

# Developing and validating a breast cancer screening health literacy questionnaire for Malaysian adults

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Track: Diseases of Skin / Other NCDs

Theme: Prevention, Screening and Early Detection

## ABSTRACT

**Introduction:** Health literacy supports decision-making and cancer prevention. In Malaysia, limited health information among disadvantaged groups causes delayed diagnoses and poorer outcomes. No validated tool exists to assess breast cancer screening health literacy. Aim: This study aimed to develop and validate a culturally appropriate questionnaire to assess breast cancer screening health literacy among Malaysian adults. **Materials and Methods:** A three-phase, multi-method design was employed. Phase One involved item generation through systematic review, online surveys, expert validation, and translation. Phase Two included cognitive debriefing and test-retest reliability. Phase Three involved data collection among 779 adults (mean age 36.6 years; 66% female) attending clinics in Selangor and Johor, recruited through convenience sampling. Analyses included EFA, internal consistency, and CFA using CB-SEM. **Results:** The initial 66-item tool was reduced to 41 items across seven domains. One item was removed due to low test-retest reliability, and four following EFA, yielding a 61-item version with strong internal consistency (Cronbach's alpha  $\geq 0.93$ ; CITC  $\geq 0.71$ ). CFA entailed 31 refinement steps, removing 20 items and correlating 11 residuals. The final model demonstrated strong factor loadings (0.75–0.92), convergent validity (AVE  $> 0.50$ ), composite reliability (CR  $> 0.70$ ), discriminant validity (HTMT  $< 0.90$ ), and acceptable model fit ( $\chi^2/df = 2.175$ , GFI = 0.849, AGFI = 0.827, CFI = 0.953, TLI = 0.948, RMSEA = 0.052). **Conclusion:** The validated 41-item Bahasa Malaysia questionnaire is psychometrically robust and applicable across clinical and community settings to identify literacy gaps, guide tailored health promotion strategies, enhance early detection, and reduce disparities in breast cancer outcomes among Malaysian women.

Keywords: Breast Cancer, Screening, Health Literacy, Questionnaire, Malaysia