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# Psychometric Evaluation of a Psychosocial Wellbeing Questionnaire for Older Adults in Sibul, Sarawak, Malaysia

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## Abstract

### Background

Malaysia's ageing population highlights the need for robust instruments to assess psychosocial wellbeing among older adults, especially in semi-urban settings such as Sibul, Sarawak. However, many existing tools have limited cultural adaptation, unclear factor structure, or uncertain comparability across population subgroups. This study evaluated the internal consistency and factor structure of a 69-item psychosocial wellbeing questionnaire and conducted preliminary exploratory analyses of cross-group similarity by gender, recognizing that full measurement invariance testing was beyond the scope of this study.

## Methods

A community-based cross-sectional study was conducted among 1,077 community-dwelling older adults ( $\geq 60$  years) in Sibuluan, Sarawak, selected using multistage stratified sampling. Interviewer-administered questionnaires captured sociodemographic characteristics, the 69-item psychosocial wellbeing instrument, and MHC-SF scores. Internal consistency was assessed using Cronbach's  $\alpha$  and McDonald's  $\omega$ . Factorability was evaluated with the Kaiser-Meyer-Olkin (KMO) index and Bartlett's test of sphericity. Dimensionality was explored using parallel analysis and common factor analysis with principal axis-type extraction and varimax rotation. Preliminary cross-group stability across gender was examined using Tucker's congruence coefficients.

## Results

The mean age of respondents was 67.1 years (SD 6.6); 52.0% were men and the largest ethnic group was Chinese (38.7%). Total scale reliability was excellent ( $\alpha = 0.97$ ;  $\omega \approx 0.97$ ), while most subscales showed good internal consistency ( $\alpha = 0.79$ – $0.94$ ). Block A demonstrated weaker reliability ( $\alpha \approx 0.39$ ), indicating a need for item refinement. Factorability indices were strong (KMO  $\approx 0.949$ ; Bartlett's  $\chi^2 \approx 72,586$ ,  $p < 0.001$ ). Parallel analysis supported retention of nine factors. Common factor analysis yielded a rotated solution that largely aligned with the intended content domains, although some overlap between blocks suggested conceptual proximity and possible redundancy. Tucker's congruence analysis indicated strong cross-gender similarity for most factors ( $\phi \approx 0.89$ – $0.99$ ), with two factors showing only moderate similarity ( $\phi \approx 0.53$ – $0.67$ ).

## Conclusions

The 69-items instrument demonstrates excellent overall internal consistency and a coherent multi-factor structure among older adults in Sibuluan. At the same time, one subscale and a small number of factors show weaker performance and potential gender-related differences. These findings support cautious use of the instrument for research and programme evaluation in similar urban Sarawak settings, while underscoring the need for further refinement, full confirmatory factor analysis, measurement invariance testing and convergent validity assessment before widespread adoption.

Keywords: older adult, psychosocial wellbeing, questionnaire validation, factor analysis, Malaysia.

## Introduction

Malaysia, like many countries in the Asia Pacific region, is experiencing a rapid ageing transition, with the number of older adults increasing steadily. As people live longer, attention has shifted beyond disease and disability toward psychosocial wellbeing, which influences quality of life, independence,