

Methods:

Six to eight months post-floods, households located in the flooded zones (in one of the 6 Quebec regions the most severely affected) were randomly invited to participate to a telephone or a web-based survey (response rate=15.3%). Several psychological health outcomes were examined, including psychological distress (based on the 6-item Kessler Scale, score 0-24) and post-traumatic stress (based on the 15-item Impact of Event Scale, score 0-75). These outcomes were compared among 3 levels of exposure using Chi-square test: flooded (floodwater in ≥ 1 liveable room), disrupted (floodwater in non-liveable areas, loss of utilities, loss of access to services, or evacuation), and unaffected.

Results:

Of the 3,437 participating households, 349 (10.2%) were flooded and 1230 (35.8%) were disrupted (but not flooded) during the 2019 floods. A steep gradient was observed for moderate/severe symptoms of post-traumatic stress (score ≥ 26) according to the level of exposure to flooding (unaffected: 3.0%; disrupted: 14.6%; flooded: 44.1%; $p < 0.0005$). For psychological distress (score ≥ 7), the baseline level (i.e. unaffected group) was 7.3% while it reached 15.0% and 38.4% in the disrupted and the flooded groups, respectively ($p < 0.0005$).

Conclusions:

This study is among the largest to examine the psychological impacts of flooding. The magnitude of effects observed in flooded households is consistent with the literature and calls for stronger social and economic measures to support flood victims. Such support should help coping with initial stress, but also alleviating secondary stressors classically observed in post-flood settings.

Key messages:

- Psychological impacts of floods may persist for several months and may be observed in both flooded and disrupted people.
- Stronger social and economic measures are needed to better support flood victims, not only in the short but also in the longer term.

Psychological impacts of the 2019 Quebec floods: findings from a large population-based study

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Background:

During Spring 2019, many regions in Quebec (Canada) experienced severe floods. As much as 5,245 households were flooded and 7,452 persons were evacuated, causing extensive material and human damages. A large population-based study was therefore conducted to examine medium-term effects of this natural disaster on health and well-being.