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Does Broadening One's Concept of Trauma Undermine Resilience?

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Objective: The term “trauma” seems to have expanded from a narrow usage (referring exclusively to extreme events such as rape and warfare) to a broad usage (encompassing almost any event that results in emotional distress). Today, individuals vary widely in the extent to which their personal “trauma concept” is relatively narrow or broad. In this study, we explore whether this variation is important to individuals’ actual experience when facing a stressful event. **Method:** Participants were randomized to a set of “Narrow” or “Broad” belief induction tasks. They then watched a short film clip involving a mutilated corpse and completed self-report response measures. Days following the task, participants reported event-related symptoms. **Results:** Individuals with broader beliefs about trauma experienced more intense negative emotions and were more likely to report viewing the film clip as a personal trauma. Moreover, those who saw the film clip as a personal trauma reported more event-related distress (e.g., intrusions, nightmares) in the days after they watched it. We found limited support for causality, with the experimental manipulation showing a significant direct effect on personal trauma concepts but only indirect effects on other outcomes. **Conclusion:** Broader personal trauma concepts were related to increased vulnerability in a trauma film paradigm. While some evidence suggests causality, it remains possible that at least part of the effect is explained by a third variable causing both broad concepts and vulnerability (e.g., high trait anxiety).

Clinical Impact Statement

Individual clinicians and patients may have very different ideas about the meaning of “trauma.” Beliefs about trauma have also changed significantly over time, tending toward a broader view. Patients’ beliefs about trauma may affect how future stressful events are interpreted, and clinicians can play a role in helping patients interpret events in a healthy manner. In this study, we find that broader concepts of trauma are related to increased vulnerability to stress. Clinicians should remain aware that expanding concepts of harm may be related to increasing vulnerability.

Keywords: trauma, PTSD, belief


The word “trauma” is often used by physicians to describe physical injuries resulting from a sudden insult to the body (e.g., head trauma). Its usage in psychiatry, however, refers to injuries of an emotional variety. This usage of trauma denotes events capable of producing intense acute distress that may persist for many years, exemplified by posttraumatic stress disorder (PTSD).

Initially, only extremely terrifying and rare events were presumed capable of producing PTSD. Since that time, the range of events deemed capable of producing PTSD has substantially expanded (McNally, 2011). This “conceptual bracket creep in the definition of trauma” (McNally, 2003a, p. 281) has also extended

more generally to other types of harm (e.g., bullying, aggression; Haslam, 2016).

Diagnostic Concept Bracket Creep

The definition of trauma as embodied in the *DSM*’s Criterion A for PTSD has significantly expanded. When committees met to update the criteria for PTSD for later versions of the *DSM*, empirical research had complicated the original diagnostic definition (McNally, 2015). Evidence suggested that most individuals suffering from canonical stressors do not develop PTSD, and those who did develop PTSD often had pre-existing risk factors (Breslau et al., 1991). More importantly, cases were observed in which individuals who had not experienced canonical *DSM-III* stressors nevertheless met the symptomatic profile of PTSD (Dohrenwend, 2010). *DSM-III-R* explicitly defined trauma in Criterion A, broadening it to include vicarious exposure (e.g., witnessing another person being harmed; American Psychiatric Association, 1987). *DSM-IV* committee members further expanded the stressor criterion to include a much wider variety of potential traumatic experiences. If the committees did not broaden the concept of trauma,

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individuals who otherwise qualified for the diagnosis would have been unable to receive reimbursable treatment for their suffering. *DSM-5* scaled back this expansion in comparison to *DSM-IV* but remained expanded compared to *DSM-III*. Many researchers have expressed concern that the expanding definition of PTSD may undermine the integrity of the psychobiological concept of PTSD (e.g., Bracha & Hayashi, 2008; McNally, 2003b).

Personal Concept Bracket Creep

In addition to diagnostic concept changes, individuals may expand their personal definitions of trauma. Although research in this area is comparatively lacking, there are anecdotal suggestions that at least some conceptualizations of traumatic distress have expanded far beyond even the broadened version in the *DSM* (e.g., speech as violence, Feldman-Barrett, 2017). This trend seems especially evident on the American college campus, where calls for protective policies such as trigger warnings, safe spaces, and disinvitations of potentially distressing speakers have increased (Lukianoff & Haidt, 2018). These evolving views substantiate Haslam's (2016) concern that our concept of psychological harm continues to expand dramatically. Yet strong conclusions in this area are premature, as they are limited to specific demographic groups and may not generalize widely (but see also Vylomova et al., 2019; Haslam & McGrath, 2020).

What influences the breadth of one's personal concept of trauma? Schroeder and colleagues (2017) found that parents who scored higher on victim sensitivity and entitlement had broader concepts of "bullying." Expanding this line of research, McGrath and colleagues (2019) evaluated personal concepts of harm, including bullying, abuse, prejudice, and trauma (each of which were closely related). Those with broader concepts of harm were more likely to endorse liberal political attitudes, greater empathic concern, and sensitivity to injustice toward others. Consistent with Schroeder et al. (2017), those with broader concepts also reported greater entitlement and personal vulnerability. Surprisingly, findings on age were mixed, with one sample showing a link between broader concepts and younger age, whereas the other found no such link (McGrath et al., 2019). Other psychological characteristics such as neuroticism, trait anxiety, or anxiety sensitivity may also play a role.

Perhaps personal concepts of trauma are impacted by general exposure to life adversity either directly or through one's social group. That is, a mildly stressful event in the context of a relatively stress-free life might cause more acute distress than the same event in the context of a challenging life (McNally, 2016). One recent insight in this area comes from research on *prevalence-induced concept change* (Levari et al., 2018). Prevalence-induced concept change means that when instances of a concept become less common, individuals broaden their interpretation of the concept, changing the context in which future instances are evaluated.

One recent investigation found no evidence for prevalence-induced concept change in the concept of trauma over the course of a short experiment (Jones et al., 2020). However, the authors found a *range*-induced concept change—that is, individuals who read brief descriptions of exclusively nonserious events ("walked up a flight of stairs," "was not hired after a job interview") broadened their conceptual brackets, whereas individuals who saw exclusively serious events ("received chemotherapy," "was raped

by a family member") narrowed their conceptual brackets. In summary, it appears that personal trauma concepts are malleable and depend on context.

Does the Personal Concept of Trauma Matter?

Although concepts of trauma have likely changed over time, it is unclear whether the actual clinical phenomena surrounding trauma—that is, the emotional and psychological consequences of a given event—have been similarly altered.

One possibility is that the concept of trauma has changed, but the emotional consequences following stressful events have remained stable. That is, distress in the wake of any given event may have remained constant over time, but we merely refer to the same emotional reactions by using different words. For example, an individual bullied in the 1970s might have had a comparable emotional experience to an individual bullied in the 2010s, the only difference being that the latter might be labeled "trauma" by the individual and his or her contemporaries. Yet there is a second possibility: As personal concepts of trauma have changed over time, so have the average emotional consequences of a given event. That is, an average individual bullied in the 1970s may have had a very different emotional experience than an average individual bullied in the 2010s.

In other words, emotional reactions to an event may partly depend on how the event is understood by the person experiencing it. For example, consider the case of childhood sexual abuse. Many children who are sexually abused do not understand what is happening, and thus experience their molestation as confusing, but not horrifying (Clancy, 2005). However, when recalling these experiences years later through the eyes of an adult, they can experience intense betrayal, shock, and symptoms of delayed onset PTSD (McNally, 2012b). That is, the emotional sequelae of this event depend heavily on the victim's beliefs and understanding of the world.

This opens the possibility that events that could not have caused PTSD in the past can cause PTSD today. As McNally (2012a) noted, "Vicarious trauma provides especially dramatic examples. Witnessing the torture and execution of human beings was long a form of entertainment throughout the world. In ancient Rome, amphitheatres featured Christians, criminals, and others tied to stakes as hungry lions devoured them alive to the delight of thousands of cheering fans" (pp. 223–224). Today, witnessing such events would almost certainly result in PTSD for a nontrivial proportion of individuals. The expansion of our sensitivity is far from an unambiguous moral negative—our horror upon hearing these historical events is surely a sign of progress. Expanding concepts of harm may empower individuals to take collective action toward prevention (Cikara, 2016).

Humans constantly adapt their classifications and categorizations of the world, but humans' concepts do not necessarily affect the *referent* of the concepts. The philosopher Ian Hacking thus makes a useful distinction between "indifferent kinds" and "interactive kinds" of categorizations (Hacking, 1999, pp. 100–124). For instance, a tree is an indifferent kind—regardless of whether humans call the tree an alder or an oak, the tree does not respond to its classification. In contrast, a "police officer" is an interactive kind—humans' collective categorization of an individual as a

police officer directly influences how the police officer acts as well as how others act around the police officer.

PTSD may be an interactive kind insofar as the trauma survivor's personal concept of trauma at least partially influences the course of symptoms. Indeed, the manner in which one subjectively (re)conceptualizes one's experience is a fundamental linchpin in cognitive psychotherapies. There are several ways this could play out in the example of "trauma." Conceptualizing an event as a "trauma" might lead individuals to expect certain well-known symptoms (e.g., nightmares), but perhaps not others (e.g., feelings of detachment). If "trauma" or "PTSD" implies persistence or severity, other looping effects may occur. Trauma survivors who report negative appraisals about a traumatic event (e.g., mental defeat, mental confusion) are more likely to develop PTSD and to experience it more persistently (Beierl et al., 2020, Dunmore et al., 1999). People who believe that a stressor is likely to cause a chronic and relapsing emotional condition from which they will never recover may be especially unlikely to take steps enabling them to confront and overcome their distress. It is unclear whether survivors must consciously label their experience as "trauma" for such effects to occur. It is also possible that general implicit expectations about harm and emotional well-being impact reactions without a conscious labeling process.

In this study, we investigated whether personal concepts of trauma are related to stress vulnerability. We conducted a randomized experiment in which individuals were trained to have either narrow or broad beliefs about trauma. Participants then watched a stressful film clip (i.e., trauma film paradigm; James et al., 2016) and responded to various self-report measures. We contacted participants several days later to collect follow-up reports of event-related symptoms (e.g., intrusive memories of the clip). This experiment helps test several important questions. First, we test whether broader concepts of trauma predict poorer stress reactions, including negative emotions and event-related symptoms. Second, we test the extent to which personal concepts of trauma are malleable based on a brief manipulation. Finally, we test whether our brief manipulation of personal trauma concepts has a causal effect on negative outcomes.

Method

Participants

Participants were recruited from Amazon Mechanical Turk and were invited to participate in a two-part study separated by a 48-hr (minimum) window. Participants were excluded from the data analysis if they failed an English language verifier, if they failed more than one attention check across both parts of the study, if they reported having seen the film clip before, or if they voluntarily reported that their data should not be used for any reason (see online supplemental materials for details; <https://osf.io/sh58t/>). Accordingly, 309 participants provided valid data for Part I and 293 participants did so for both parts.

Procedure

We randomized participants to one of two groups. The Narrow group received psychoeducational materials and exercises meant to induce the belief that the definition of trauma is limited to

exceptionally severe events, whereas the Broad group received a paired series of psychoeducational materials and exercises meant to induce the belief that the definition of trauma extends to virtually any event that may cause emotional distress.

After the manipulation, participants watched a film clip from the movie *The Last King of Scotland* that depicts a mutilated corpse (Claderwood et al., 2006). Participants rated their emotions in response to the film and answered basic verification questions to ensure they had watched it in its entirety.

Participants then completed a manipulation check (Trauma Breadth Scale) and other scales (see Measures). This scale measures the extent to which participants construe trauma broadly. Participants reported demographic information and completed an English verifier question. Finally, after assuring participants that their replies would not imperil their compensation, we asked participants to report if there was any reason their responses might be considered invalid and we asked them for any feedback about the survey that the researcher should know.

In Part II, participants completed the Impact of Events Scale (Horowitz et al., 1979; Weiss, 2007) in reference to watching the film clip and repeated the Words Can Harm Scale and Trauma Breadth Scale. They were also asked to report if they considered watching the film clip in Part I of the study to be a trauma. All procedures were approved by the Harvard University Institutional Review Board.

Measures

Experimental Manipulation

Psychoeducation. Participants read a single page of psychoeducational material. They were required to remain on the screen for at least eight seconds and were told to read carefully, as they might be tested on the information later. Participants were given vignettes intended to induce either a narrow or broad belief about trauma (see online supplemental materials, <https://osf.io/sh58t/>).

Guessing Task. Participants were asked to guess the prevalence of PTSD for several different events (e.g., "War combat experience has a ___% chance of causing PTSD"). Participants were then given feedback on the "correct" answer. In the narrow condition, the feedback was based on actual rates of PTSD (Liu et al., 2017; e.g., war combat experience = 1.9%). In the broad condition, participants were asked about less severe events (e.g., being fired from a job) and were given inflated rates of PTSD (e.g., being fired from a job = 55%).

Sorting Task. Participants viewed a series of brief descriptions of stressful events (e.g., "being shoved," "being a victim of sexual assault," "witnessing violence on TV"). They were asked to sort the events into one of two categories: "Not Trauma" or "Trauma." They were only allowed to proceed once they had the answer "correct" according to the information provided in the psychoeducation section.

Film and Emotions

Film Clip. The seven-minute film clip included selected scenes from the film *The Last King of Scotland* (Claderwood et al., 2006) including images of the mutilated corpse of a pregnant woman. The same clip was used in a previous trauma film study

(Marks & Zoellner, 2014). Participants were instructed to enter full screen mode and to watch it in its entirety.

Emotions. After watching the clip, participants rated their emotions (Fearful, Anxious, Depressed, Sad, Happy, Horrified, Helpless, Irritable, Ashamed, Guilty) on a slider scale from 0 to 100. Emotions (except Happy) were aggregated as Negative Emotions for analysis.

Self-Report Scales

Words Can Harm Scale (WCHS-10). (Bellet et al., 2018; Jones et al. 2020). The WCHS is a 10-item scale with sliders (0–100; *Strongly disagree–Strongly agree*) measuring the extent to which participants believe that words can cause long-lasting emotional harm. Examples of items include “I should be careful about what I say, as it could permanently damage someone’s emotional health” and “Even a simple phrase can be emotionally traumatizing for someone vulnerable.” The WCHS-10 was administered at both time points. Given past work indicating that concept expansions in trauma are correlated with sensitivity to other forms of harm (McGrath et al., 2019), we included the WCHS-10 to provide a comparative data point on harm sensitivity.

Perceived Posttraumatic Vulnerability Scale—Self and Other (PPVS-S; PPVS-O). (Bellet et al., 2018; Jones et al., 2020). The PPVS-S is a 19-item scale measuring the extent to which participants believe they would be vulnerable to an imagined future trauma (“A stranger threatens to take your life and tries to kill you, but you survive the incident”). Participants are asked to rate their projected PTSD-like responses to the event (e.g., “I would never be the same as I was before the event,” “I would have difficulty sleeping”) on a slider (0–100; *Strongly disagree–Strongly agree*). The PPVS-O is identical to the PPVS-S but asks participants to first imagine “a specific individual who would be considered an ‘average’ person,” and imagine the event happening to that person, rather than to themselves. The PPVS-S and PPVS-O were highly correlated in our sample ($r = .93$).

Trauma Screener and Life Events Checklist (LEC-5). Participants were given a Criterion A screener (Yes/No). They were also given the LEC-5 and asked to identify their most stressful or traumatic event.

Trauma Breadth Scale (TBS-5) / Manipulation Check. We developed a scale to serve as a manipulation check for this study. The scale was designed to measure participants’ “Narrow” versus “Broad” beliefs about trauma: that is, the degree to which they endorse the view that any event can be a trauma. The items were rated on a 7-point Likert scale (*Strongly disagree–Strongly agree*). Example items include “Even minor, everyday events can be traumatic” and “Even if people act in a well-intentioned way, they could traumatize someone vulnerable accidentally.”

To avoid demand characteristics, we prefaced this scale with the following text: “For the next few items, we are interested in your *own genuine opinions*. Again, please do not respond how you think the researcher might want you to respond. Instead, provide your *own honest opinions*.” Participants viewed this text for five seconds before they were able to proceed. This text was repeated at each page break during the TBS-5.

The full version of the scale included 10 items. We removed one item because multiple participants reported that it was confusing. We further performed exploratory factor analyses on the scale based on data from the first time point, aiming to characterize the

scale properties and the items converging on a single factor. Based on these analyses we removed four additional items. The final five-item version of the scale had good reliability at the first time point and excellent reliability at the second time point (Cronbach’s $\alpha = .89, .91$) and demonstrated acceptable properties in single factor confirmatory factor analyses at both time points (CFI = .98, .99; RMSEA = .08, .09; SRMR = .02, .02). We use the standardized sum scores from the five-item version of the scale in all future analyses.

Impact of Event Scale—Revised (IES-R). (Weiss, 2007). The IES-R is a 22-item self-report scale that measures PTSD-like symptoms in response to a specific anchor event. In our case, we asked participants to answer in reference to “the film clip you viewed in Part I of the study.” Items are rated on a 5-point Likert scale (*Not at all to Extremely*).

Other. In Part II of the study, we asked participants, “In your own view, was watching the film clip in Part I of the study a trauma?” (Yes/No). Four attention checks (e.g., “Please select ‘Strongly Agree’”) were interspersed throughout the survey.

Research Questions and Analyses

Our analyses were guided by a series of research questions. First, we were interested in whether beliefs about trauma affected outcomes. Thus, we tested several questions related to the TBS-5 and to participants’ binary rating of whether they considered the film clip a trauma.

Q1: Did individuals with a broader view of trauma (i.e., higher scores on the TBS-5) experience more intense negative emotions in response to the film clip?

Q2: Were individuals with a broader view of trauma (i.e., higher scores on the TBS-5) more likely to rate viewing the film clip as a trauma several days following viewing the clip?

Q3: Did individuals with a broader view of trauma (i.e., higher scores on the TBS-5) experience more severe symptoms on the IES-R and its intrusions subscale?

Q4: If individuals viewed the film clip as a trauma, did they experience more severe symptoms on the IES-R and its intrusions subscale?

Next, we were interested in the causal effects of our experimental manipulation. That is, was it sufficient to cause changes in participants’ reported beliefs about trauma on the TBS-5 or on their rating of the film as trauma? If so, did the experimental manipulation have a causal effect on negative emotions and experienced symptoms?

Q5: Did our experimental manipulation impact beliefs about the definition of trauma, as measured by scores on the TBS-5, in the expected direction?

Q6: Did our experimental manipulation impact whether participants viewed the film clip as a trauma?

Q7: Did our experimental manipulation impact the extent to which participants experienced negative emotions in response to the film clip?

Q8: Did our experimental manipulation impact the extent to which participants experienced intrusion symptoms or general symptoms as measured by the IES-R?

We analyzed all data by using linear regressions in R. For binary response variables, we used logistic regression. Responses on the IES-R were heavily skewed, with most responses close to zero. Thus, for analyses that use the IES or IES subscales as the dependent variable, we used negative binomial regression. Analyses were conducted with all available valid participants. This means that analyses relevant to the first time point had a slightly higher sample size ($n = 309$) than analyses that included data from the second time point ($n = 293$). In analyses relevant to the first time point, we controlled for the following variables: age, political orientation, gender, and previous psychiatric diagnoses (Y/N) because they were potentially relevant to the dependent variables (i.e., TBS-5, negative emotionality, rating the clip as trauma, IES-R)¹. In analyses relevant to the second time point, we additionally controlled for the amount of time elapsed between viewing the film clip and completing Part II of the study. We report effect sizes as Cohen's f^2 , which is a ratio of the unique contribution of the variable of interest to the model r^2 to the overall r^2 of the model (subtracted from 1). For generalized linear models, we computed a pseudo- r^2 based on the ratio of residual to null deviance values. Cohen's f^2 values of .02, .15, and .35 represent the thresholds for small, medium, and large effect sizes, respectively.

Results

Sample Characteristics

Our sample included 309 participants. Of these participants, a majority identified as male ($n = 175$) and the remainder as female ($n = 134$). Participants identified their ethnicity as Hispanic ($n = 20$) or Not Hispanic ($n = 289$) and their race as Caucasian ($n = 244$), Black/African American ($n = 30$), Hispanic ($n = 10$), Asian/Pacific Islander ($n = 10$), Multiracial or multiple races selected ($n = 14$), or Other ($n = 1$). They had a median age of 37 years old with a standard deviation of 11.5 years. Most participants identified as Not Religious ($n = 155$). Participants leaned slightly liberal in political orientation ($M = 2.75$; 1 = *very liberal* to 5 = *very conservative*). A minority of participants reported experiencing a Criterion A traumatic event in their lifetime ($n = 85$) or having been diagnosed with a psychiatric or psychological problem ($n = 50$). There were 16 individuals who did not complete Part II of the study, leaving us with 293 participants who completed follow-up measures.

Beliefs About Trauma

Q1: *Did Individuals With a Broader View of Trauma (i.e., Higher Scores on the TBS-5) Experience More Intense Negative Emotions in Response to the Film Clip?*

Yes. After controlling for covariates, TBS-5 scores predicted greater composite negative emotions ($f^2 = .09, p < .001$). More conservative political orientation was also predictive of greater negative emotions ($f^2 = .03, p = .002$).

Q2: *Were Individuals With a Broader View of Trauma (i.e., Higher Scores on the TBS-5) More Likely to Rate Viewing the Film Clip as a Trauma Several Days Following Viewing the Clip?*

Yes. In a logistic regression, those with higher TBS-5 scores were more likely to rate the film clip as a trauma ($f^2 = .03, p = .002$).

Q3: *Did Individuals With a Broader View of Trauma (i.e., Higher Scores on the TBS-5) Experience More Severe Symptoms on the IES-R and Its Intrusions Subscale?*

Yes and no. In a negative binomial regression, those with higher TBS-5 scores were slightly more likely to experience symptoms in general on the full IES-R ($f^2 = .012, p = .048$), but were not more likely to experience intrusion symptoms as measured by the Intrusions subscale ($f^2 = .007, p = .151$). More conservative political orientation predicted both general symptoms and intrusions ($f^2 = .01, .02, p = .047, .012$), and younger age predicted more intrusion symptoms ($f^2 = .03, p = .010$).

Q4: *If Individuals Viewed the Film Clip as a Trauma, Did They Experience More Severe Symptoms on the IES-R and Its Intrusions Subscale?*

Yes. In a negative binomial regression, those who viewed the film clip as a trauma experienced increased symptoms on the full IES-R ($f^2 = .09, p < .001$). Those who viewed the film clip as a trauma also experienced greater intrusion symptoms on the IES-R ($f^2 = .11, p < .001$). Those of younger age and more conservative political orientation also experienced greater intrusion symptoms ($f^2 = .02, .02, p = .019, .024$).

Experimental Manipulation

Q5: *Did Our Experimental Manipulation Impact Beliefs About the Definition of Trauma, as Measured by Scores on the TBS-5, in the Expected Direction?*

Yes. Controlling for relevant covariates, we found that those in the Narrow condition scored lower on the TBS-5 compared to those in the Broad condition with a medium-large effect size ($f^2 = .28, p < .001$). This effect endured at the second time point, showing that our intervention had lasting effects ($f^2 = .28, p < .001$). At both time points, more liberal political orientation also predicted TBS-5 scores ($f^2 = .04, .04, p < .001$).

Q6: *Did Our Experimental Manipulation Impact Whether Participants Viewed the Film Clip as a Trauma?*

Yes. Those in the Narrow condition were less likely to view the film clip as trauma ($f^2 = .02, p = .020$).

¹ At the request of a reviewer, we also controlled for race, ethnicity, and trauma type in a sensitivity analysis. This did not change any of the results except that Q3a became nonsignificant ($p = 0.048$ without extra controls, $p = .064$ with extra controls). This may be primarily due to decreased power, as none of these control variables significantly predicted the dependent variable.

Q7: Did Our Experimental Manipulation Impact the Extent to Which Participants Experienced Negative Emotions in Response to the Film Clip?

No. There was no significant difference between conditions ($f^2 = .01, p = .109$). Those with more conservative political orientation experienced slightly more negative emotions ($f^2 = .02, p = .027$).

Q8: Did Our Experimental Manipulation Impact the Extent to Which Participants Experienced Symptoms on the IES-R and Its Intrusions Subscale?

No. There was no significant difference between the conditions for either the full IES-R ($f^2 < .01, p = .335$), or intrusion symptoms ($f^2 = .01, p = .212$). Those of younger age ($f^2 = .03, p = .010$) and more conservative political orientation ($f^2 = .02, p = .012$) experienced greater intrusion symptoms.

A summary of the results of all eight research questions appears in Figure 1. Overall, results consistently support the idea that beliefs about trauma (i.e., the TBS-5) predict reactions to a stressful film clip. Evidence regarding the results of the experimental condition is more mixed.

Exploratory Analyses

We were interested in participants' naïve guesses about PTSD prevalence in the first iteration of the Guessing Task. In the narrow condition, the first example was "physical violence," which the median participant guessed caused PTSD in 50% of cases ($sd = 27$; displayed rate = 4%, true rate = 4%). In the broad condition, the first example was "witnessing violence on the news," which the median participant guessed caused PTSD in 10% of cases ($sd = 20$; displayed rate = 24%; true rate = 0%). Participants adjusted their guesses upward (Broad Condition) or downward (Narrow Condition) for subsequent iterations of the task.

In certain cases, we did not find significant direct effects of the experimental condition on an outcome, but plausible indirect pathways remained. For example, although the manipulation did not significantly (directly) alter negative emotions, it did alter the TBS-5, and the TBS-5 significantly predicted negative emotions. An indirect pathway (through the TBS-5) was also a possibility for

general and intrusion symptoms on the IES. In such cases, one can test for the presence of an indirect effect through bootstrapping (Mackinnon et al., 2004). We performed an indirect paths analysis using 5,000 bootstraps via the *lavaan* package (Rosseel, 2012). We found a significant indirect effect of the manipulation on negative emotions through the TBS-5 ($ab = 63.4 [36.6, 96.1], p < .001$), a significant indirect effect of the manipulation on general IES symptoms through the TBS-5 ($ab = 2.26 [.5, 4.3], p < .05$), but no significant indirect effect of the manipulation on IES intrusions symptoms through the TBS-5 ($ab = .64 [-.03, 1.4], p = .07$).

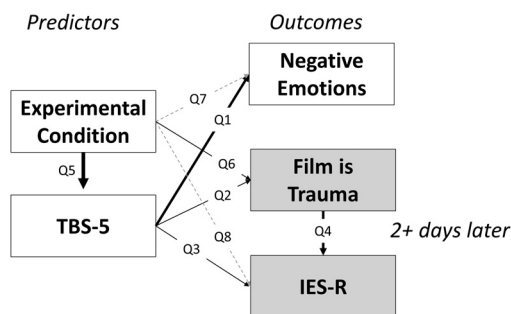
We were interested in correlations between broad beliefs about trauma (TBS-5) and other variables. A summary of associations between the TBS-5 and other scales appears in Table 1. The TBS-5 was strongly associated with the belief that words can cause long-lasting emotional damage (i.e., the WCHS). It was moderately associated with participants' sense of vulnerability to PTSD symptoms following a hypothetical trauma, in terms of both their own perceived vulnerability and the vulnerability of others. This is consistent with the findings of McGrath and colleagues (2019), who found that those with broader concepts of harm felt more personally vulnerable and endorsed greater sensitivity to injustices done to others. Broad beliefs were associated with more liberal political orientation. Although the magnitude of the correlation between broad beliefs and age was similar in size to that of political orientation, it was nonsignificant in this case. This is also consistent with McGrath et al. (2019), who found inconsistent correlations between harm-related concepts and age.

Discussion

Is trauma limited to only a small subset of extreme events such as rape and warfare? Or can almost anything cause long-lasting emotional damage? We measured participants' beliefs about this issue and had them watch a disturbing film clip. We found that the more individuals viewed trauma as a broad concept applying to many different events, the more likely they were to experience negative emotional outcomes after watching the film. They reported more negative emotions immediately after the film, had more intrusion symptoms in the days following, and were more likely to report that watching the film was itself a trauma. Moreover, we found that their belief was at least somewhat malleable—after a short series of psychoeducational tasks, participants could be induced to report a somewhat broader or narrower belief about traumatic events.

Importantly, however, the belief induction in our study was insufficient to significantly alter two of the three outcomes (at least directly). Those induced to have a broader belief (vs. a narrow belief) did not experience significantly greater negative emotions nor did they report significantly greater symptoms on the IES-R or its Intrusions subscale. That said, we did find significant indirect effects on negative emotions and IES-R symptoms via changes in the TBS-5. The manipulation also made individuals more likely to rate watching the film as a trauma. Overall, the correlational results were robust, whereas the experimental results were mixed. This should qualify conclusions about trauma concepts. It remains possible that another variable may drive both beliefs about trauma and sensitivity to stressors. For example, high trait anxiety could influence an individual's forecasting of negative events, leading to a broader definition of trauma, while independently fostering

Figure 1
Summary of Results: Do Broadened Trauma Concepts Amplify Responses to a Stressful Film Clip?



Note. Solid lines indicate statistical significance ($p < 0.05$). Dotted lines indicate nonsignificant results. Thicker lines indicate larger effect sizes.

Table 1
Correlations Between Trauma Breadth Scale and Selected Covariates

Variable	TBS-5	TBS-5 (follow-up)
TBS-5		
TBS-5 (follow-up)	.83**	
Gender	.04	.09
Religiosity	.00	.00
Political orientation (right)	-.13*	-.12*
Age	-.10	-.08
Caucasian	.09	.11
WCHS	.70**	.69**
PPVS-S	.38**	.38**
PPVS-O	.32**	.31**
Previous trauma	-.05	-.04
Previous psychiatric diagnosis	-.04	-.05

Note. TBS-5 = Trauma Breadth Scale; WCHS = Words Can Harm Scale; PPVS-S = Perceived Posttraumatic Vulnerability Scale—Self; PPVS-O = Perceived Posttraumatic Vulnerability Scale—Other; Caucasian = Caucasian/White race compared to all other identified races (collapsed due to sample size constraints). Correlations with binary variables are point-biserial correlations.

* $p < .05$. ** $p < .01$.

greater vulnerability to stressors. Accordingly, broadening or narrowing a person's definition of trauma may not necessarily have any effect on experienced emotions or PTSD symptoms.

It is difficult to parse whether a direct causal effect is truly absent, or whether our study was simply inadequate to capture a direct causal relationship. It seems unlikely that 5 to 10 minutes of psychoeducational tasks would cause deeply internalized shifts in beliefs about trauma and emotional vulnerability. The measured effect on beliefs may be surface-level and ephemeral, or perhaps even the result of demand characteristics (although we did put measures in place to prevent demand characteristics). Perhaps a larger study with more potent interventions over a longer period might detect direct causal effects of beliefs about trauma.

Our results are highly relevant to debates about conceptual bracket creep in the definition of trauma and PTSD. First, our study suggests that beliefs about trauma and PTSD can be altered by relatively small psychological interventions. Thus, it is highly plausible that bracket creep could result from intentional or unintentional social signaling about trauma. Although researchers have pointed to decreases in violence (e.g., McNally, 2003a, pp. 279–281; Pinker, 2011) as a likely explanation for bracket creep in the past few decades (Haslam, 2016; Jones et al., 2020), our results suggest that trauma brackets could also be shifted (at least temporarily) in the absence of such objective societal changes. For instance, changing formal diagnostic standards regarding PTSD and then informing the public about those standards could plausibly shift beliefs regarding what types of events can cause long-lasting emotional harm. More subtly, protective policies like trigger warnings and safe spaces might signal that minor adversities are potentially traumatogenic (Lukianoff & Haidt, 2018). Indeed, some recent studies have indicated that trigger warnings increase perceptions of personal vulnerability (Bellet et al., 2018) and reinforce the perceived importance of traumatic events (Jones et al., 2020), although other studies have found no such effects (Bellet et al., 2020).

Second, our results are largely consistent with previous researchers' words of caution about bracket creep, namely that "by identifying increasingly mild events and experiences as harmful, concept creep may make people vulnerable and fragile, prone to catastrophize everyday life" (McGrath et al., 2019, p. 79). Indeed, among the top quartile scorers on the TBS-5, 56% reported that viewing a film clip from a popular Hollywood movie was a trauma². Broader trauma concepts were highly correlated with the belief that words can cause long-lasting emotional harm ($r = .70$) and moderately correlated with the subjective perception that one is vulnerable to PTSD following trauma ($r = .38$). More importantly, broader trauma beliefs were associated with objective vulnerability; those with broader trauma concepts experienced more negative emotions and PTSD symptoms in response to the film clip.

We were surprised to find that although more liberal political orientation was related to higher scores on the TBS-5, more conservative political orientation was associated with greater negative emotions and intrusions symptom following the film clip. We suspect this may be a factor of the specific film clip used, as past studies have noted greater negative reactions among conservatives for stimuli primarily focused on core disgust domains (e.g., mutilated body parts, dog feces; Elad-Strenger et al., 2020; Smith et al., 2011). It could also result from traditional conservative views regarding women as a protected class or greater sensitivity to the death of the fetus. Extending this study to diverse stressful events would provide useful clarification.

This study had several important limitations. Our online sample was modest in size, mostly Caucasian, and entirely English-speaking, thereby limiting the generalizability of the results. We investigated beliefs as induced by an experiment. Future research could investigate beliefs that exist naturally in the population and how they vary by cultural context and personal trauma history. The study used a single video clip for all participants, and it is possible that results might differ depending on the exact content of the stimulus used. Although some results were experimental, many were correlational, opening possibilities for spurious relationships attributable to unmeasured variables. Although the measures demonstrated good reliability, some of them are newer scales with limited tests of validity; one scale was developed in the context of this study specifically. Both direct replications of the current study and conceptual replications that vary the stimuli and measurement tools would be informative.

In conclusion, individuals' personal trauma concept varies in breadth; some reserve the term for only the most severe stressors, whereas others apply it broadly. This variation is predictive of how individuals respond to a stressful experience, namely, watching a disturbing film clip: Those with broader beliefs suffer greater emotional consequences. We further found that beliefs about trauma can be influenced through psychoeducational content, but we did not find that this psychoeducational content significantly influenced emotional outcomes. Understanding shifting concepts of trauma is essential to sociocultural debates regarding harm, violence, and PTSD. Hacking argued that changes in concepts directly alter human experience by "looping" back into how individuals understand themselves (Hacking, 1999). If vulnerability to

² Compared to 28% in the bottom quartile.

PTSD expands as adversity declines, then public health efforts that simply decrease adverse events may fail to reduce rates of PTSD (a “neurotic treadmill”, Jones, 2021; McNally, 2016). Indeed, if activists are serious about reducing rates of PTSD, there exists a serious need to grapple with the fact that PTSD rates in the United States have not fallen in tandem with decreases in violence over the same time period (Jones, 2021; Helzer et al., 1987; Kessler et al., 1995, 2005; Kilpatrick et al., 2013; Pinker, 2011). If Hacking’s hypothesis has merit for the trauma concept, investigating the causes and consequences of conceptual bracket creep should be a primary aim in the study of trauma-related disorders.

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