



Not all trauma is the same

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In a recent Brief Report by Raker et al. (1), the investigators analyze data from a prospective study of young, low-income mothers who survived Hurricane Katrina and apply this to the ongoing coronavirus disease 2019 (COVID-19) pandemic to discuss strategies to mitigate the pandemic's indirect effects on survivors. We appreciate the comparison made, but it is slightly contrived for several reasons.

First, natural disasters generally refer to catastrophic occurrences of atmospheric, geologic, and hydrologic origins; as such, pandemics are not "natural disasters" per se and more a result of social, microbial, and other ecological factors. Apart from the issue of typology, the nature of natural disasters and of pandemics are markedly different in terms of their immediacy and destructive power. Natural disasters like the Hurricane Katrina, a category 5 tropical cyclone, leave a staggering death toll and ruined housing and infrastructure in their wake (2). Although pandemics may result in the loss of human lives and disruption of normal services, the extent of physical damage and loss of property is without equal. The sheer force and magnitude of Hurricane Katrina mean it is more likely to fulfill the definition of a traumatic event in the International Classification of Diseases, 11th Revision, that is, a "stressful event or situation of exceptionally threatening or horrific nature likely to cause pervasive distress in almost anyone" (3).

Given the above differences, the phenomenology and psychopathology of persons affected by COVID-19 and by Hurricane Katrina are likely to be

dissimilar as well. COVID-19 may more commonly result in general distress, depression, anxiety, and somatization instead of post-traumatic stress disorder (4, 5). Rather than pathologize these experiences, some degree of sadness, anxiety, fear, anger, paranoia, and short-term adjustment issues and long-term adaptation to the uncertain future are perhaps reasonable or expected responses. The majority of mental disorders following COVID-19 may be "reactive" in nature. It may be in response to the fear and stress of contagion, especially given the possibility of asymptomatic spreaders in the community (6). It may be the consequence of hospitalization for infected individuals or strict measures to curb and contain the pandemic, with "lockdown" living, loss of livelihood, and financial hardship. It is clear that this pandemic has disproportionately impacted racial minorities and lower-income families (7).

Nonetheless, through Hurricane Katrina, we recognize that beyond grief and extreme devastation, self-reported positive psychological changes, or post-traumatic growth is possible, albeit the victims simultaneously struggled with mental illness. Three years after the event, the Resilience in Survivors of Katrina study investigators found significant abatement of psychological distress among the African American women who participated in the original study (8). In the case of COVID-19, people may have learned to live with "less," and they may have found more time for leisure activities like quiet reading, honing a new skill or craft, or simply having a meal as a family.

- 1 E. J. Raker, M. Zacher, S. R. Lowe, Lessons from Hurricane Katrina for predicting the indirect health consequences of the COVID-19 pandemic. *Proc. Natl. Acad. Sci. U.S.A.* **117**, 12595–12597 (2020).
- 2 J. Padgett et al., Bridge damage and repair costs from Hurricane Katrina. *J. Bridge Eng.* **13**, 6–14 (2008).
- 3 A. Shalev, I. Liberzon, C. Marmar, Post-traumatic stress disorder. *N. Engl. J. Med.* **376**, 2459–2469 (2017).
- 4 R. P. Rajkumar, COVID-19 and mental health: A review of the existing literature. *Asian J. Psychiatr.* **52**, 102066 (2020).
- 5 Q. X. Ng, M. L. Z. Q. De Deyn, D. Y. Lim, H. W. Chan, W. S. Yeo, The wounded healer: A narrative review of the mental health effects of the COVID-19 pandemic on healthcare workers. *Asian J. Psychiatr.* **54**, 102258 (2020).
- 6 Y. Bai et al., Presumed asymptomatic carrier transmission of COVID-19. *JAMA* **323**, 1406–1407 (2020).
- 7 M. Webb Hooper, A. M. Nápoles, E. J. Pérez-Stable, COVID-19 and racial/ethnic disparities. *JAMA* **323**, 2466–2467 (2020).
- 8 E. E. Manove et al., Posttraumatic growth in low-income Black mothers who survived Hurricane Katrina. *Am. J. Orthopsychiatry* **89**, 144–158 (2019).

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