

## Adolescent Sleep Hygiene Scale and Adolescent Sleep Wake Scale: Factorial Analysis and Validation for Indian Population

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**Abstract :** Background: Sleep deprivation is a matter of public health importance among adolescents. We used adolescent sleep wake scale and adolescent sleep hygiene scale to determine the sleep quality and sleep hygiene respectively of school going adolescents in Vellore city of India. The objective of the study was to do factorial analysis of the scales and validate it for use in local population. Methods: Observational questionnaire based cross sectional study. Setting: Community based school survey in a semi-urban setting in three schools in Vellore city. Data collection: Non probability sample was collected from students studying in standard 9 and 11. Students filled Adolescent Sleep Wake scale (ASWS) and Adolescent Sleep Hygiene Scale (ASHS) translated into vernacular language. Data Analysis: Exploratory Factorial Analysis was used to see the factor loading of various components of the two scales. Confirmatory factorial analysis is subsequently planned for assessing the internal validity of the scales. Results: 557 adolescents were included in the study of 12 - 17 years old. Exploratory factorial analysis of adolescent sleep hygiene scale indicated significant factor loading for 18 items from 28 items originally devised by the authors and has been reconstructed to four domains instead of 9 domains in the original scale namely sleep stability, cognitive - emotional, Physiological - bed time routine - behavioural arousal factor (activities before bedtime and during bed time), Sleep environment (lighting and bed sharing). Factorial analysis of Adolescent sleep wake scale showed factor loading of 18 items out of 28 items in original scale reconstructed into 5 aspects of sleep quality. Conclusions: The factorial analysis gives a reconstructed scale useful for the local population. Further a confirmatory factorial analysis has been subsequently planned to determine the internal consistency of the scale for local population.

**Keywords :** factorial analysis, sleep hygiene, sleep quality, adolescent sleep scale

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