

Impact of extreme climate events on health vulnerability: Case of 2010 floods in northwest Pakistan

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Extreme climate events manifested by heavy rains and flash floods has created havoc for people in Pakistan who have witnessed deadliest floods in 2010. Survivors faced unprecedented threats of water-borne diseases, the most prevalent public health issue. 2010 flood hit areas of Pakistan were subjected to health impact assessment with an aim to manage future calamities and minimize loss of human life. The study focused to uncover how a weather-related event can affect health and well-being flood-hit areas. We obtained demographic, disease symptoms and flood exposure data from evacuee population through periodic surveys in two districts of Nowshera and Charsadda in northwest Pakistan. Using self-structured questionnaire, detailed information was collected and responses of 841 people was included in final analysis. Among surveyed population, 44% were male and 56% female. In logistic regression models, risk factors were associated with water-borne diseases. Level of flood exposure was not associated with district wise physical health, however, once hygiene conditions in relief camps were controlled, suggesting that flood exposure did not have a lasting impact on overall physical well-being. In Nowshera, evacuee arrived in camps with fever and skin problems while frequent diarrhoea and occasional cholera cases were observed among flood victims of Charsadda district. As a whole, malaria was significantly higher among males (OR=1.45; 95% CI=1.10-1.91) whereas children were most affected by skin diseases (OR=1.79; 95% CI=1.24-2.57). Body ache and sleep disturbances leading to anxiety situation were recorded as most apparent flood-exposure symptoms in majority of surviving population. We conclude that such an extreme weather event has increased the vulnerability of inhabitants in northwest Pakistan. Moreover, response of government was slow in preventing loss of human life by drowning and in providing immediate health-care to surviving communities.

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