Psychometric properties of the emergency preparedness information questionnaire (EPIQ) in Malaysia context

ABSTRACT

Nurses must be prepared to respond to major disasters to meet the needs of those affected, and they must also possess the knowledge needed for management of patients with special needs, such as the elderly, children,and persons with mobility impairments. The objectives of the current study were to assess the psychometric properties (e.g., reliability, validity, and item analysis) and to test the suitability of the factorial model of the Emergency Preparedness Information Questionnaire (EPIQ) in Malaysia context. EPIQ contained 41 items that divided into four main dimensions to assess civilian nurses' perceived familiarity with nine competencies of emergency preparedness. A sample of 418 nurses from five hospital in Sabah, Malaysia was selected randomly using a convenience sampling method. The nurses' ages ranged from 22 to 58 years old with a mean of 35.91 (s.d = 8.76) years old and the mean of their working experience was 12.39 years (s.d. = 9.28). There were 37.3% nurses participated in actual disaster event before and 55.3% did not have that experience. They were asked to complete EPIQ, as well as the Nurse Assessment of Readiness Scale (NARS) (for the validation purpose). The nine dimensions of EPIQ demonstrated very high reliability with the internal consistency of Cronbach's Alpha range from .82 to .94. The result of item analysis indicated that all the items of EPIQ are acceptable and measurable in Malaysia context. The convergent validity of EPIQ was supported by an expected pattern of correlations (positive and significant correlation) between the score among the nine dimensions of EPIQ and positive and significant correlation between the nine dimensions of EPIQ score and NARS score which measured the same construct. The pattern of the relationship between the dimensions of EPIQ and score of Self-Regulation Scale confirmed the discriminant validity of EPIQ. The results of Confirmatory Factor Analysis supported a good nine-factor model of EPIQ to fit the data. This study has revealed EPIQ has strong psychometric properties, and it is reliable and valid to assess nurses' competencies in Malaysia context. We hoped that this instrument can be used by the Ministry of Health Malaysia to evaluate nurses' preparedness and competencies in managing disasters. Data collected with EPIQ also can serve as reference for a curriculum designed for nursing schools in Malaysia.