

Translation and validation of the Karolinska Sleepiness Scale (KSS) for subjective measurement of sleepiness

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ABSTRACT

Introduction: The Karolinska Sleepiness Scale (KSS) assesses an individual's subjective level of sleepiness at a specific time of day. It measures situational sleepiness, which increases as wakefulness persists. Kaida et al. (2006) examined the validity of the KSS by establishing a strong correlation between its scores and the EEG and behavioural variables. However, it does not currently have a version available in the Malay language. Consequently, this study aimed to validate a Malay language translation of the KSS among healthy individuals who had been awake for 18-24 hours. **Methods:** The English language KSS underwent forward and backward translations by four experts. The translated Malay language questionnaire (KSS-MAS) was pilot-tested on 15 subjects and revised accordingly. The validation of the revised questionnaire was carried out on 30 healthy individuals following an 18-24-hour wakefulness period. The reliability of the translated questionnaire was checked. **Results:** The KSS-MAS was developed through comprehensive procedures to ensure accurate translation and meaning. The mean (SD) age of respondents was 29.1 (5.3) years with majority female (66.7%), and Malay (63.3%). The baseline mean (SD) score for KSS-MAS was 1.63 (1.0) and increased to 7.80 (1.5) following an 18-24 hours wakefulness period, with $p < 0.001$. **Conclusion:** The KSS-MAS scale, a Malay language translation of the Karolinska Sleepiness Scale, demonstrates reliability and validity in assessing the level of subjective sleepiness in individuals who have been awake for 18-24 hours.