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## Preliminary validity and reliability of a Thai Berlin questionnaire in stroke patients

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**Background:** The aim of the study was to develop a Thai-language Berlin Questionnaire (Thai BQ) to evaluate the risk for OSA in stroke patients. We also aimed to assess content validity, construct validity and the agreement of the Thai BQ with the Thai Epworth Sleepiness Scale (Thai ESS).

**Methods:** 100 patients with stroke enrolled in the study. The BQ was first translated into Thai and then translated back to English using the forward-backward translation method. Evaluation of content validity was performed by 4 health care professionals. Evaluation of construct validity of the questionnaire was done by factor analysis. Internal consistency of the Thai BQ and the Thai ESS were evaluated using Cronbach's alpha coefficient. Test-retest reliability and the agreement of the Thai BQ and the Thai ESS were evaluated using Cohen's kappa coefficient.

**Results:** Factor analysis identified 4 main factors. Cronbach's Alpha coefficient was 0.74 and a Cohen's kappa coefficient was 0.86 in the Thai BQ. The internal consistency of the Thai ESS evaluated by Cronbach's Alpha was 0.59 and the test-retest reliability (Cohen's kappa coefficient) was 0.81. The agreement of the Thai ESS and the Thai BQ was fair (Cohen's kappa coefficient =0.29).

**Conclusions:** The Thai BQ has been developed and shown to be a more valid and reliable tool than the Thai ESS in stroke patients. However, as factor analysis revealed 4 factors which are different from the 3 factors in the original BQ, modification of the Thai BQ may be required before the administration in Thai stroke patients.

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