

Household preparedness for future earthquake disaster risk using an extended theory of planned behaviour

ABSTRACT

The study aims to predict household earthquake preparedness in Malaysia using the theory of planned behavior (TPB) in its original form and an extended model including community participation and community-agency trust. A survey was undertaken in 2019 with 550 Malaysian residential households in four locations. The structural equation modeling (SEM) method was used in this study for the analysis of data. The findings demonstrated support for the extended model of TPB and showed that attitude, subjective norms, community participation, and community-agency trust were significant predictors of behavior intention to engage the household in earthquake preparedness. In both models, the intention of the household to earthquake preparedness is an important positive contributor to actual preparedness. The study has shown that, contrary to our expectations, perceived behavioral control in both models has no significant effect on the intent to prepare. The results also displayed that the original TPB constructs contributed 26% and 32% of the variance in intentions to prepare and actual earthquake preparedness behavior, whilst the inclusions of community participation and community-agency trust slightly increased the explained variance by 31.2% and 39.5% respectively. As a result, the extended model of TPB provided a good fit with the data and explains slightly better amounts of variance in intention to prepare in comparison to the original TPB model. Adding constructs in the original TPB model considerably contributes to improving our understanding of household preparedness for future earthquake disaster risk.

Keyword: Preparedness behavior; Earthquake; The theory of planned behavior; Community participation; Community-agency trust; Malaysia