Published in final edited form as:

Soc Psychiatry Psychiatr Epidemiol. 2014 December ; 49(12): 1859–1860. doi:10.1007/s00127-014-0949-2.

Posttraumatic growth in the aftermath of a disaster: looking for the role of gender

Magdalena Cerdá^a

^aDepartment of Epidemiology, Mailman School of Public Health, Columbia University, New York, NY.

In the past ten years, the literature on disasters and mental health has shifted from a focus on psychopathology, to an interest in documenting manifestations of resilience in the face of mass trauma. The Jin et al. study, published in this issue of the *Journal*, examines gender differences in the relationship between posttraumatic stress disorder (PTSD) and posttraumatic growth (PTG) in the aftermath of the Wenchuan Earthquake in China. The study suggests that the coping response to PTSD may differ between males and females, and raises interesting questions about the types of factors that contribute to the manifestation of high versus low PTG given high levels of PTSD. At the same time, this type of study highlights the need to investigate the long-term impact and meaning of PTG, and to examine whether it reflects an adaptive process with long-term benefits in the face of traumatic exposures, or an illusory type of posttraumatic response.

In the past ten years, the literature on disasters and mental health has shifted from a focus on psychopathology, to an interest in documenting manifestations of resilience in the face of mass trauma [1]. In this context, the Jin et al. study, published in this issue of the *Journal* [2], examines gender differences in the relationship between posttraumatic stress disorder (PTSD) and posttraumatic growth (PTG) in the aftermath of the Wenchuan Earthquake in China.

While the impact of natural disasters on post-traumatic stress disorder is well documented, the concept of PTG is insufficiently understood. Defined in different cases as either an attitude or cognition or a set of positive behaviors, PTG has been proposed as a form of coping to offset the negative impact of exposure to trauma, or else as the positive immediate result of the struggle with challenging life circumstances[3]. In the Jin et al. [2] study, PTG is defined as a cognitive adaptation process among those who experience PTSD in response to the disaster – as a means to provide a positive reinterpretation of the events. The study finds a weak relationship between PTSD and PTG, particularly among females, and suggests that those who experienced worse traumatic events due to the earthquake may be more likely to use the types of coping strategies manifested in PTG.

*Magdalena Cerdá, Department of Epidemiology, Columbia University Mailman School of Public Health, 722 W168th St, New York, NY 10032. Tel.: +1 212 305 2570; fax: +1 212 342 4760. mc3226@columbia.edu.

Conflict of Interest

The author has no conflicts of interest to declare.

The majority of the Jin et al. [2] study findings were previously reported by the authors in a recent publication in *Archives of Psychiatric Nursing* [4]. However, the focus of Jin et al. [2] on gender differences in the relationship between PTSD and PTG does raise some potentially interesting questions. By using quadratic models and graphs, the study reveals the shape of the relationship between PTSD and PTG by sex. Among females, there was a U-shaped relationship between PTSD and PTG – that is, subjects with high PTSD presented with either high or low PTG, while subjects with low PTSD presented with moderate levels of PTG. In contrast, among males, subjects with higher levels of PTSD presented with higher levels of PTG. This finding suggests that the nature of the coping response to PTSD may differ between males and females. Further, it begs two questions: (1) what factors contribute to the manifestation of high versus low PTG given high levels of PTSD?; and (2) why is the variation in the PTG response to high PTSD restricted to females? Such questions are critical if we are to effectively intervene in the post-disaster context to promote resilient responses to the disaster.

Several methodological questions also arise with this study. First, given the cross-sectional, post-disaster design of the study, it is not possible to assess the directionality or the causal nature of the relationship between PTG and PTSD –PTG could be an adaptive response to PTSD, or PTSD could be worse given lower levels of PTG, or the two could be independent of each other, and merely connected by a third factor, such as pre-disaster psychopathology. A few longitudinal studies have tried to assess this question, and found conflicting results—while some studies found that initial PTG predicted subsequent levels of distress [5,6], others found that initial distress predicted subsequent growth [7,8], and yet others found that growth and distress were unrelated [9,10]. However, the contrasting patterns of the cross-sectional relationship between PTG and PTSD by gender suggest that it is important to examine this longitudinal relationship separately among females and males, and to carefully consider the direction and the causal nature of the relationship for each gender group. Second, the study found subgroup patterns of relationships between PTG and PTSD symptoms – that is, the PTG subscale of “Personal Strength” was particularly correlated with the total scale of PTSD symptoms, as well as specifically with the symptoms of avoidance/numbing, re-experience, and arousal. In future studies, person-centered approaches such as latent class analysis could be used to empirically test whether there are subgroups of individuals who present different combinations of symptoms of PTG and PTSD. Such studies would allow us to identify the aspects of PTG that are most predictive of positive long-term outcomes following exposure to traumatic events.

At a broader and more fundamental level, a question arises about the long-term impact and meaning of PTG: does it reflect an adaptive process with long-term benefits in the face of traumatic exposures, or is it an illusory type of posttraumatic response [7]? An opportunity exists for future studies on instances of mass trauma to move beyond focusing on single psychiatric disorders and cognitive processes such as PTG to examine the long-term manifestations of wellness across multiple dimensions – mental, physical, and social – among persons who initially manifested PTG. By identifying subgroups who exhibit long-term wellness, we can also find those factors that, if intervened on, could promote long-term

and comprehensive wellness after the occurrence of disasters and other sources of mass trauma.

References

1. Norris FH, Tracy M, Galea S. Looking for resilience: Understanding the longitudinal trajectories of responses to stress. *Social Science & Medicine*. 2009; 68(12):2190–2198. [PubMed: 19403217]
2. Jin Y, Xu J, Liu D. The relationship between post traumatic stress disorder and post traumatic growth: gender differences in PTG and PTSD subgroups. *Soc Psychiatry Psychiatr Epidemiol*. 2014
3. Pat-Horenczyk R, Brom D. The Multiple Faces of Post-Traumatic Growth. *Applied Psychology: An International Review*. 2007; 56(3):379–385.
4. Jin Y, Xu J, Liu H, Liu D. Posttraumatic Stress Disorder and Posttraumatic Growth Among Adult Survivors of Wenchuan Earthquake After 1 Year: Prevalence and Correlates. *Archives of Psychiatric Nursing*. 2014; 28(1):67–73. [PubMed: 24506990]
5. McMillen JC, Smith EM, Fisher RH. Perceived benefit and mental health after three types of disaster. *Journal of consulting and clinical psychology*. 1997; 65(5):733–739. [PubMed: 9337492]
6. Ickovics JR, Meade CS, Kershaw TS, Milan S, Lewis JB, Ethier KA. Urban teens: Trauma, posttraumatic growth, and emotional distress among female adolescents. *Journal of consulting and clinical psychology*. 2006; 74(5):841–850. [PubMed: 17032088]
7. Lowe SR, Manove EE, Rhodes JE. Posttraumatic stress and posttraumatic growth among low-income mothers who survived Hurricane Katrina. *Journal of consulting and clinical psychology*. 2013; 81(5):877–889. [PubMed: 23750467]
8. Dekel S, Ein-Dor T. Posttraumatic Growth and Posttraumatic Distress: A Longitudinal Study. *Psychological Trauma: Theory, Research, Practice, and Policy*. 2012; 4(1):94–101.
9. Salsman JM, Segerstrom SC, Brechting EH, Carlson CR, Andrykowski MA. Posttraumatic growth and PTSD symptomatology among colorectal cancer survivors: a 3-month longitudinal examination of cognitive processing. *Psycho-oncology*. 2009; 18(1):30–41. [PubMed: 18481837]
10. Phelps L, Williams R, Raichle K, Turner A, Ehde D. The importance of cognitive processing to adjustment in the 1st year following amputation. *Rehabilitation Psychology*. 2008; 53:28–38.