

# The Subjective Experience of Trauma and Subsequent PTSD in a Sample of Undocumented Immigrants

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**Abstract:** Although a subjective component of trauma is commonly recognized in diagnosing posttraumatic stress disorder (PTSD), there are few studies that specifically address Criterion A<sub>2</sub>, and none addressing this issue among undocumented immigrants. We assessed 212 arriving undocumented immigrants with diverse trauma histories to investigate concordance between objective and subjective factors of trauma (Criteria A<sub>1</sub> and A<sub>2</sub>) and across different types of trauma and PTSD. Concordance between Criteria A<sub>1</sub> and A<sub>2</sub> varied, with highest rates found for political violence. Interpersonal violence in general was associated with higher rates of PTSD. We identified a dose-response effect for PTSD, but this was not dependent on other events (i.e., other doses) meeting Criterion A<sub>2</sub>. Discussion focuses on Criterion A within the phenomenology of PTSD and the need to gauge subjective interpretations of trauma events among this population.

**Key Words:** Criterion A, PTSD, undocumented immigrants, dose-response effect.

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Recent research on the phenomenology of trauma sequelae focuses largely on mediators between trauma event and psychopathology, including hippocampal volume (Villareal, 2002), social support (Brewin et al., 2000), and interactions between psychological resources and environmental factors (Rasmussen et al., 2004). The diversity of this work evinces the complexity of predicting posttraumatic stress disorder (PTSD) from potentially traumatic events. Interestingly, detailed inspection of the PTSD gateway criterion, Criterion A, has been largely absent from the literature. The current study addresses Criterion A within the phenomenology of PTSD, focusing on concordance between the objective and subjective components of trauma, and variation in this concordance across types of potentially traumatic events.

Trauma research also suffers from reliance on mainstream, primarily native-born samples. Those studies that do include immigrant groups are generally limited to those immigrants that are established and legally documented. Epidemiologic studies indicate that PTSD rates among immigrant groups are lower than among US-born populations, with the notable exception of refugees and asylum seekers, who report higher rates (Kandula et al., 2004). Rates of PTSD among undocumented immigrants are virtually nonexistent, despite the acknowledged hardships that many face in their own countries and along migration routes.

The existence of a particular etiology distinguishes PTSD from other major disorders in the DSM-IV. Criterion A requires that an individual be exposed to a potentially traumatic event (often termed Criterion A<sub>1</sub>) in which there exists “actual or threatened death or serious injury, or a threat to the physical integrity of self or others” and the individual’s response “involved intense fear, helplessness, or horror” (Criterion A<sub>2</sub>; American Psychiatric Association, 2000, p. 427–428). PTSD is indicated when three symptom criteria associated with this event (intrusive thoughts, Criterion B; avoidance/numbing, Criterion C; and increased arousal, Criterion D) persist and cause significant impairment in daily activities (American Psychiatric Association, 2000). Exactly what experiences constitute trauma has been debated since medical/mental health professionals first recognized that certain events resulted in significant distress (Kinzie and Goetz, 1996). However, most clinicians and researchers today recognize a need for further degree of subjective interpretation in the definition of Criterion A (Davidson and Foa, 1991; March, 1993). Considerable research has estimated the prevalence of potentially traumatic events in a wide range of populations and circumstances, but very few studies have investigated the frequency with which traumatic events are perceived as inducing “intense fear, helplessness, or horror.”

The measurement of Criterion A has been a persistent problem in the PTSD literature (Netland, 2001), largely because many researchers ignore its subjective component. Measuring Criterion A<sub>1</sub> simply requires establishing whether or not an individual has been exposed to a potentially traumatic event. However, once Criterion A<sub>1</sub> has been established, Criterion A<sub>2</sub> is often overlooked. Studies often infer Criterion A<sub>2</sub> from reports of events that would seem to be traumatic or membership in potentially traumatized populations such as refugees or members of ethnic minorities without actually asking participants for their interpretation of the trauma (e.g., Crescenzi et al., 2002; Robinson, 1999;

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Sikkema et al., 1995). These studies presume that PTSD symptoms combined with a history of some trauma event comprise prima facie evidence of Criterion A. This “conceptual bracket creep” (i.e., expansion, McNally, 2003; p. 231) regarding Criterion A<sub>2</sub> likely results in overestimating the prevalence of PTSD. This assumption that Criterion A<sub>2</sub> is met by establishing Criterion A<sub>1</sub> may also discount individuals’ resilience in the face of aversive events, a phenomenon that recent work has suggested is the norm rather than the exception (Bonnano, 2004).

Ignoring Criterion A<sub>2</sub> may have significant consequences for understanding the phenomenology of PTSD. Studies of community-based samples in the United States and Mexico have reported high rates of exposure to potentially traumatic events, or Criterion A<sub>1</sub>. Lifetime rates of trauma exposure typically range from 60% to 80% (Cusack et al., 2004; Norris et al., 2003; Resnick et al., 1993). On the other hand, lifetime PTSD prevalence rates are only 8% to 11% (Kessler et al., 1995; Norris et al., 2003), corresponding to a small subset of those exposed to trauma. This discrepancy may reflect the relative infrequency of a PTSD response to trauma or may be explained by individual perceptions of the event (i.e., whether the individual’s perception satisfies Criterion A<sub>2</sub>).

Few studies have reported rates of Criteria A<sub>1</sub> and A<sub>2</sub> separately, and those that have report widely varying concordance. Among participants in the 1996 Detroit Area Survey of Trauma, 59% met Criterion A<sub>1</sub>, and on average 77% of those (46% of the total sample) met Criterion A<sub>2</sub> (Breslau and Kessler, 2001). Of 19 events that participants were asked about, the rate of concordance between Criterion A<sub>1</sub> and A<sub>2</sub> was highest for rape (93%) and the lowest for combat experience (34%). Concordance rates for most types of trauma, which included a variety of incidents of assault, life-threatening accidents and illnesses, and learning about others’ trauma, ranged from 70% to 80%. Brewin et al., (1999), focusing solely on acts of crime, found an overall concordance rate of 58% between the experience of a traumatic event and reported feelings of fear, helplessness, or horror. Interestingly, women were more likely to report fear and horror than were men. Vaiva et al. (2003) found that in a sample of patients hospitalized following motor vehicle accidents, over half (57%) met Criterion A<sub>2</sub>. Investigating natural disasters, Briere and Elliott (2000) found a lifetime prevalence of 22% in the general population, and 64% of these incidents were associated with a fear of death (evidence of Criterion A<sub>2</sub>). These studies have been limited to mainstream samples (i.e., primarily white and African-American).

Although clearly not a proxy for the prevalence of Criterion A<sub>2</sub>, rates of PTSD following different traumatic events may provide estimates of their relative severity. Epidemiologic studies report higher rates of PTSD among those who are exposed to interpersonal violence (Kessler et al., 1995; Norris et al., 2003). Resnick et al. (1993) reported a 25% PTSD rate following street crimes (nonviolent as well as violent), but rates of PTSD were twice as high for crimes that involved a threat to life or a threat of injury. Kilpatrick et al., (1989) found that when rape was completed and involved a threat to life or significant injury, PTSD rates exceeded 80%. Using data from the National Comorbidity Survey, Kessler et

al. (1995) found the highest rates of PTSD among male combat veterans (38.8%) and female rape survivors (45.9%).

Rates for trauma events that do not involve interpersonal violence are generally lower. Motor vehicle accidents typically result in PTSD for less than a fifth to a third of those involved after 1 year (Blanchard et al., 1995; Kuch et al., 1996; Liegey et al., 2001; Mayou et al., 2001). Among a sample of survivors of Hurricane Mitch in Nicaragua, while 56% reported some trauma event associated with the disaster, only 6% (9% of those exposed) were identified with PTSD after a year (Caldera et al., 2001). Kessler et al. (1995) reported rates of PTSD under 10% for natural disasters and motor vehicle accidents. These data suggest that reactions involving extreme fear or horror are much less common in response to natural disasters and motor vehicle accidents than interpersonal violence.

Anyone investigating the phenomenology of Criterion A<sub>2</sub> must acknowledge demographic and historical factors that may influence responses to trauma. Female gender is a consistent predictor of traumatization, associated with both Criterion A<sub>2</sub> (Breslau and Kessler, 2001; Vaiva et al., 2003) and the development of PTSD across trauma types (Kessler et al., 1995; Norris et al., 2003). Another common finding in the PTSD literature is that prior trauma magnifies the impact of subsequent traumas. A number of studies have identified a “dose-response effect,” whereby multiple traumas, whether different types or repeated events, are more likely to result in PTSD than a single traumatic event (Breslau and Kessler, 2001; Kessler et al., 1995).

The current study addresses the relative impact of potentially traumatic events by measuring concordance between Criterion A<sub>1</sub> and A<sub>2</sub>, and resulting rates of PTSD using a sample of immigrants entering the United States without legal authorization. Using an immigrant sample is appropriate for gauging the relative severity of stressors, as this sample may represent a greater diversity of experiences than represented among US-born subjects. For example, an immigrant sample may include individuals who have experienced severe political violence (Eisenman et al., 2003) and a higher rate of devastation from natural disasters (Norris et al., 2001), as well as experiences that are more typical of individuals in developed countries (e.g., domestic violence, motor vehicle accidents). In addition, this study provides a rare examination of rates of trauma-related psychopathology among a hard-to-reach subsample of immigrants, the undocumented. Although cultural factors present considerable challenges for identifying PTSD among immigrants (see van Ommeren, 2003), cross-cultural equivalence has been established in both ethnographies and quantitative research with Latin American samples (Norris et al., 2001; Perilla et al., 2002). These studies have typically found support for the construct validity of PTSD across diverse populations, despite some variation concerning symptom expression.

## METHODS

### Sample

The sample of participants consisted of 212 immigrants arriving at six ports of entry: San Ysidro Border Station ( $N =$

97, 46%), Miami International Airport ( $N = 77, 36\%$ ), Newark Liberty International Airport ( $N = 14, 7\%$ ), Los Angeles International Airport ( $N = 11, 5\%$ ), John F. Kennedy International Airport ( $N = 9, 4\%$ ), and Houston International Airport ( $N = 4, 2\%$ ). The majority ( $N = 167, 79\%$ ) were eventually returned to the country from which they came, and the rest were referred for an interview with an asylum officer to determine whether they had a potential asylum claim. Because of the nature of the study in which these data were collected, we deliberately oversampled immigrants pursuing asylum or expressing a fear of returning to their native country. The sample described here was 55% male ( $N = 116$ ), with an average age of 33.18 years ( $SD = 10.73$ ), and participants came from 37 countries. The majority were from Latin America and the Caribbean ( $N = 183, 86\%$ ), followed by Asia ( $N = 19, 9\%$ ), Africa ( $N = 7, 3\%$ ), and Europe ( $N = 3, 2\%$ ). The top 10 countries represented in the sample are listed in Table 1. All participants gave their informed consent for results to be used in research, in line with protective guidelines of the Institutional Review Board of New York University School of Medicine (which approved this study).

**Procedures**

The six ports of entry were selected because of the high volume of traffic and the representative diversity of immigrants attempting to enter the United States. Participants were identified by immigration inspectors and selected consecutively during high-traffic times at each site. Trained research assistants interviewed immigrants following official immigration processing (which these same researchers observed) but prior to dispositions by immigration officials. In addition to English, languages spoken by researchers included Spanish, French, Mandarin, Haitian Creole, Farsi, Serbo-Croatian, and German. Interview text was translated into Spanish and French. When interviews required fluency in a language that was not spoken by available research personnel, professional telephonic interpreters were used. Research assistants assured participants that they had no authority to influence their immigration status and that the information provided in interviews would not be released to officials. Of those who were asked to participate, 232 of 276 (84%) agreed. Complete trauma history and psychological data were available for 212 partici-

pants. Interviews were conducted in private rooms, within sight but out of auditory range of immigration inspectors.

**Measures**

History of traumatic events was assessed using a trauma event screening measure adapted from the Harvard Trauma Questionnaire (Mollica et al., 1992). The measure was designed to reflect problems commonly reported by refugees and low-income immigrants and supplemented by the first author to include a wider range of more universal events such as natural disasters and automobile accidents. For those events endorsed, respondents were asked whether they felt threatened (“you felt your life or someone else’s life was in danger, or in which you or someone else you knew were in danger of serious injury”) at the time of the event or were actually injured (“you suffered enduring physical injury, disfigurement, or disability as a result of any of these events”). A positive response on at least one of these separate items was interpreted as meeting PTSD Criterion A<sub>2</sub>.

All participants also completed the symptom portion of the Harvard Trauma Questionnaire, a 16-item scale measuring severity of current PTSD symptoms (Mollica et al., 1992). Although several studies have used a cutoff score of 2.5 to identify “clinically significant” PTSD (Mollica et al., 1992), the authors have also developed a scoring algorithm to adapt this measure to DSM-IV criteria (Mollica et al., 1999). This approach assigned items to the three PTSD symptom criteria (Criteria B, C, and D), and those endorsed as “quite a lot” or “extremely” indicated presence of the symptom.

**Statistical Analyses**

After using descriptive statistics for the demographics of the sample, we calculated rates of Criterion A<sub>1</sub>, A<sub>2</sub>, full PTSD, and component symptom criteria. We used logistic regression to determine the relationship between number of traumatic events and PTSD (i.e., dose-response), differences in rates of Criterion A<sub>1</sub>, A<sub>2</sub>, and PTSD across selected demographics, and the likelihood of PTSD given particular types of trauma.

**RESULTS**

**Criterion A<sub>1</sub> and Criterion A<sub>2</sub>, and PTSD**

Although many types of trauma events (Criterion A<sub>1</sub>) were endorsed by participants, only a subset were characterized as traumatic or injurious (i.e., met Criterion A<sub>2</sub>). Table 2 presents the frequency of trauma events endorsed by event type and the proportion that also met Criterion A<sub>2</sub>. A large majority of participants ( $N = 173, 82\%$ ) endorsed at least one event satisfying Criterion A<sub>1</sub>, but only half of these participants ( $N = 96, 55\%$ ) described their experiences in a manner satisfying Criterion A<sub>2</sub>.

Many of the most commonly endorsed events rarely met Criterion A<sub>2</sub>. For example, natural disasters, reported by 33% of the sample ( $N = 70$ ), were perceived as threatening or injurious by only 10% of those who experienced them. Likewise, seeing dead bodies killed in violence, reported by 35% of the sample ( $N = 75$ ), met Criterion A<sub>2</sub> for only 8% of those individuals. On the other hand, violence by author-

**TABLE 1.** Top 10 Countries of Origin

	Frequency	Percent
Mexico	80	37.7
Brazil	24	11.3
Haiti	13	6.1
Colombia	9	4.2
China	9	4.2
Venezuela	8	3.8
Dominican Republic	6	2.8
Costa Rica	6	2.8
El Salvador	4	1.9
Guatemala	4	1.9



**TABLE 2.** Trauma Events

Event	Met Criterion A <sub>1</sub>	Met Criterion A <sub>2</sub>	A <sub>2</sub> :A <sub>1</sub> Concordance	PTSD
Violence by authorities	25	19	.76	8
Domestic violence by partner	28	7	.25	4
Sexual abuse or rape	13	3	.23	1
Street crime	49	10	.20	3
Automobile accident	74	15	.20	1
Witnessed violence against family member	28	4	.14	1
Man-made disaster	31	4	.13	1
Engaged in combat violence	15	2	.13	0
Natural disaster	70	7	.10	0
Harassment by authorities	31	3	.10	0
Saw dead bodies killed in violence	75	7	.09	0
Witnessed violence against someone else	51	3	.06	0
Family members killed or disappeared	39	2	.05	1
Harassment of family by authorities	22	1	.05	1
Victim of religious or ethnic violence	25	1	.04	0
Family members imprisoned or tortured	31	1	.03	1
Arrested or detained for a brief period of time	47	0	.00	0
Imprisoned for political reasons	9	0	.00	0
Forcibly separated from your family	31	0	.00	0
Forced to go long periods without food or water	15	0	.00	0
Other traumas not listed <sup>a</sup>	7	7	NA	0

<sup>a</sup>This category is a collection of events not included on the original screening, but identified as threatening by participants.

ities was reported by 25 participants (12%), 19 (76%) of whom described their experiences as threatening or injurious. The next highest rate of concordance between A<sub>1</sub> and A<sub>2</sub> was found for domestic violence, with 25% of those reporting domestic violence also meeting Criterion A<sub>2</sub>. The overall rate of concordance across all traumatic events was 13%; however, when violence by authorities was excluded, this rate dropped to 11%.

Twenty-three participants met full criteria for PTSD. This number represented 11% of the full sample (95% CI: .07, .16) and 24% of those who reported an event that met

Criterion A<sub>2</sub> (95% CI: .17, .33). For five participants in the sample, all PTSD symptom criteria (i.e., B, C, and D) were present without the presence of Criterion A<sub>2</sub>, although four of these five did report at least one trauma event. Similar findings were observed for each of the three symptom criteria, as the proportion of those meeting each criteria was higher for those reporting an A<sub>2</sub> event (*N* = 48, 50% for B; *N* = 29, 30% for C; *N* = 36, 38% for D) than those reporting a trauma event without satisfying Criterion A<sub>2</sub> (*N* = 17, 22%; *N* = 10, 13%; and *N* = 14, 15%; respectively).

To assess the dose-response theory, we used logistic regression predicting PTSD by the number of Criterion A<sub>1</sub> events. The odds of meeting diagnostic criteria for PTSD increased by 1.31 (95% CI: 1.17, 1.46) for each trauma event (Wald  $\chi^2$ [*df* = 1, *N* = 212] = 23.14, *p* < 0.0001), supporting the dose-response theory. Among those participants who reported Criterion A<sub>2</sub> events this effect remained, although the odds ratio was somewhat lower (OR = 1.17, 95% CI: 1.04, 1.31; Wald  $\chi^2$ [*df* = 1, *N* = 96] = 7.26, *p* < 0.007). However, the number of Criterion A<sub>2</sub> events was not significantly associated with PTSD (among those reporting at least one A<sub>2</sub> event; Wald  $\chi^2$ [*df* = 1, *N* = 96] = 3.97, *p* = 0.68). Not surprisingly, there was no association between number of trauma events and PTSD within the subgroup of participants who did not report an A<sub>2</sub> event.

Gender was also significantly associated with PTSD ( $\chi^2$ [*df* = 1] = 4.14, *p* = 0.04), and this association remained significant in a multivariate model that included number of trauma events (Wald  $\chi^2$ [*df* = 1, *N* = 212] = 1.51, *p* = 0.04). The odds of PTSD were 2.5 times greater for women than men (95% CI: 1.01, 6.18). There were no differences across gender for Criterion A<sub>1</sub> or A<sub>2</sub>. No other demographic variables (e.g., age, race, education) were significantly associated with PTSD, Criterion A<sub>1</sub> or A<sub>2</sub>.

Rates of PTSD differed depending on the type of Criterion A<sub>2</sub> event experienced (Table 3). Because many trauma events rarely resulted in Criterion A<sub>2</sub>, this analysis only included the six most common Criterion A<sub>2</sub> events, which accounted for 65 of the 98 Criterion A<sub>2</sub> events. Those who reported natural disasters as A<sub>2</sub> events also mentioned other A<sub>2</sub> events, and thus comparisons between natural disasters and other A<sub>2</sub> events were not made. Violence by authorities and domestic violence were associated with PTSD much more often than automobile accidents, even though all of these events were perceived as injurious or threatening.

**TABLE 3.** PTSD Prediction Across Selected Events Satisfying Criterion A<sub>2</sub>

	Wald $\chi^2$	<i>df</i>	OR	95% CI	
				Lower	Upper
Automobile accident	7.84	1	—	—	—
Domestic violence by partner	5.81*	1	26.00	1.84	367.696
Violence by authorities	4.21*	1	10.40	1.11	97.335
Street crime	.67	1	2.89	.23	36.868
Saw dead bodies killed in violence	.03	1	.001	.00	1.5 × 10 <sup>29</sup>

Eight of the 19 participants reporting violence by authorities that met Criterion A<sub>2</sub> also met criteria for PTSD, whereas one of the automobile accident victims met PTSD criteria.

## DISCUSSION

Our results demonstrate the importance of Criterion A<sub>2</sub> in the phenomenology of PTSD. Many research studies treat the experience of a traumatic event as synonymous with perceiving that event as threatening, yet our results support the important distinction made in the DSM-IV. The majority of our sample reported experiencing at least one trauma event, and many individuals reported multiple different trauma events. Yet less than one in five trauma events was perceived as threatening or injurious, and only half of all individuals perceived a trauma event in a manner consistent with Criterion A<sub>2</sub>. Moreover, symptoms of PTSD (i.e., criteria B, C, and D) were present in roughly one quarter of those who reported a Criterion A<sub>2</sub> event, but were rarely present among those who experienced trauma that did not meet Criterion A<sub>2</sub>. Thus, the cluster of psychological symptoms characterized as PTSD appears much more closely linked to the experience of an event as threatening or injurious rather than the trauma event itself.

Some types of trauma events were much more likely to meet Criterion A<sub>2</sub> than others. Concordance rates between Criteria A<sub>1</sub> and A<sub>2</sub> varied widely across the different types of trauma described. For example, most of individuals who reported being subject to violence by authorities described their experiences as meeting Criterion A<sub>2</sub>, supporting the belief that this form of violence is particularly severe (Gerrity et al., 2001). The common contention in the refugee literature that refugee status is *de facto* evidence that Criterion A<sub>2</sub> has been met may therefore be less problematic compared with other research areas in which the concordance between A<sub>1</sub> and A<sub>2</sub> is much lower. This finding may be tempered by the fact that many of those who reported political violence were seeking asylum, and therefore almost by definition found their experiences threatening. A number of other common types of trauma events were much less likely to meet Criterion A<sub>2</sub>, such as motor vehicle accidents and natural disasters. These results may have important implications for treatment providers who presume that all survivors of potentially traumatic events are at risk for PTSD. Clearly, many individuals who experience common traumatic events do not perceive the event in a manner that is likely to result in PTSD.

Even when an event was perceived in a manner consistent with Criterion A<sub>2</sub>, there were significant discrepancies in the frequency with which Criterion A<sub>2</sub> events resulted in PTSD. Concordance between rates of Criterion A<sub>2</sub> and PTSD indicated that violence by authorities and domestic violence result in PTSD more often than other types of trauma. These traumas share a number of attributes that others do not, such as a violation of safety at home, the pervasiveness of the aggressors in the victims' lives, considerable stigma, and collateral social effects (e.g., flight, prohibition from health services; Ehrenreich, 2003). That the individuals in this sample were immigrants only strengthens this analogy: both types of survivors are fleeing the scene of their trauma. Other

trauma events, such as motor vehicle accidents or street crime, were much less likely to be associated with PTSD. Of course, without inclusion of a large and exhaustive sample of trauma events, assessing the relative impact of different traumatic events is incomplete. For example, our sample did not include victims of child abuse, a group for which the rate of PTSD has been consistently high (and for which, presumably, the concordance between Criterion A<sub>1</sub> and A<sub>2</sub> may be quite high).

Our findings support a dose-response effect of trauma in this population, whereby cumulative stressors increase the likelihood of developing PTSD. New to the literature is that this effect does not appear dependent on the distinction between Criteria A<sub>1</sub> and A<sub>2</sub>. Individuals who experienced an event that met Criterion A<sub>2</sub> were significantly more likely to meet PTSD criteria when they experienced multiple other trauma events, even when these other events did not meet Criterion A<sub>2</sub>. On the other hand, exposure to multiple trauma events did not increase the likelihood of PTSD when none were perceived as threatening or injurious. These findings suggest that trauma may have a detrimental effect on psychological well-being for already traumatized individuals even when some events are not perceived as traumatic. However, the cross-sectional nature of our data does not allow us to determine whether additional traumas (non-A<sub>2</sub> events) exacerbate the effects of the A<sub>2</sub> event or serve as a risk factor, increasing the likelihood that a subsequent traumatic event will result in a PTSD response. In other words, it may be that exposure to non-A<sub>2</sub> events increases one's vulnerability to developing PTSD when one is later exposed to a trauma that is threatening, or whether these additional traumas may have exacerbated the effects of a prior trauma, again increasing the likelihood of PTSD. Because we did not attempt to determine the sequence and timing of the various trauma events, nor the onset of PTSD symptoms, we are not able to determine which of these hypotheses is best supported. However, several studies undertaken shortly after the occurrence of natural disasters have suggested that the number of prior trauma events is directly related to the severity of the most recent one, serving as the "tipping point" to PTSD (e.g., Shore et al., 1986). Further research is needed to investigate the time sequence of this dose-response effect in diverse types of trauma.

In addition to contributing to the general field of post-trauma psychology, this study is of note in that it is the first to our knowledge that attempts to gauge the phenomenology of trauma sequelae among illegal entrants. Relying on a sample of immigrants arriving primarily at airports and who were turned back clearly means that our results are not representative of all undocumented immigrants. However, given the literature suggesting that rates of PTSD are lower among established (or documented) immigrants than US-born (e.g., Kandula et al., 2004), our findings that rates are comparable to those of US-born subjects is of note. Certainly they suggest that those who screen such individuals at our nation's ports of entry need to be aware of severe psychological distress among a proportion of the population they work with.

Despite the intriguing findings, a number of limitations must be acknowledged. First and foremost, there is the potential for underreporting stigmatized trauma events. Given the shame involved in sexual assault and its prevalence reported in prior work in related populations (e.g., Norris et al., 2003), it is quite possible that some participants failed to report having been sexually assaulted. There is also the possibility that some individuals did not describe a reported event as being threatening, when they in fact perceived it in that manner at the time. Other researchers have cautioned that distorted recollections may skew research results (Yoshihama and Horrocks, 2003), and this issue deserves future investigation. A final limitation concerns the definition of Criterion A<sub>2</sub>. The DSM-IV asks for information on “fear, helplessness, or horror,” and our measure asks directly about threat as a proxy for these responses. However, almost by definition, feeling threatened involves fear. Nevertheless, it is the case that our measure of the subjective element of Criterion A is less direct than using the DSM-IV language verbatim.

Trauma events are common among undocumented immigrants, but being traumatized by these events is a significantly less frequent occurrence. The likelihood that an individual who is traumatized develops PTSD depends in part on the nature of the trauma, and in part on the individual’s history of trauma. Of course, history of trauma arguably represents only one factor that influences an individual’s resilience to trauma, and must be integrated into literature addressing other potential mediators of the PTSD response. Nevertheless, this study represents one of the first attempts to identify types of events that are more and less likely to qualify as Criterion A<sub>2</sub>, and helps disentangle the relative influences of trauma event type, and individual historical factors among undocumented immigrants. Our findings emphasize the need for researchers to account for subjective interpretation of trauma events in their work and to integrate this factor into a model of trauma and PTSD that includes individual and situational variables that may influence the perception of an event as meeting Criterion A<sub>2</sub> and the subsequent development of PTSD.

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### CORRECTION

There was an error in “A Transdiagnostic Approach to Understanding Eating Disorders: A Twin Study Examining a Dimensional Model,” by Wade et al. *J Nerv Ment Dis.* (2006) 194:510–517. The zygosity numbers were incorrect on page 511. The correct report of numbers is: “of whom 622 were from MZ pairs and 434 were from DZ pairs. The final sample included 348 complete pairs (226 MZ and 122 DZ) and 360 incomplete pairs (170 MZ and 190 DZ), where only one of the twins participated.” The data were analyzed and discussed with these correct zygositys.