



Building Public Health Resilience to Fluvial Flooding in Scotland

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Introduction

Climate change is increasing our exposure to fluvial flooding in Scotland. Flooding can negatively impact public health, with the greatest impacts in the UK and Scotland on mental health. This project reviewed:

1. Physical and mental health impacts of fluvial flooding.
2. Factors that influence health resilience to flooding.
3. Key Scottish flood-related and public health policies to identify knowledge gaps and mechanisms to incorporate public health resilience to flooding.

Public Health Impacts of Flooding and Flood Vulnerability

Floodwater can be hazardous to physical health. Impacts include drowning, contact with contaminants, water-borne pathogens, vector-borne/zoonotic disease and respiratory disease from mould/damp. However the greatest impacts of flooding in the UK and Scotland are on mental health. People who experience flooding are at higher risk of depression, anxiety and post-traumatic stress disorder, and the impacts can be long-term. Exposure to floods interacts with demographic, socio-economic and environmental factors, as well as access to and quality of health care, to affect the magnitude and pattern of risks and impacts. This can exacerbate existing social and economic inequalities. In Scotland, certain groups are more vulnerable to flooding:

children, elderly, those with pre-existing chronic illness or disability, place-based occupations, low incomes and rural/remote areas. Secondary stressors, such as displacement from home and insurance-related issues, can add to negative mental health impacts.

Research Recommendations

The Scottish population is becoming increasingly vulnerable to the health impacts of flooding. To build health resilience in Scotland we need further research to understand health impacts on vulnerable groups (knowing who, where and when) and implement this knowledge into localised flood emergency management, as a public health priority. We need to: quantify the burden of health impacts of flooding in Scotland by engaging with affected communities; develop, implement and evaluate timely intervention strategies before, during and after flooding; identify the positive roles communities can play; and address barriers to behavioural change and uptake of interventions.

Conclusions

Project findings will support the development of Scotland's Flood Resilience Strategy. We need to improve the evidence-base by conducting targeted research (see Policy Brief for details and final recommendations), better integrate flood management and public health policies, and raise awareness of health impacts of flooding.

Please reference this project summary as follows: Thomas, R and Niedzwiedz, C (2024) *Building Public Health Resilience to Fluvial Flooding in Scotland*. CSPF2023_01. Centre of Expertise for Waters (CREW).

To access the outputs for this project, please visit: crew.ac.uk/publication/building-public-health-resilience

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Visual minutes from project workshop.
Graphic Artist: Jenny Capon.