

Blue Health: Water, Health & Well-being – Flood Risk, Mental Health & Well-being

Introduction

Qualitative studies on health and social impacts of flooding show that flood disasters, and associated experiences, can have severe and long-lasting social and health impacts, with emotional and psychological impacts often being more severe and longer lasting (e.g. 4 years) than physical damage to property, lives and health (Carroll et al., 2009; Keene, 1998). The effects can include shock and disbelief, uncertainty, grief and loss, emotional exhaustion, loss of hope and meaning, General Adaptation Syndrome (GAS), Post-traumatic Stress Disorder (PTSD), alarm, resistance and exhaustion (Tapsell et al., 2002; Werritty et al., 2007; Mason et al., 2010; Paranjothy et al., 2011).

Key Points



- Public health impacts of floods, including loss of life, compromised personal hygiene, disruption of sewage systems, disruption of health care services, impact on front line support workers, and possible chemical contamination of homes and water sources are wide-ranging (Carroll et al., 2009; Few, 2007; Keim, 2008; Euripidou and Murray, 2004).
- Consequences of flooding include increased levels of anxiety about future flood events, a loss of trust/confidence in authorities, a sense of isolation and loss of sense of security (within homes, and within the community), and a changed perception of place as home (Tuohy and Stephens, 2012).
- Social and geographical differentiations of impacts on mental health with respect to flooding exacerbate existing health inequalities (Few, 2007; Curtis and Oven, 2011; Kazmierczak and Cavan, 2011; Walker and Burningham, 2011).
- Variables which increase the risk of mental disorders are young age, prior mental health problems, financial status, family or social dependencies, and previous experience of a traumatic event. The highest levels of anxiety are reported amongst under 65s, women and people from ethnic minorities. There are disproportionate effects on women over men (e.g. Tunstall et al., 2006; Hayes et al., 2009; Kazmierczak and Cavan, 2011).
- Research findings are mixed about the impacts of shorter and longer-term effects. Werritty et al. (2007) distinguish between tangible effects (e.g. loss of property and belongings) and intangible effects (e.g. stress, worry about future flooding, deterioration in health problems with insurance companies). They argue that intangible impacts register markedly higher than tangible impacts, and that immediate intangible impacts are generally higher than lasting intangible impacts.
- Forecasting and warning of flood events, levels of vulnerability in the population, and the implications of this for the 'at risk' population, including loss of life and injury, are seen as increasingly important in mitigating the health impacts of flooding, both physical and mental (Johnson et al., 2005; Jonkman et al., 2008; Kazmierczak and Cavan, 2011; Oven et al., 2012).

From consultation with stakeholders, priorities for further research are: the long-term impact of flooding on mental well-being is a research priority using existing data sets (e.g. from Scottish Flood Forum); the impact of social inequalities in recovery post-flood event and ability to take preventative action to avoid future flood risk (e.g. people on low income, with a disability, older people); and, the role of education and communication in promoting resilience and preparedness for flooding.

Research Undertaken

The main approach of the research was a literature review using systematic review principles (e.g. clear search terms, inclusion and exclusion criteria), reviewed by academic peers and key stakeholders (e.g. NHS Health Scotland, SEPA). Efforts were also made to track grey literature in the field. Workshops with stakeholders were held to identify priority areas of interest for the review, to disseminate key findings from the research and to re-visit stakeholder priorities post research.

This summary is one of a set of four derived from the BlueHealth project. All summaries and the project report are available at www.crew.ac.uk/publications.

Policy Implications

Vulnerability to flooding should be reduced through pre event/emergency preparedness, response and post-event care/recovery. For older people, the overcrowding of care homes in the aftermath of a flood event results in increases in behavioural difficulties and psychological symptoms (Hayes et al., 2009).

Planning for health impacts of flooding should include psychological health provision, dealing with contamination, training for frontline support workers, site restoration, and the geographic distribution of emergency services. Civil infrastructure requires to be sufficient to cope with demand, and for surviving extreme events such as flooding.

Issues emphasised through stakeholder engagement include a need for appropriate measures (quality and health indicators) which link to Single Outcome Agreements and priorities of Local Authorities. These are agreements between the Scottish Government and Community Planning Partnerships which set out how each will work towards improving outcomes for the local people in a way that reflects local circumstances and priorities, within the context of the Government's National Outcomes and Purpose. Overall, the priority is to be able to quantify the social benefits of sustainable flood management, including those of human well-being.

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