

Validation of the Malay version of Berlin questionnaire to identify Malaysian patients for obstructive sleep apnea

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Abstract:

Objective: To validate the Malay version of Berlin Questionnaire (BQ) as a tool to screen for patients at risk of obstructive sleep apnea (OSA) in primary care

Background: Most patients with OSA are unrecognised and untreated. Thus, the BQ has been used as a tool to screen for patients at risk for OSA. However, this tool has not been validated in Malay version.

Materials and Methods: A parallel back-to-back translation method was applied to produce the Malay version (Berlin-M). The Malay version was administered to 150 patients in a tertiary respiratory medical centre. Concurrent validity of the Berlin-M was determined using the Apnea Hypopnea Index (AHI) as the gold standard measure. The test-retest reliability and internal consistency of the Berlin-M were determined.

Results: Most patients were males (64.0%) and majority of them were Malays (63.3%). Based on the sleep study test, 121 (84.0%) were classified as high risk while 23 (16.0%) as low risk using the Apnea Hypopnea Index (AHI) ≥ 5 as the cutoff point. The test-retest reliability Kappa value showed a good range between 0.864 – 1.000. The Cronbach's alpha of BQ was 0.750 in category 1 and 0.888 in category 2. The sensitivity and specificity were 92% and 17% respectively.

Conclusion: The BQ showed high sensitivity (92%) but low specificity (17%). Therefore, though the Berlin-M is useful as a screening tool, it is not a confirmatory diagnostic tool.