

DEVELOPMENT AND PSYCHOMETRIC EVALUATION OF FLOOD DISASTER MANAGEMENT QUESTIONNAIRE- (FloodDMQ-BM): EXPLORATORY FACTOR ANALYSIS AND ITEM RESPONSE THEORY ANALYSIS

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ABSTRACT

Background: Flood catastrophe has a major impact on healthcare service in Malaysia. However, there is no validated tool to measure the knowledge, attitude and practice of flood disaster management among healthcare providers involved in the response phase of a flood disaster in Malaysia. We aim to develop and validate a questionnaire in Bahasa Malaysia (FloodDMQ-BM) to measure the level of knowledge, attitude and practice of flood disaster management among healthcare providers.

Materials and Methods: The questionnaire was developed based on four domains: standard operating procedure, transportation, alert system and communication. Psychometric analyses were tested on healthcare providers involved in patient management during flood disaster in Kelantan. The hypothetical concept of the items in attitude and practice sections was assessed using Exploratory Factor Analysis (EFA) and internal consistency reliability. The knowledge section were analysed using 2-parameter logistic model of Item Response Theory.

Result: 36 items were generated for FloodDMQ-BM. For both the attitude and practice items, the EFA have good factor loading (>0.5) and satisfactory internal consistency of 0.925 and 0.935 respectively. The remaining items in the knowledge section have good marginal fit and adequate Root Mean Square Error of Approximation of 0.08. All the remaining items have good standardized loading (>0.3) and marginal reliability of 0.623.

Conclusion: The results suggested that the FloodDMQ-BM has valid and reliable psychometric properties.

Keywords: Flood, disasters, questionnaire, psychometric, healthcare providers