

PERSONALITY PREDICTORS OF POSTTRAUMATIC STRESS DISORDER IN ORPHANED SURVIVORS OF THE SICHUAN EARTHQUAKE

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The personality predictors of posttraumatic stress disorder in orphan survivors after the 2008 Sichuan earthquake in China were investigated. Half a year after the earthquake, 196 preearthquake and 116 postearthquake orphans who survived were recruited. All participants completed the Eysenck Personality Questionnaire for Children (Gong, 1984) and Children's Revised Impact of Event Scale (Smith, Perrin, Dyregrov, & Yule, 2003). The regression analysis showed that the Neuroticism score was the strongest predictor of the severity of PTSD symptoms for both pre- and postearthquake orphans. For the preearthquake orphans, the Extraversion trait predicted Arousal negatively, and the Lie trait predicted Intrusion and Arousal positively. However, for the postearthquake orphans, only the Extraversion trait predicted Avoidance positively.

Keywords: Eysenck Personality Questionnaire for Children, Eysenck Children's Revised Impact of Event Scale, posttraumatic stress disorder, orphans.

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Appreciation is due to anonymous reviewers.

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On May 12th, 2008, a huge earthquake occurred in the Sichuan province in southwest China, which has been deemed one of the deadliest and strongest natural disasters to hit China since a great earthquake happened in Tangshan in 1976. The earthquake devastated Sichuan, causing overwhelming economic losses, physical injuries, and deaths as well as mental health implications. The earthquake caused 69,197 deaths, 374,176 injuries, 18,222 disappearances, and thousands of children were left orphaned (<http://www.512gov.cn/GB/123057/807425.html>).

Previous researchers have found that a high percentage of children experienced symptoms of posttraumatic stress disorder (PTSD) after being exposed to traumatic events, especially the orphans who lost their parents at the same time (Norris et al., 2002; Zhang, Wang, & Sun, 2000). For example, Norris et al. found that natural disasters such as earthquakes cause orphans more serious mental health problems and these orphans have a higher probability of developing PTSD. Similarly, after more than 20 years, Chinese researchers explored the long-term effects of the 1976 Tangshan earthquake on the mental health of earthquake orphans, concluding that orphans had more mental health problems and a higher prevalence rate of PTSD and repeated flashbacks of traumatic experience (Zhang et al., 2000) compared to non-orphan children who experienced the earthquake. A large number of researchers reported that there was a strong relationship between personality and PTSD development, suggesting that some personality traits such as Neuroticism acted as a lens magnifying the impact of trauma (Holeva & Tarrier, 2001; Hou & Li, 2006; Miller, 2003). So it is very meaningful to investigate the relationship between the pretraumatic personality risk factors and PTSD symptoms, which is very important for psychiatric and educational research in China.

In the study, we were mainly concerned with the primary personality risk factors predicting the development of PTSD in pre- and postearthquake orphans.

Half a year after the great earthquake, 312 pre- and postearthquake orphans who survived the earthquake were recruited. Among them, there were 196 preearthquake orphans, including 116 boys aged between 8 and 18 ($M = 12.51$, $SD = 2.06$), and 80 girls, aged between 8 and 16 ($M = 12.37$, $SD = 1.85$) and 116 postearthquake orphans, consisting of 69 boys aged between 8 and 16 ($M = 12.21$, $SD = 1.76$), and 47 girls aged between 8 and 17 ($M = 12.08$, $SD = 2.01$). All participants completed a package of questionnaires including the Eysenck Personality Questionnaire for Children (Gong, 1984) and the Children's Revised Impact of Event Scale (CRIES-13; Smith, Perrin, Dyregrov, & Yule, 2003).

Four personality factors were entered into the regression analysis to verify the risk factors for the PTSD (see Table 1). The results showed that a high Neuroticism score was the strongest predictor which could significantly predict the severity of PTSD symptoms for both pre- and postearthquake orphans. For

the preearthquake orphans, the Extraversion trait predicted Arousal negatively, and the Lie trait predicted Intrusion and Arousal positively. However, for the postearthquake orphans, only Extraversion predicted Avoidance positively.

TABLE 1
REGRESSION ANALYSIS OF PERSONALITY PREDICTING PTSD FOR ORPHANS BOTH
PRE- AND POSTEARTHQUAKE

	Variable	Intrusion (β)	Avoidance (β)	Hyperarousal (β)
Psychoticism	preearthquake orphans	0.073	-0.076	0.042
	postearthquake orphans	-0.048	-0.217	0.077
Extroversion	preearthquake orphans	-0.089	0.036	-.149*
	postearthquake orphans	0.104	.201	-0.083
Neuroticism	preearthquake orphans	.469***	.423***	.618***
	postearthquake orphans	.544***	.519***	.660***
Lie	preearthquake orphans	.263**	0.088	.162*
	postearthquake orphans	-0.127	-0.069	0.006

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

These results suggest that different personality predictors of PTSD presented in pre- and postearthquake orphans. This is probably because they had different individual experiences of growing up. The results from postearthquake orphans were highly accordant with previous studies in which it was proposed that Neuroticism acted as a lens magnifying the impact of trauma (Holeva & Tarrier, 2001; Hou & Li, 2006; Miller, 2003). However, for the preearthquake orphans, besides the Neuroticism trait, there were some other personality traits such as a low score for the Extraversion trait and a high score for the Lie trait predicting the PTSD.

So, it is very meaningful if we understand the relationship between individual differences related to the developmental environment and PTSD, and examine the possible presence of personality-base subtypes of PTSD in a variety of trauma populations, because we will be able to use the pretrauma measuring information to predict the strength of PTSD symptoms. When we try to help the orphans to recover from the trauma, our psychological and educational aid and intervention will be more practical if they are based on pretrauma information, such as personality and the type of the orphan.

According to our results, we can construct the personality-base subtypes of PTSD among orphans, which is promising for the development of assessment, intervention, education techniques, and ways of more appropriately addressing individual differences in orphans.

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