-11 PTSD and CPTSD

The International Trauma Questionnaire (ITQ: Cloitre et al., 2018) was used to measure the ICD-11 symptoms of PTSD and CPTSD. The ITQ is a self-report scale measuring all diagnostic requirements for PTSD and CPTSD. Respondents identify their index trauma event and how long ago it occurred. They are then instructed to answer all questions in relation to this event. There are six items measuring PTSD symptoms across the clusters of 'Re-experiencing in the here and now', 'Avoidance', and 'Sense of Threat'. These items are answered in terms of how much the respondent has been bothered by that symptom in the past month. Three questions measure functional impairment in the domains of social, occupation, and other important areas of life associated with these symptoms. There are an additional six items measuring 'Disturbances in Self-Organization' (DSO) symptoms across the clusters of 'Affective Dysregulation', 'Negative Self-Concept', and 'Disturbed Relationships'. The DSO symptoms are answered in terms of how the respondent typically feels, thinks about oneself, and relates to others. Three items measure functional impairment associated with these symptoms. All items are answered on a five-point Likert scale that ranges from 0 (*Not at all*) to 4 (*Extremely*), and a symptom is considered to be present based on a score of ≥ 2 (*Moderately*). Multiple studies with general population (Ben-Ezra et al., 2018; Cloitre et al., 2018), clinical (Hyland et al., 2017), and refugee (Vallières et al., 2018) samples have shown that the ITQ scores possess satisfactory reliability and validity. The internal reliability (Cronbach's alpha) estimates of the PTSD (α = .90) and DSO (α = .93) subscales in this sample were excellent.

Diagnosis of PTSD requires that at least one symptom is present from each PTSD cluster, and endorsement of functional impairment associated with these symptoms. Diagnosis of CPTSD requires that one symptom is present from each PTSD and DSO

symptom cluster, and endorsement of functional impairment associated with both sets of symptoms. ICD-11 diagnostic rules permit a diagnosis of PTSD or CPTSD, but not both.

Statistical analysis

The proportion 'trauma exposed' participants based on DSM-5 Criterion A (i.e., exposure to at least one of the first 16 events in the ITEM) and the 'expanded' definition (i.e., exposure to any of the 21 ITEM events) were compared using McNemar's exact binomial test. The proportion of participants who met diagnostic criteria for PTSD, CPTSD, and PTSD or CPTSD (i.e., the combined rate of the two disorders) were compared under three conditions: (1) when the DSM-5 Criterion A definition was applied, (2) when the 'expanded' trauma definition was applied, and (3) when no trauma exposure criterion was applied. These proportions were compared using McNemar's exact binomial test.

The *bivariate* associations between the 21 events measured by the ITEM and meeting the symptom and functional impairment requirements for PTSD and CPTSD, respectively, were assessed using a chi-square (χ^2) analysis. Odds ratios (OR) were calculated to quantify the strength of these bivariate associations. The *multivariate* associations between each event and meeting the symptom and impairment requirements for PTSD and CPTSD, respectively, were assessed using binary logistic regression analysis. Sex was included as a covariate in these analyses given the well-established sex differences in rates of PTSD and CPTSD (Cloitre et al., 2019), and exposure to traumatic life events (Benjet et al., 2016). Adjusted ORs (OR_{adj}) were calculated to quantify the strength of these multivariate associations.

Full data were available for all analyses as completion of all questions in the online survey was a requirement of participation. *A priori* power analyses (assuming an alpha level of .05, two-tailed significance testing, weak-to-moderate sized effects, and statistical power of .80) showed that the sample size was sufficient for the tests to be adequately powered.

Results

Rates of trauma exposure, and PTSD and CPTSD

Frequency of exposure each event in the ITEM during childhood (0-12 years), adolescence (13-18 years), adulthood (19 years and older), and across the lifespan, are reported in Table 1. The most commonly reported event in childhood was being physically assaulted by a parent or guardian (21.1%); in adolescence, it was being humiliated, put down, or insulted by another person (26.4%); and in adulthood (32.2%), and across the lifespan (51.9%), it was having a loved one experience a life-threatening illness or accident.

Table 1 here

According to the Criterion A definition, 82.3% (n = 839) of participants were 'trauma exposed'. Based on the expanded criterion, 87.7% (n = 895) of participants were 'trauma exposed'. The difference between these two proportions was statistically significant (exact binomial test: $p < .001$). Females were significantly more likely than males to be trauma exposed according to the Criterion A (χ^2 (1) = 4.05, p = .044, OR = 1.39 [95% CI = 1.01, 1.92]) and expanded (χ^2 (1) = 5.91, p = .015, OR = 1.60 [95% CI = 1.09, 2.34]) definitions.

Using the DSM-5 Criterion A definition of trauma, 12.7% (95% CI = 10.7%, 14.8%) met diagnostic requirements for PTSD (5.0%, 95% CI = 3.7%, 6.3%) or CPTSD (7.7%, 95% CI = 6.1%, 9.4%); using the expanded definition of trauma exposure, 13.2% (95% CI = 11.2%, 15.3%) met diagnostic requirements for PTSD (5.1%, 95% CI = 3.7%, 6.5%) or CPTSD (8.1%, 95% CI = 6.5%, 9.8%); and when no trauma exposure criterion was used, 13.7% (11.6%, 15.8%) met diagnostic requirements for PTSD (5.4%, 95% CI = 4.0%, 6.8%) or CPTSD (8.3%, 95% CI = 6.6%, 10.0%).

The difference between the Criterion A rate of PTSD or CPTSD and the rate when no exposure criterion was used was statistically significant (exact binomial test: p = .002). The rate of PTSD or CPTSD when the expanded trauma criterion was used was not significantly

different to the rate based on Criterion A (exact binomial test, $p = .063$), or when no exposure criterion was used (exact binomial test, $p = .063$). For rates of PTSD, specifically, there were no significant differences across the three conditions. For rates of CPTSD, specifically, the Criterion A rate was significantly lower than the rate based on no exposure criterion (exact binomial test, $p = .031$). The rate of CPTSD based on the expanded trauma exposure criterion was not significantly different from the Criterion A rate (exact binomial test, $p = .500$), or the rate when no exposure criterion was used (exact binomial test, $p = .500$).

Females were significantly more likely than males to meet symptom and impairment requirements for PTSD or CPTSD based on Criterion A (15.2% vs. 10.2%, $\chi^2 (1) = 5.71$, $p = .017$, OR = 1.58 [95% CI = 1.08, 2.30]), the expanded criterion (16.0% vs. 10.4%, $\chi^2 (1) = 6.87$, $p = .009$, OR = 1.64 [95% CI = 1.13, 2.37]), and when no exposure criterion was used (16.2% vs. 11.2%, $\chi^2 (1) = 5.28$, $p = .022$, OR = 1.53 [95% CI = 1.06, 2.20]).

As a supplementary analysis, we determined that 71.0% ($n = 724$) of people were classified as 'trauma exposed' if only the five psychologically threatening events were selected; and 12.4% (95% CI = 10.3%, 14.4%) met symptom and impairment requirements for PTSD (4.8%, 95% CI = 3.5%, 6.1%) or CPTSD (7.6%, 95% CI = 5.9%, 9.2%) using only these events as a criterion for trauma exposure.

Bivariate associations between traumatic events and PTSD and CPTSD

The bivariate associations between the 21 life events in the ITEM and meeting the symptom and impairment requirements for PTSD and CPTSD, respectively, are reported in Table 2. The χ^2 results indicated that the 16 'Criterion A' events were significantly and positively associated with CPTSD, and 11 were significantly and positively associated with PTSD. The 'Criterion A' event most strongly associated with PTSD was having been 'kidnapped or tortured' (OR = 5.58), and the event most strongly associated with CPTSD was having experienced 'sexual assault by a parent or guardian' (OR = 8.39).

The five psychologically threatening events reflected in the 'expanded' definition of trauma were all significantly and positively associated with PTSD and CPTSD. Having been 'stalked by another person' was most the event most strongly associated with PTSD (OR = 4.13), and having been 'made to feel unloved, unwelcome, or worthless' was the event most strongly associated with CPTSD (OR = 8.36).

Table 2 here

Multivariate associations between traumatic events and PTSD and CPTSD

The results of the binary logistic regression analyses that tested the multivariate associations between the 21 events in the ITEM and PTSD and CPTSD, respectively, are reported in Table 3. The binary logistic regression model of PTSD was statistically significant (χ^2 (22) = 56.76, $p < .001$, Cox and Snell $R^2 = .054$, Nagelkerke $R^2 = .158$). Controlling for sex and all other traumatic events, one event remained significantly associated with meeting the symptom and impairment requirements for PTSD: having been 'stalked by another person' ($OR_{adj} = 2.68$).

Table 3 here

The binary logistic regression model of CPTSD was also statistically significant (χ^2 (22) = 114.71, $p < .001$, Cox and Snell $R^2 = .106$, Nagelkerke $R^2 = .244$). Controlling for sex and all other traumatic events, three events remained significantly associated with meeting the symptom and impairment requirements for CPTSD: having been 'made to feel unloved, unwelcome, or worthless' ($OR_{adj} = 2.60$), 'neglected, ignored, isolated, or rejected' ($OR_{adj} = 2.34$), and 'repeatedly bullied online or offline' ($OR_{adj} = 1.82$).

Discussion

In this study we found that even using the narrower ICD-11 formulation of PTSD that focuses on core symptoms, the combined prevalence rate of PTSD and CPTSD with no restrictions concerning traumatic exposure was only 1.0% higher (equating to 10 people in

1,020) than when the DSM-5 Criterion A trauma exposure definition was used, and only 0.5% higher (equating to 5 people in 1,020) than when the expanded definition including five psychologically threatening events was used. These results are consistent with previous studies showing that the DSM-5 Criterion A traumatic exposure definition has minimal predictive validity (Franklin et al., 2019; Larsen & Berenbaum, 2017). Given the challenges that exist in delineating the boundary between 'traumatic' and 'non-traumatic' events, the difficulties in reliably and validly measuring traumatic exposure, and the limited predictive validity associated with Criterion A, questions arise about whether Criterion A is a help or a hindrance to diagnosing PTSD (and now, also, CPTSD). It should be noted that one reason for eliminating DSM-IV Criterion A2 in DSM-5 was its lack of positive predictive value, and the fact that its inclusion had little effect on prevalence rates (Friedman et al., 2011).

Our results do not in any way suggest that PTSD should be reconceptualized as a disorder that can arise in response to stressful life events that do not normally provoke feelings of extreme threat or horror. In our view, PTSD and CPTSD are uniquely valuable in defining a constellation of symptoms that almost always occur in response to situations in life that are associated with extreme fear or horror. Our point is simply that such situations, and their attendant responses, can occur in a larger range of situations than is encompassed by past and current versions of Criterion A, and maintaining a strict adherence to Criterion A can hinder their recognition and treatment. This view is consistent with previous empirical data from Frewen et al. (2019) and Cloitre et al. (2019) who showed that adversities such as emotional abuse and neglect that occurred in the first 18 years of life are associated with an increased risk of DSM-5 PTSD, and ICD-11 PTSD and CPTSD, respectively. Our results add to these findings by showing that these types of psychologically threatening events – as well as others such as bullying and stalking - that can occur across the lifespan and not just in

childhood, are associated with an increased risk of meeting the diagnostic criteria for ICD-11 PTSD and CPTSD.

Our findings may be seen as supporting calls for the abolition of Criterion A (Brewin et al., 2009; Solomon & Canino, 1990), however, we take seriously the contrary argument which is that Criterion A is needed because the traumatic experience in some sense defines PTSD: It usually marks a major change in the life trajectory of a person affected with PTSD, and it provides a context without which intrusion and avoidance symptoms are incomprehensible (Friedman et al., 2011; Kilpatrick et al., 2009; Weathers & Keane, 2007). A center-ground between these two positions is a hitherto undiscussed third possibility that draws on the approach of ICD-11: That DSM-5 could adopt a less specific definition that provides a context for PTSD but does not have the status of a formal diagnostic criterion. The advantage of this approach would be to accommodate the findings of this and numerous other studies which show that experiences involving threats to psychological or emotional safety are equally important – if not more so - as events that are considered the prototypical antecedents of PTSD and CPTSD (e.g., combat exposure, physical assault, sexual assault, and natural or human-made disasters).

Some in the field may worry that adopting a less formal approach to defining trauma could lead to an increased number of false positive diagnoses and thus undermine the construct validity of the PTSD diagnosis, however, we believe that this is unlikely to occur. Studies that have compared rates of PTSD based on the DSM-IV and DSM-5 criteria to rates of PTSD and CPTSD based on the ICD-11 criteria have consistently found that the ICD-11 identify significantly *fewer* diagnostic cases (Brewin et al., 2017). This appears to be primarily due to the requirement of present-moment re-experiencing of the trauma (Shevlin et al., 2018). Nonetheless, the difference between the two diagnostic systems may be thought of in terms of where the main filtering of non-cases occurs: DSM-5 provides a narrow gateway

for the consideration of PTSD by virtue of its specific trauma exposure definition and subsequently provides a broad symptom set, whereas, ICD-11 provides a broad gateway for the consideration of PTSD and CPTSD by virtue of its sensitive trauma exposure guidelines and subsequently provides a narrow symptom set with a higher diagnostic threshold.

There are several limitations with this study that ought to be mentioned. First, this study was based on data from a general population sample, therefore, these findings may not generalize to clinical samples with higher rates of PTSD, CPTSD, and trauma exposure. The inability to determine the proportion of non-respondents poses a threat to the generalizability of these findings to the population as a whole. Additionally, the extent to which these findings generalize to other nationalities is unknown. Replication in other nationally representative samples will be important. Second, data on both trauma history and trauma symptoms were assessed via self-reports, therefore, replication with interview-based methods of assessment will be useful. As self-report assessments of PTSD typically yield a higher number of diagnostic cases than interview assessments (Hoffman et al., 2011), the strength of the associations observed in this study between the traumatic events and PTSD and CPTSD may be different if assessed by means of a clinical interview. Finally, we only assessed five psychologically threatening events that fall outside the Criterion A definition. We selected these events based on existing data regarding their connection to PTSD and CPTSD, however, there may well be other types of threatening events that are relevant to PTSD and CPTSD which were not assessed in this study.

More than a decade ago, Brewin et al. (2009, p. 369) stated '*Criterion A has now gone through three iterations, and we regard it as highly unlikely that any formulation for Criterion A will be found that deals with all the problems and inconsistencies that have been identified.*' In the intervening decade, another iteration of Criterion A has been presented and the evidence that has accumulated in that time provides little reason to disagree with Brewin

and colleagues' assessment. The findings of this study, however, suggest that the ICD-11 approach of providing guidance for what constitutes a traumatic event – that is, any event that is extremely threatening or horrific in nature – rather than a formal definition, can be viewed as a viable solution to the problems associated with the current and past formulations of Criterion A. The ICD-11 guideline for what constitutes a traumatic event is helpful because it (1) maximises clinical utility by allowing clinicians flexibility to determining whether or not a given event is traumatic; (2) prevents situations where a person can exhibit all of the symptoms of PTSD (or CPTSD), along with significant impairments associated with these symptoms, but fails to qualify for a diagnosis because their index event does not conform with the formal Criterion A definition; and (3) retains the relevance of the traumatic event so that the PTSD (and CPTSD) symptoms can be understood in relation to the event, whilst ensuring that diagnostic decisions are focused on the presenting symptoms and impairments.

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Table 1. Frequencies of exposure to each traumatic event in childhood, adolescence, adulthood, and across the lifetime (N = 1,020).

	0-12 years %	13-18 years %	19+ years %	Lifetime %
ITEM 1: Diagnosed with a life-threatening illness.	4.9	2.3	7.0	14.1
ITEM 2: Someone close to you died in an awful manner.	8.0	9.5	21.2	38.7
ITEM 3: Someone close to you had a life-threatening illness or accident.	9.0	10.7	32.2	51.9
ITEM 4: Life threatened with a weapon.	3.0	6.2	11.5	20.7
ITEM 5: Physical assault by a parent or guardian.	21.1	7.8	2.1	31.0
ITEM 6: Physical assault by someone other than a parent or guardian.	10.3	15.5	13.5	39.3
ITEM 7: Sexual assault by a parent or guardian.	2.1	1.8	0.8	4.6
ITEM 8: Sexual assault by someone other than a parent or guardian.	5.3	4.8	3.7	13.8
ITEM 9: Sexual harassment (unwanted comments or behaviors).	4.3	12.4	14.4	31.1
ITEM 10: Exposure to war or combat as a soldier or as a civilian.	3.3	1.4	2.5	7.3
ITEM 11: Held captive and/ or tortured.	2.2	1.7	1.9	5.7
ITEM 12: Inflicted extreme suffering or death on another person.	1.4	1.3	1.9	4.5
ITEM 13: Witnessed another person experiencing extreme suffering or death.	3.9	4.4	16.3	24.6
ITEM 14: Life-threatening accident.	4.0	3.8	14.8	22.6
ITEM 15: Exposure to a natural disaster.	1.7	2.9	3.4	8.0
ITEM 16: Exposure to a human-made disaster.	2.2	1.8	4.5	8.4
ITEM 17: Another person stalked you.	2.3	5.0	11.1	18.3
ITEM 18: Repeatedly bullied online or offline.	13.2	18.2	6.5	37.9
ITEM 19: Humiliated, put down, or insulted by another person.	15.1	26.4	18.9	60.4
ITEM 20: Made to feel unloved, unwelcome, or worthless.	12.3	18.2	17.6	48.1
ITEM 21: Neglected, ignored, rejected, or made to feel isolated.	10.4	15.1	13.9	39.4

Table 2. Bivariate associations between each traumatic life event in the ITEM and PTSD and CPTSD diagnostic status (N = 1,020).

	PTSD	CPTSD
	OR (95% CI)	OR (95% CI)
Criterion A traumatic life events		
Diagnosed with a life-threatening illness.	3.24 (1.79, 5.87)***	2.17 (1.28, 3.67)**
Someone close to you died in an awful manner.	1.97 (1.14, 3.41)**	2.44 (1.56, 3.84)***
Someone close to you had a life-threatening illness or accident.	1.21 (0.70, 2.09)	1.78 (1.12, 2.83)**
Life threatened with a weapon.	2.97 (1.70, 5.20)***	3.19 (2.01, 5.06)***
Physical assault by a parent/guardian.	2.26 (1.31, 3.90)**	2.62 (1.67, 4.10)***
Physical assault by a non-parent/guardian.	2.25 (1.30, 3.90)**	2.95 (1.86, 4.68)***
Sexual assault by a parent/guardian.	2.76 (1.12, 6.81)*	8.39 (4.43, 15.89)***
Sexual assault by a non-parent/guardian.	1.61 (0.81, 3.19)	4.86 (3.00, 7.85)***
Sexual harassment (unwanted comments or behaviors).	2.08 (1.20, 3.59)**	3.05 (1.94, 4.78)***
Exposure to war or combat as a soldier or a civilian.	2.32 (1.05, 5.11)*	3.18 (1.72, 5.90)***
Kidnapped or tortured.	5.58 (2.76, 11.29)***	5.45 (2.94, 10.10)***
Inflicted suffering/death on another person.	4.91 (2.24, 10.77)***	6.25 (3.22, 12.12)***

Witnessed extreme suffering or death.	1.67 (0.94, 2.96)	1.97 (1.24, 3.14)**
Accident where your life was in danger.	1.43 (0.78, 2.61)	2.64 (1.67, 4.18)***
Natural disaster where your life was in danger.	3.15 (1.56, 6.36)***	5.09 (2.93, 8.84)***
Human-made disaster where your life was in danger.	1.94 (0.88, 4.24)	4.05 (2.31, 7.09)***
Non-Criterion A psychologically threatening events		
Stalked by another person.	4.13 (2.37, 7.21)***	4.03 (2.54, 6.41)***
Repeatedly bullied online or offline.	2.56 (1.49, 4.51)***	4.75 (2.91, 7.76)***
Humiliated, put down, or insulted by another.	2.20 (1.17, 4.15)**	5.46 (2.79, 10.70)***
Made to feel unloved, unwelcome, or worthless.	2.53 (1.41, 4.54)***	8.36 (4.38, 15.95)***
Neglected, ignored, rejected, or isolated.	3.10 (1.75, 5.49)***	6.67 (3.90, 11.41)***

Note: The PTSD and CPTSD diagnostic status are based on symptom and impairment criteria only. Bivariate associations are statistically significant at: * $p \leq .05$, ** $p \leq .01$, and * $p \leq .001$.

Table 3. Multivariate associations between each life event in the ITEM and PTSD and CPTSD diagnostic status (N = 1,020).

	PTSD	CPTSD
	OR_{adj} (95% CI)	OR_{adj} (95% CI)
Criterion A traumatic life events		
Diagnosed with a life-threatening illness.	2.03 (0.95, 4.34)	0.61 (0.28, 1.30)
Someone close to you died in an awful manner.	1.35 (0.70, 2.62)	1.23 (0.71, 2.15)
Someone close to you had a life-threatening illness or accident.	0.70 (0.36, 1.35)	0.99 (0.56, 1.75)
Life threatened with a weapon.	1.64 (0.74, 3.64)	1.10 (0.57, 2.14)
Physical assault by a parent/guardian.	1.14 (0.56, 2.26)	0.88 (0.50, 1.55)
Physical assault by a non-parent/guardian.	1.50 (0.74, 3.05)	1.14 (0.63, 2.05)
Sexual assault by a parent/guardian.	0.49 (0.10, 2.31)	2.51 (0.86, 7.34)
Sexual assault by a non-parent/guardian.	0.46 (0.18, 1.18)	1.68 (0.86, 3.29)
Sexual harassment (unwanted comments or behaviors).	1.01 (0.50, 2.04)	0.88 (0.47, 1.62)
Exposure to war or combat as a soldier or civilian.	0.74 (0.19, 2.91)	0.33 (0.10, 1.09)
Kidnapped or tortured.	2.74 (0.85, 8.82)	0.82 (0.27, 2.50)
Inflicted extreme suffering/death on another person.	2.78 (0.60, 12.78)	1.20 (0.32, 4.48)

Witnessed extreme suffering or death.	0.82 (0.38, 1.79)	0.92 (0.50, 1.74)
Accident where your life was in danger.	0.66 (0.29, 1.51)	1.31 (0.71, 2.41)
Natural disaster where your life was in danger.	1.31 (0.43, 4.05)	2.00 (0.81, 4.97)
Human-made disaster where your life was in danger.	0.40 (0.11, 1.47)	1.40 (0.54, 3.61)
Non-Criterion A psychologically threatening events		
Stalked by another person.	2.68 (1.34, 5.34)**	1.54 (0.83, 2.87)
Repeatedly bullied online or offline.	1.43 (0.69, 2.94)	1.82 (1.00, 3.29)*
Humiliated, put down, or insulted by another.	0.78 (0.32, 1.91)	1.21 (0.52, 2.82)
Made to feel unloved, unwelcome, or worthless.	0.86 (0.36, 2.04)	2.60 (1.15, 5.92)*
Neglected, ignored, rejected, or isolated.	1.99 (0.92, 4.31)	2.34 (1.21, 4.76)**

Note: OR_{adj} = Odds ratios are adjusted for sex and all other traumatic life events. Multivariate associations are statistically significant at: * $p \leq .05$, ** $p \leq .01$, and * $p \leq .001$.