

Impact of natural disasters on mental health outcomes of first responders in central Myanmar

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Background: The evidence that extreme weather events take a toll on mental health is well documented. Most of the existing research about how first responders' respond psychologically to these events is conducted in high-income countries. Little is known about the mental health of first responders in developing countries. The study objective was to examine impact of natural disasters on mental health outcomes of first responders in disaster-prone Myanmar

Methods: This cross-sectional study took place in the central Myanmar region of Magway, where a large cyclone hit in the previous year. Participants (e.g. fire fighters, healthcare professionals, and volunteers from NGOs) completed a 112-item questionnaire including a modified Depression Anxiety Stress Scale (DASS-42).

Results: Of the 234 survey respondents, 82.5% reported participating in disaster response activities. Adverse mental health outcomes were prevalent among first responders. 51.7% of participants' DASS-42 scores indicated depressive symptoms that were either "severe" or "extremely severe". Just over one-third (39.6%) experienced symptoms of "severe" or "extremely severe" anxiety, and 31.2% endorsed symptoms of post-traumatic stress. Individuals who became ill or injured during their response activities were 3.43 (95% CI: 1.87 – 6.28; $p < 0.01$) times more likely to report severe anxiety and 7.40 (95% CI: 3.62 – 15.11; $p < 0.01$) times more likely to endorse severe stress.

Discussion: The data from this pilot study suggests that natural disasters have the potential to create catastrophic burdens of psychological distress to disaster responders. Addressing mental health outcomes will be vital to the wellbeing of those first responders in the face of natural disasters. Because the data indicates that physical harm from disasters affects mental health outcomes based on this study, interdisciplinary approaches to community resilience are crucial, including mental health systems strengthening in low-income countries.

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