Assessment of the Health Impacts of the 2011 Summer Floods in Brisbane

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Background:

During December 2010 and January 2011, torrential rainfall in Queensland resulted in the worst flooding in over 50 years. We carried out a community-based survey to assess the health impacts of this flooding in the city of Brisbane.

Methods:

A community-based survey was conducted in 12 flood-affected electorates using postal questionnaires. A random sample of residents in these areas was drawn from electoral rolls. Questions examined sociodemographic information, the direct impact of flooding on the household, and perceived flood-related health impacts. Outcome variables included perceived flood-related effects on overall and respiratory health, along with mental health outcomes measured by psychosocial distress, reduced sleep quality and probable post-traumatic stress disorder (PTSD). Multivariable logistic regression was used to examine the association between flooding and health outcome variables, adjusted for current health status and socioeconomic factors.

Results:

3000 residents were invited to participate in this survey, with 960 responses (32%). People whose households were directly impacted by flooding had a decrease in perceived overall health (OR 5.3, 95% CI: 2.8–10.2), along with increases in psychological distress (OR 1.9, 1.1–3.5), decreased sleep quality (OR 2.3, 1.2–4.4), and probable PTSD (OR 2.3, 1.2–4.5). Residents were also more likely to increase usage of both tobacco (OR 6.3, 2.4–16.8) and alcohol (OR 7.0, 2.2–22.3) after flooding.

Conclusions:

There were significant impacts of flood events on residents’ health, in particular psychosocial health. Improved support strategies may need to be integrated into existing disaster management programs to reduce flood-related health impacts.