

## Original Research Article

# Risk perception and coping strategy taken by flood victims in Kuching division, Sarawak, Malaysia

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### ABSTRACT

**Background:** Nine per cent of the total areas of Malaysia is subjected to flood. The individual's risk perception is one of the fundamental values in determining the subsequent behaviour, action, coping mechanism and effective strategy towards possible risk. Thus, this study aims to determine the risk perception and coping strategy among the flood victims in Kuching, Sarawak, and its factors.

**Methods:** The 200 respondents were systematically selected from three districts in Kuching division, Sarawak. Data were collected through face-to-face interviews using interviewer-administered questionnaire.

**Results:** The analysis revealed that about three-fifths (72.5%) of the respondents were inundated last year. The most definite perceptions of risk by the flood victims were a physical health risk, followed by the capacity to mitigate flood and the perception of the social consequences. The respondents had a moderate (score of 4 to 6) to good (score of 7 to 9) level of coping strategy, which was influenced by ethnicity and level of education ( $p < 0.05$ ).

**Conclusions:** Though the flood risk perception was good, it needs to go hand-in-hand with the coping measures to minimise flood impact. The planning for flood-related health programs and activities should be more community-centred by assigning villagers and the vulnerable group as committee members.

**Keywords:** Risk perception, Strategy, Flood, Sarawak, Malaysia

### INTRODUCTION

Flooding is among the three most serious natural hazards that commonly occur in Malaysia. The tremendous impact on every level of the community or society in various aspects of life, especially for those who live in the flood-prone areas.<sup>1</sup> It is a climate-related hazard that is influenced by the increasing frequency of more intensified extreme weather.<sup>2</sup> Department of irrigation and drainage (DID), Malaysia stated that approximately 29,800 km<sup>2</sup> or 9% of Malaysia's total area, is vulnerable to flood.<sup>3</sup> In Kuching, the susceptible communities live near the 21 basins of Sarawak and Samarahan river channels. A post-flood forensic analysis showed two

types of flood in that area, internal and external flooding.<sup>4</sup> The internal flooding occurred around the water catchment areas after heavy rainfall during the northeast monsoon due to the existing small channel's inability to accommodate the runoff from high rainfall volume. The external flood occurred when the high intensity of rainfall coupled with Sungai Sarawak's high tides (local river name). The condition is worsened when both internal and external flooding happened at the same time. Ministry of Housing, Sarawak, pointed out that the current drainage system as one of the leading causes of flash flood due to its inability to hold up for the total amount of calculated rainfall at the Kuching South city council (KSCC).<sup>5</sup>