



Post-traumatic Growth and Resilience in Adolescents in Puerto Rico Post-hurricane Maria

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PUBLISHED ABSTRACT



ABSTRACT

Background/Rationale: Hurricane Maria and the COVID-19 pandemic have greatly impacted the lives of adolescents in Puerto Rico. Understanding how individuals respond to stress can elucidate strategies used to cope and grow from impactful life events (ILE) while minimizing adverse mental health consequences. This expands on work with medical students in Fukushima post-3/11.

Hypothesis or Research Question: Adolescents who utilize more resilience behaviors will experience more post-traumatic growth. Adolescents who demonstrate post-traumatic growth from a previous event will experience less COVID-related stress.

Study Design/Methods: Students were anonymously surveyed and responded to the Davidson-Trauma Scale (DTS), Post-Traumatic Growth Inventory (PTGI), Connor-Davidson Resilience Scale-10 (CDRS-10), Resilient Behavior Scale (RBS), and questions specific to COVID-19 and Hurricane Maria. Data was analyzed by examining correlations between scales and between scales and questions specific to COVID-19 and natural disasters.

Results: Most students indicated the COVID-19 pandemic as their most impactful life event (44%) (*Figure 1*). The RBS and CDRS-10 were positively correlated with each other ($r = .679, p = .002$). The PTGI was positively correlated with the RBS ($r = .878, p < .001$) but not the CDRS-10 (*Table 1*). Students who chose a prior non-COVID-19 ILE experienced less COVID-19 stress ($p = 0.047$) than those who chose COVID-19. Post-traumatic growth (PTG) was greater in those who indicated an ILE affected them and others instead of only them ($p = 0.04$) (*Table 2*). PTG was also positively correlated with finding something positive in Hurricane Maria ($r = .458, p = 0.024$) but not COVID-19. In the free response section, most indicated meeting new people and coming together as positive aspects of Hurricane Maria.

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Conclusions/Future Plans: Our results indicate adolescents' resilient behaviors, not resiliency per se, were associated with post-traumatic growth since only RBS was correlated with PTG. Additionally, undergoing prior stressful events appears to mitigate distress from future stressors. Finally, experiencing an ILE alongside others appears to lead to greater PTG suggesting an important role for social connection. The social isolation of COVID-19 may have diffused the potential to find something positive in the event even in those experiencing PTG.

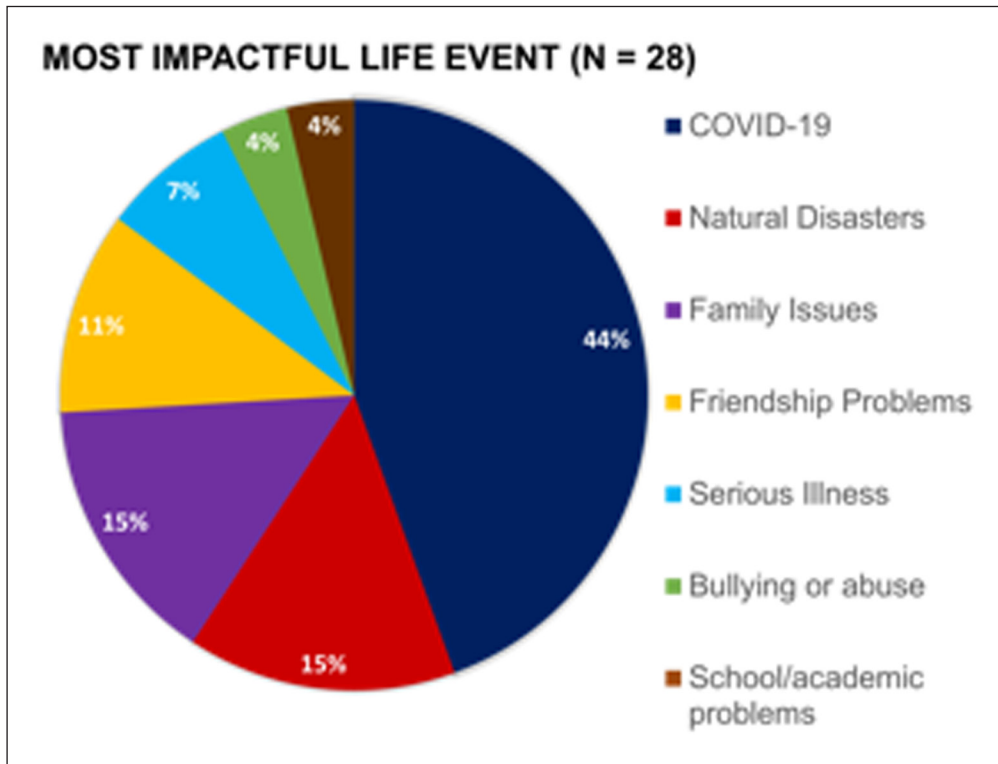


Figure 1 44% of students indicated COVID-19 as their ILE, 15% indicated a natural disaster, and 41% indicated another event.

A	CDRS-10	
	PEARSON CORRELATION	P VALUE
PTGI Total	.402	.052
RBS	.679	.002

B	RBS	
	PEARSON CORRELATION	P VALUE
PTGI Total	.878	<.001
PTGI-F1: Relating to Others	.854	<.001
PTGI-F2: New Possibilities	.802	<.001
PTGI-F3: Personal Strength	.706	0.001
PTGI-F4: Spiritual Change	.596	0.009
PTGI-F5: Appreciation of Life	.805	<.001

Table 1 (A) CDRS-10 is positively correlated with RBS but not PTGI; **(B)** RBS is positively correlated with posttraumatic growth.

	ILE = TO YOU (N = 6)	ILE = TO YOU AND OTHERS (N = 19)	TEST	P VALUE
PTGI Total	M = 25 (16.18)	M = 30.83 (10.37)	-1.111	0.046
PTGI-F1: Relating to Others	M = 5.375 (4.03)	M = 6.7778 (2.32)	-1.130	0.036
PTGI-F2: Nev/Possibilities	M = 5.125 (3.94)	M = 6.056 (2.51)	-0.730	0.039

Table 2 Students who indicated an ILE that happened to them and others demonstrated significantly greater posttraumatic growth than students who indicated an ILE that only occurred to them. This was driven by PTGI factors 1 and 2.

COMPETING INTERESTS

The authors have no competing interests to declare.

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