

Translation, validity and reliability of Chinese Epworth Sleepiness Scale for Children and Adolescents for Malaysian

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ABSTRACT

Introduction: The Epworth Sleepiness Scale for Children and Adolescents (ESS-CHAD) is a valid and reliable self-administered questionnaire for the assessment of excessive daytime sleepiness and screening of sleep-disordered breathing for children and adolescents. This study aimed to translate and cross-culturally adapt ESS-CHAD into a Chinese version (CESS-CHAD) for Malaysians, and to assess its validity and reliability. **Methods:** Forward-backward translation method was used to translate and cross-culturally adapt ESS-CHAD. Content validity for relevancy and clarity was tested using the item-content validity index (I-CVI). Face validity was conducted using semi-structured in-depth interviews with two primary school teachers and 30 native Chinese-speaking children and adolescents followed by thematic analysis. For criterion validity, 156 subjects answered the final CESS-CHAD and Chinese version of the Paediatric Sleep Questionnaire (C-PSQ) concurrently. For formative construct validity, the Variance Inflation Factor (VIF) was analysed using SmartPLS to assess the indicator's multicollinearity. Two weeks later, 32 subjects answered the final CESS-CHAD again for internal consistency and test-retest reliability. **Results:** All eight questionnaire items passed the threshold I-CVI value of 0.79 for relevance and clarity. Spearman Correlation Coefficient value of 0.53 suggested a strong positive correlation between CESS-CHAD and C-PSQ. VIF ranging from 1.25 to 2.45 indicated no collinearity problem. Intraclass Correlation Coefficient ranging from 0.70 to 0.94 and Cronbach's alpha ranging from 0.82 to 0.97 confirmed good to excellent test-retest reliability and internal consistency, respectively. **Conclusion:** ESS-CHAD has been translated and cross-culturally adapted into Chinese for Malaysians, and found to be valid and reliable.