

ORIGINAL RESEARCH

Development of a questionnaire for the study of malnutrition among children in rural Kelantan, Malaysia

WL Cheah¹, WM Wan Abdul Manan², Z Zabidi-Hussin², CT Chang¹

¹Universiti Malaysia Sarawak, Kuching, Sarawak, Malaysia

²Universiti Sains Malaysia, Kelantan, Malaysia

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Cheah WL, Wan Abdul Manan WM, Zabidi-Hussin Z, Chang CT

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ABSTRACT

Introduction: Historical data have shown that the factors contributing to and underlying malnutrition among children are diverse, multisectoral and include interrelated biological, social, cultural and economic factors. To determine these factors in a given population an accurate and reliable questionnaire is essential. This article concerns the process of questionnaire development and validation.

Method: This study was based on a previously described conceptual framework of malnutrition in children and was conducted in two phases. During the first phase, an in-depth interview using a semi-structured questionnaire was conducted of 20 health workers who provide direct care for the malnourished study children in rural Kelantan, Malaysia. Based on these findings a theoretical framework was generated to assist the development of quantitative questionnaire. The developed questionnaire was then tested using a quantitative approach to establish its reliability and validity.

Results: Qualitative analysis of the in-depth interview revealed 17 items that were used to build a conceptual framework for questionnaire development. The questionnaire was then administered to 295 children and their parents/caregivers, with 28.76–35.28% of the children showing signs of malnutrition in the form of stunting, wasting and underweight. Exploratory factor analysis revealed two factors: environmental and behavioral with composite reliability of 0.70, and 0.74, respectively. The quantitative findings identified 14 items which were further tested with factor loadings, showing loading on to 2 factors.