

Effect of health belief model on flood-risk educational approach among elementary school children in Malaysia

ABSTRACT

Worsening climatic conditions can subsequently lead to the frequent occurrence of unpredictable natural disasters. The early-life educational approach is one of the non-structural mitigations in disaster management, which are the most effective efforts to promote early-life disaster awareness and enhance the knowledge transfer in disaster risk education. By using the health belief model (HBM), this study aims to examine the effectiveness of HBM on the flood-risk reduction (FRR) educational intervention by looking into the perceived susceptibility, severity, benefit and self-efficacy among elementary school children in Malaysia. This study utilised the one-group pre-test–post-test design by recruiting 224 elementary school children in the pre-FRR educational intervention programme, and 205 who undertook a post-intervention programme a month later. This study showed that the FRR educational intervention significantly improved ($p < 0.001$) the overall HBM components during the post-intervention, particularly in: (1) FRR knowledge, (2) perceived susceptibility, (3) perceived severity and (4) perceived benefits. The one-way analysis of covariance test showed that knowledge transfer intervention is effective to improve all the HBM components that include (1) FRR knowledge, $F(38,127) = 2.517$; (2) perceived susceptibility, $F(6,191) = 6.957$; (3) perceived severity, $F(20,163) = 2.944$; (4) perceived benefits, $F(25,153) = 2.342$ and (5) self-efficacy, $F(7,189) = 12.526$. The impact of integrating HBM into knowledge transfer intervention was seen to be effective and provide a positive knowledge enhancement among learners. Therefore, it is crucial to implement a consistent and sustainable educational intervention to harness formal education for community resilience at an early age.

Keyword: Health belief model; Flood-risk reduction; Knowledge transfer; School children