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“Calculating the Toll of Trauma” in the Headlines: Portrayals of Posttraumatic Stress Disorder in the *New York Times* (1980–2015)

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Public awareness about traumatic stress is needed to address trauma as a public health issue. News media influence public awareness, but little is known about how traumatic-related disorders are portrayed in the news. A content analysis was conducted of all articles that mentioned posttraumatic stress disorder (PTSD) in *The New York Times* between 1980–2015. There were 871 articles analyzed. The number of PTSD articles published annually increased dramatically, from 2 in 1980 to 70 in 2014. Overall, 50.6% of articles were focused on military populations. Combat was identified as the trauma exposure in 38.0% of articles, while sexual assault was identified in 8.7%. Negative themes such as crimes perpetrated by people with possible PTSD (18.0%) and substance abuse (11.5%) were prominent, substance abuse being more prevalent in articles focused on military populations (16.4% vs. 6.3%, $p = <.001$). Only 9.1% of articles mentioned PTSD treatment options and this theme became less prevalent over time—ranging from 19.4% of articles published between 1980–1995 to just 5.7% of articles published between 2005–2015 ($p = <.001$). Results suggest that public awareness of PTSD has increased, but may be incomplete, inaccurate, and perpetuate PTSD stigma at individual- and institutional-levels. These findings can inform advocacy strategies that enhance public awareness about PTSD and traumatic stress.

Public awareness about traumatic stress is needed to address trauma as a public health issue (International Society for Traumatic Stress Studies, 2010). News media shape public awareness about mental health issues, such as traumatic stress, and exert influence at multiple levels. At the individual-level, news media affect mental illness problem recognition, management, and treatment seeking by providing information about risk factors, symptoms, coping strategies, and treatment options (Sieff, 2003; Wahl, 1992, 1997). At the community-level, news media shape attitudes about mental illness and can contribute to social stigma by negatively framing stories about people with mental illness (e.g., by implying that people with mental illness are violent; Corrigan et al., 2005; Klin & Lemish, 2008; Sieff, 2003). At the policy-level, news media educate policymakers about mental illnesses and influence decisions about whether and how to

address them (Goulden et al., 2011; Waddell et al., 2005; Wahl, Wood, & Richards, 2002; Wahl, 2003). Given the pervasive effects of news media, a large body of research has examined how mental illnesses are represented in the news. These studies have found that news media often contain inaccurate information, negatively frame mental illnesses, and convey that people with mental illness are dangerous (Klin & Lemish, 2008; Sieff, 2003).

Few studies, however, have examined how trauma-related disorders are depicted in the news. Jeong, Kim, Oh, and Park (2013) analyzed Korean newspaper articles mentioning posttraumatic stress disorder (PTSD) and found that coverage of the disorder had increased dramatically between 1980–2010, but that many stories contained inaccurate information about PTSD treatment. Further research about how PTSD has been depicted in news media is warranted because evidence suggests that widely held beliefs about PTSD are inconsistent with research on the etiology and epidemiology of the disorder. Specifically, evidence suggests that there is a pervasive misconception that PTSD is a problem that exclusively affects military populations and that combat exposure is a criterion for the disorder.

PTSD prevalence is high among military populations (Kang et al., 2003; Kulka et al., 1990), with an estimated prevalence of 20% among veterans who served in Operation Iraqi/Enduring Freedom (Department of Veterans Affairs, 2014). A wide range of traumatic exposures, however, can cause PTSD and the vast majority of cases are attributable to noncombat traumas among civilians. It is estimated that only 28% of cases of PTSD among U.S. men are attributable to combat (Prigerson, Maciejewski, & Rosenheck,

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The results of this study were presented at the International Society for Traumatic Stress Studies' Annual Meeting in New Orleans, Louisiana on November 6, 2015.

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2002), a proportion likely to be much smaller among U.S. women (Tolin & Foa, 2006) and the U.S. population as a whole. Most PTSD cases in the United States are caused by traumas such as sexual assault, with 30% to 80% of survivors developing the disorder (Kilpatrick & Acerno, 2003), nonsexual assault, with 23–39% of survivors developing the disorder (Kilpatrick & Acerno, 2003), disasters with 30–40% of survivors developing the disorder (Galea, Nandi, & Vlahov, 2005), and motor vehicle accidents, with 25–33% of survivors developing the disorder (Beck & Coffey, 2007). Because exposure to these noncombat traumas is much more common than combat exposure, the number of civilians affected by PTSD in the United States is approximately 13 times larger than the number of military personnel affected (Purtle, 2016). This epidemiologic reality, however, does not appear to be reflected in how PTSD is conceptualized by policymakers and the general public.

A content analysis of U.S. federal legislation introduced to address PTSD between 1989–2009 found that 91.4% of the legislative proposals were exclusively focused on military populations and that 81.7% implicated combat exposure as the cause of PTSD, followed by sexual assault (5.5%; Purtle, 2014). An accompanying analysis of the language used in these legislative proposals found that themes of war (e.g., wounds, Kevlar) and heroism were prominent and that PTSD was constructed as a military-specific disorder (Purtle, 2016). A vignette study—in which research participants read fictional narratives about characters suffering from identical PTSD symptoms, but differed in the type of trauma they were exposed to—found that the symptoms were correctly identified as PTSD substantially more often when the character was exposed to combat trauma (82.5%) as opposed to a nonintentional injury (68.6%) or sexual assault (49.4%; Merritt, Tharp, & Furnham, 2014). Qualitative studies have found that survivors of noncombat trauma often believe that combat exposure is a necessary criterion for the disorder and that this inaccurate belief is a barrier to treatment seeking (Sayer et al., 2009; Schreiber, Maercker, & Renneberg, 2010).

The current study builds on this body of research by describing how PTSD has been portrayed in *The New York Times* (NYT) between 1980–2015. The aims of the study were to: (a) assess if and how NYT PTSD coverage has changed over time, (b) identify themes in NYT PTSD articles, and (c) determine if the content of NYT PTSD articles differed according to whether articles were focused on military populations. By documenting how PTSD has been portrayed in NYT articles, this study can inform advocacy strategies to enhance public awareness about PTSD and traumatic stress.

Method

We conducted a content analysis of NYT articles that mentioned PTSD between January 1, 1980 and December 31, 2014. NYT is regarded as the U.S. newspaper that is most influential in shaping national news coverage and policy (Kioussis, 2004). We selected 1980 as the start of the study period because it was when PTSD was added to the *Diagnostic and Statistical Manual for Mental Disorders-Third Edition (DSM-III)*.

The ProQuest NYT database—a comprehensive digital archive of all NYT articles—was searched to identify articles mentioning “PTSD,” “P.T.S.D.,” “post traumatic stress disorder,” “posttraumatic stress disorder,” or “post-traumatic stress disorder.” First, in

accordance with recommendations for content analysis of newspaper articles (Krippendorff, 2012; Riff, Lacy, & Fico, 2014), three coders each read a random sample of 50 articles and wrote memos about themes observed in the data. These observations were informed by prior research about portrayals of PTSD textual documents (Jeong et al., 2013; Purtle, 2014, 2016) and public perceptions of the disorder (Merritt, Tharp, & Furnham, 2014; Sayer et al., 2009; Schreiber, Maercker, & Renneberg, 2010). The coders met regularly to discuss memos and inductively developed and defined thematic coding categories (e.g., substance abuse as a consequence of PTSD, court cases involving people with possible PTSD). These categories were combined with the a priori categories of: publication year, PTSD symptoms, type of trauma exposure, and whether each article was exclusively focused on military populations. A priori categories were derived from prior content analyses of PTSD in Korean newspapers (Jeong et al., 2013) and federal legislative proposals (Purtle, 2014).

A codebook was then developed with definitions for each coding category. All coding categories were dichotomous (yes/no) and equal weight was given to inductively generated and a priori categories. A coding instrument was created in Qualtrics, a Web based survey platform, and two coders each read 50 of the same articles to pilot the instrument and test for interrater reliability. Kappa statistics were calculated for each coding category and only those with greater than “moderate agreement” ($\kappa \geq .60$) were retained (Landis & Koch, 1977). Two coders then coded all of the NYT PTSD articles.

Coding results were imported into SPSS 22.0 for analysis. We created a dummy variable that classified each article as belonging to one of three publication periods: between 1980–1995, between 1995–2005, and between 2005–2015. Univariate statistics were generated to describe the characteristics of the articles and bivariate analyses examined differences in article characteristics stratified by publication period and whether the article was exclusively focused on military populations. Fisher exact, Fisher-Freeman-Halton exact, and χ^2 tests were used to determine the statistical significance of differences observed in bivariate analyses. As a relative measure of publication volume, we identified the total number of NYT articles published annually and calculated the proportion of articles that mentioned PTSD each year.

Results

There were 978 NYT articles published between January 1, 1980 and December 31, 2014 that mentioned PTSD. Of these, 107 articles were not news articles (e.g., TV listings, wedding announcements) and excluded from analysis, resulting in a sample of 871 articles. Military populations were the focus of 444 (50.6%) of these articles. Military-related language was a common feature in article headlines, with 296 (34.0%) containing the word(s) “battle,” “war,” “combat,” “soldier(s),” “veteran(s),” or “military.”

Trends in PTSD Article Publication Volume and Population of Focus

NYT coverage of PTSD increased dramatically during the study period (see Figure 1). The number of articles published annually increased from two in 1980 to 70 in 2014, equivalent to 1.3 articles mentioning PTSD every week that year. Almost two-thirds (62.1%)

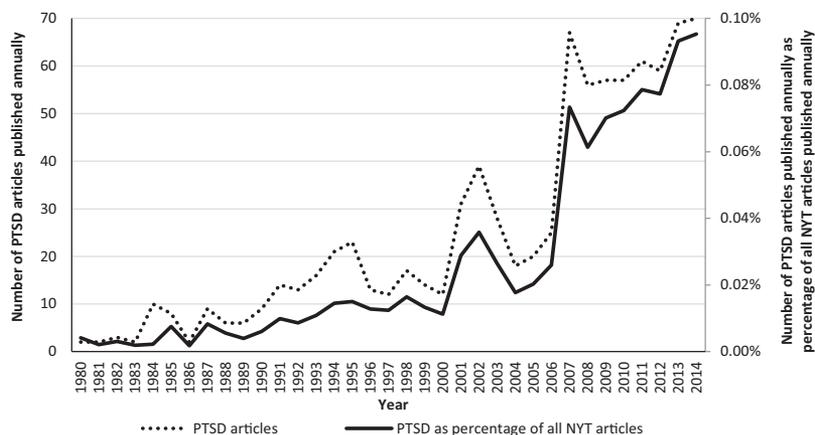


Figure 1. Articles mentioning posttraumatic stress disorder published in the *New York Times* between January 1, 1980 and December 31, 2014. *Note:* PTSD = posttraumatic stress disorder; NYT = *The New York Times*.

of the articles published in the 35 year study period were published in the 10 years between 2005–2015. PTSD article publication volume also increased relative to the total number of *NYT* articles published annually. The percentage of *NYT* articles that mentioned PTSD increased from 0.004% in 1980 to 0.095% in 2014.

The proportion of *NYT* PTSD articles that were focused on military populations fluctuated significantly during the study period ($\chi^2 = 100.00, p = <.001$). Between 1980–1995, 51.6% of articles were focused on military populations. The proportion of articles that focused on military populations then decreased to 21.3% between 1995–2005. This change corresponded with an increase in the number of articles published about the impacts of the September 11, 2001 terrorist attacks on civilians. An article entitled “Calculating The Toll Of Trauma,” for example, described trends in mental health service utilization after the attacks. Between 2005–2015, the majority (62.1%) of articles focused on military populations. Many of these articles were about issues experienced by veterans of who served in Operation Iraqi/Enduring Freedom, such as an article entitled “After the Battlefield, Fighting the Bottle at Home.”

Themes in PTSD Articles

Prominent themes were observed in the *NYT* PTSD articles (see Table 1). One-sixth (16.6%) of articles were about court cases in which the defendant potentially had PTSD. These articles focused on cases in involving both military (18.0%) and civilian (15.2%) populations. The portion of PTSD articles that focused on court cases significantly declined, however, from 28.2% between 1980–1995 to 14.8% between 2005–2015 ($\chi^2 = 14.03, p = <.001$; see Table 2). Substance abuse was discussed in 11.5% of the PTSD articles. This theme was significantly more prevalent in articles that focused on military populations than articles that did not (16.4% vs. 6.3%, $\chi^2 = 21.93, p = <.001$) and was prevalent throughout the study period. Just 9.6% of the articles identified treatment options for PTSD and the proportion of articles identifying treatment options declined over time—decreasing from 19.4% between 1980–1995 to 5.7% between 2005–2015 ($\chi^2 = 24.84, p = <.001$). Only 2.5% of articles acknowledged the notion

of preventing PTSD. Although only 2.6% of articles discussed risk or protective factors for PTSD (e.g., prior trauma exposure, social support), this theme was significantly more common in articles that were not focused on military populations (.09% vs. 4.4%, $\chi^2 = 10.66, p = <.001$).

PTSD Symptoms

Approximately one-third (32.4%) of articles provided information about specific PTSD symptoms, with nightmares (13.1%), depression (12.3%), and flashbacks (11.7%) being most common. During the study period, there was a significant decrease in the proportion of articles that identified nightmares or flashbacks and a significant increase in the proportion that identified depression. Between the publication periods of 1980–1995 and 2005–2015, the proportion of articles that identified nightmares declined from 21.8% to 8.5% ($\chi^2 = 26.46, p = <.001$) and the proportion that identified flashbacks declined from 18.5% to 9.4% ($\chi^2 = 9.00, p = <.011$). Concurrently, the proportion of articles that identified depression increased from 9.7% to 14.6% ($\chi^2 = 7.47, p = <.024$) and the proportion that identified suicidal ideation increased from 1.6% to 8.3% ($\chi^2 = 19.08, p = <.001$).

The types of PTSD symptoms identified varied according to whether or not the article was focused on military populations. Nightmares were identified significantly more often in articles that focused on nonmilitary populations (15.9% vs. 10.4%, $\chi^2 = 5.93, p = .015$) and anger (4.7% vs. 8.6%, $\chi^2 = 5.26, p = .022$) and suicidal ideation (2.3% vs. 9.0%, $\chi^2 = 17.89, p = <.001$) were identified significantly more often in articles that focused on military populations. Depression (13.3%) and flashbacks (12.4%) were the symptoms most frequently identified in articles that focused on military populations.

Trauma Exposure

Nearly three-quarters (72.8%) of articles explicitly identified at-least one traumatic exposure that caused PTSD. Combat was the most frequently identified trauma exposure, identified in 38.0% of articles. This proportion decreased from 54.8% among articles

Table 1. Number/Proportion of Articles Mentioning PTSD by Theme, PTSD Symptoms, and Trauma Exposure, Stratified by Population of Focus (New York Times, January 1, 1980 to December 31, 2014)

Article characteristic	Total N = 871		Population of focus				χ^2	p
	n	%	"Military focused" n = 444		"Not military focused" n = 427			
	n	%	n	%	n	%		
Article theme								
Court case	145	16.6	80	18.0	65	15.2	1.23	.268
Substance abuse	100	11.5	73	16.4	27	6.3	21.93	<.001
PTSD treatment options	79	9.1	42	9.5	37	8.7	.17	.683
Research study	58	6.7	23	5.2	35	8.2	3.19	.074
Physical health problems	29	3.3	18	4.1	11	2.6	1.48	.224
Risk/protective factors	23	2.6	4	.9	19	4.4	10.66	.001
Prevention	22	2.5	14	3.2	8	1.9	1.45	.229
PTSD symptoms								
Any symptom	282	32.4	148	33.3	134	31.4	.38	.538
Nightmares	114	13.1	46	10.4	68	15.9	5.93	.015
Depression	107	12.3	59	13.3	48	11.2	.85	.358
Flashbacks	102	11.7	55	12.4	47	11.0	.40	.527
Anxiety	83	9.5	36	8.1	47	11.0	2.12	.145
Hypervigilance	57	6.5	31	7.0	26	6.1	.28	.594
Anger	58	6.7	38	8.6	20	4.7	5.26	.022
Suicidal ideation	50	5.7	40	9.0	10	2.3	17.89	<.001
Trauma exposure								
Combat	331	38.0	300	67.6	31	7.3	336.01	<.001
Not specified	237	27.2	123	27.7	114	26.7	.11	.739
Intentional injury	118	13.5	18	4.1	100	23.4	69.69	<.001
Terrorism	105	12.1	8	1.8	97	22.7	89.81	<.001
Sexual assault	76	8.7	20	4.5	56	13.1	20.26	<.001
Accidental injury	48	5.5	5	1.1	43	10.1	33.44	<.001
Torture	42	4.8	9	2.0	33	7.7	15.42	<.001
Natural disaster	32	3.7	1	.2	31	7.3	30.44	<.001

Note. χ^2 and Fisher exact tests with 1 *df* comparing the proportion of a "Military focused" articles with a characteristic to the portion of "Not military focused" articles with the article characteristic. "Military focused" and "Not military focused" variables are mutually exclusive. All article characteristics variables are not mutually exclusive; thus, cumulative percentages exceed 100. PTSD = posttraumatic stress disorder.

published between 1980–1995 to 37.2% among articles published between 2005–2015 ($\chi^2 = 20.78, p = <.001$). Sexual assault was only identified in 8.7% of the articles and was identified significantly more often in articles that were focused on nonmilitary populations compared to military populations (13.1% vs. 4.5%, $\chi^2 = 20.26, p = <.001$). The proportion of articles that identified sexual assault also decreased from 11.3% in the 1980–1995 publication period to 6.8% in the 2005–2015 publication period ($\chi^2 = 6.3, p = <.041$)

Discussion

Coverage of PTSD in *NYT* articles has increased dramatically since 1980. Given the well-established link between news media and public awareness about mental illnesses (Klin & Lemish, 2008; Sieff, 2003; Wahl, 1997), this finding can be perceived as an indicator of increased public awareness about PTSD. The nature of this awareness and the extent to which it is positive, however, is unclear. At least three findings should be considered as having potentially negative implications.

First, *NYT* portrayals of populations affected by PTSD do not reflect the epidemiology of the disorder. Overall, 50.6% of *NYT* PTSD articles were focused on military populations, as were 63.5% of those published most recently (i.e., between 2005–2015). As described, the vast majority of PTSD cases in the United States are attributable to noncombat traumas (Prigerson, Maciejewski, & Rosenheck, 2002) among civilian populations (Beck & Coffey, 2007; Galea, Nandi, & Vlahov, 2005; Kilpatrick & Acierno, 2003). Sexual assault—a noncombat trauma that carries exceptionally high PTSD risk, with an estimated 30% to 80% of survivors developing the disorder (Kilpatrick & Acierno, 2003)—was identified as a traumatic exposure in only 8.7% of the articles and the proportion of articles that identified this exposure decreased significantly during the study period. The over representation of military populations and combat exposure in *NYT* PTSD articles could contribute the misconception that combat exposure is a necessary criterion for the disorder, which might in turn inhibit treatment seeking among noncombat exposed trauma survivors (Purtle, 2016; Sayer et al., 2009; Schreiber, Maercker, & Renneberg, 2010; Sieff, 2003). Treatment seeking could be further

Table 2. Number/Proportion of Articles Mentioning PTSD by Theme, PTSD Symptoms, and Trauma Exposure, Stratified by Publication Period (New York Times, January 1, 1980 to December 31, 2014)

Article characteristic	Publication period						χ^2	p
	1980–1995		1995–2005		2005–2015			
	n	%	n	%	n	%		
Article theme								
Court case	35	28.2	30	14.5	80	14.8	14.03	.001
Substance abuse	14	11.3	16	7.7	70	11.5	4.00	.135
PTSD treatment options	24	19.4	24	11.6	31	5.7	24.84	<.001
Research study	12	9.7	16	7.7	30	5.5	3.28	.194
Physical health problems	5	4.0	11	5.3	13	2.4	4.17	.124
Risk/protective factors	2	1.6	16	7.7	5	.9	22.31	<.001
Prevention	5	4.0	7	3.4	10	1.8	2.77	.250
PTSD symptoms								
Any symptom	44	35.5	59	28.5	179	33.1	2.09	.351
Nightmares	27	21.8	41	19.8	46	8.5	26.46	<.001
Depression	12	9.7	16	7.7	79	14.6	7.47	.024
Flashbacks	23	18.5	28	13.5	51	9.4	9.00	.011
Anxiety	12	9.7	16	7.7	55	10.2	1.03	.596
Hypervigilance	13	10.5	12	5.8	32	5.9	3.69	.158
Anger	13	10.5	6	2.9	39	7.2	7.900	.019
Suicidal ideation	2	1.6	3	1.4	45	8.3	19.08	<.001
Trauma exposure								
Combat	68	54.8	62	30.0	201	37.2	20.78	<.001
Not specified	13	10.5	33	15.9	191	35.3	48.71	<.001
Intentional injury	28	22.6	41	19.8	49	9.1	24.90	<.001
Terrorism	1	.8	62	30.0	42	7.8	86.82	<.001
Sexual assault	14	11.3	25	12.1	37	6.8	6.36	.041
Accidental injury	12	9.7	21	10.1	15	2.8	20.48	<.001
Torture	7	5.6	9	4.3	26	4.8	.28	.867
Natural disaster	7	5.6	9	4.3	16	3.0	2.41	.299

Note. χ^2 and Fisher-Freeman-Halton exact tests with 2 *df* comparing the proportion of articles in each publication year range with the article characteristic. Each year range category is mutually exclusive. All article characteristics variables are not mutually exclusive; thus, cumulative percentages exceed 100. PTSD = posttraumatic stress disorder.

inhibited by the fact that the proportion of articles identifying PTSD treatment options precipitously declined during the study period—decreasing from 19.4% between 1980–1995, to 11.6% between 1995–2005, and 5.7% between 2005–2015.

Second, PTSD was negatively framed in many articles. Court cases involving crimes committed by people with possible PTSD and substance abuse were among the most common themes, particularly in articles that were focused on military populations. These negative frames likely contribute to stigma about PTSD and trauma survivorship at individual- and institutional-levels (Corrigan et al., 2005; Klin & Lemish, 2008; Sieff, 2003). At the individual-level, PTSD self-stigma—defined as self-awareness and agreement with negative stereotypes about PTSD (e.g., that people with PTSD are dangerous or weak)—has been identified as a barrier to PTSD treatment seeking among military populations (Kim et al., 2010; Mittal et al., 2013). PTSD structural stigma—defined as policies and institutional decisions that intentionally discriminate against people who do or might have the disorder (Corrigan, Markowitz, & Watson, 2004)—appears to be a barrier to employment among military veterans (Zoroya, 2013). A 2010 survey found that 46% of employers identified PTSD as a barrier

to hiring veterans (Society for Human Resource Management, 2010), prompting the U.S. Army to launch the “Hire a Veteran” campaign in attempt to correct misconceptions about the disorder (Anerson, 2013).

Finally, most themes in *NYT* PTSD articles pertained to proximal causes and consequences of the disorder (e.g., exposures and symptoms). More distal concepts—such as prevention (Forneris et al., 2013), risk and protective factors (Brewin, Andrews, & Valentine, 2000), and even treatment (Bisson & Andrew, 2007)—were rarely discussed. This narrow focus could inhibit awareness about PTSD resilience and recovery and constrain discourse about the social determinants of traumatic stress, which is needed to garner political support for policy interventions (Purtle, 2016, 2014).

Although empirically supported, our inferences regarding the implications of portrayals of PTSD in *NYT* articles are largely speculative. There is a need for survey research that directly assesses public knowledge and attitudes about PTSD and traumatic stress. Regardless, our study can inform practice by identifying areas that can be targeted by advocacy strategies. Our results suggest that advocates should focus on expanding media discourse about PTSD beyond military populations, promoting survivor nar-

ratives of resilience and recovery, and disseminating research about the broader social determinants of trauma exposure, resilience, and recovery.

Our study was limited to news media coverage about PTSD, not other trauma-related disorders or the broader construct of traumatic stress. Our study was also confined to one national U.S. newspaper. Local news media about PTSD could vary between regions and our results are not generalizable to other countries. Individual articles were the units of analysis and we did not assess the number of times PTSD was mentioned in each article. Lastly, our study did not compare *NYT* coverage of PTSD to that of another trauma-related disorder. Despite these limitations, our study demonstrates how PTSD has been portrayed in a major news outlet overtime and can inform media advocacy strategies to improve public awareness about PTSD and traumatic stress.

Keywords: posttraumatic stress disorder; trauma; media analysis; public awareness; policy

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