Validating the Persian Adolescent Sleep Hygiene Scale-Revised (ASHSr) using comprehensive psychometric testing methods

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Abstract

Background: This study translated the Adolescent Sleep Hygiene Scale-revised (ASHSr) into Persian and aimed to validate its psychometric properties using classical test theory and Rasch analyses.

Methods: Adolescents aged 14-18 (n = 388; 199 males) and their parents in Iran participated in the study. Each adolescent wore a wrist actigraphy device during sleep time and completed the ASHSr, the Depression Anxiety Stress Scale (DASS), the General Health Questionnaire (GHQ), the Pediatric Daytime Sleepiness Scale (PDSS), and the Pittsburgh Sleep Quality Index (PSQI). A parent of each adolescent completed the Sleep Disturbance Scale for Children (SDSC).

Results: The construct validity of the ASHSr was supported by both classical test theory (factor loadings from confirmatory factor analysis [CFA] = 0.64 to 0.88; corrected item-total correlations = 0.70 to 0.92; test-retest reliability = 0.72 to 0.90) and Rasch analyses (infit mean square = 0.73 to 1.30; outfit mean square = 0.74 to 1.32). ASHSr had significantly negative associations with DASS subscales (beta = -0.15 to -0.42, ps < 0.001) and GHQ (beta = -0.663, p < 0.001). Known-group validity was demonstrated by the significant differences between poor and good sleep hygiene based on ASHSr in the actigraphy measure and scores of PDSS, PSQI, and SDSC. The multigroup CFA and differential item functioning in Rasch analyses suggested that all the participants interpreted the ASHSr similarly, regardless of their gender or living in a private room.

Conclusions: The Persian ASHSr demonstrated good reliability and validity in assessing sleep hygiene among Iranian adolescents. Healthcare providers may use it to assess the effectiveness of sleep hygiene programs. (C) 2018 Elsevier B.V. All rights reserved.

Keywords

Author Keywords: Adolescent; Actigraphy; Classical test theory; Rasch; Sleep hygiene

KeyWords Plus: SELF-REPORTED SLEEP; RASCH ANALYSIS; WHOQOL-BREF; CHILDREN; QUALITY; ACTOGRAPHY; VALIDITY; INSTRUMENT; PORTUGUESE; DURATION

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Addresses:
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Showing 30 of 61  View All in Cited References page

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<table>
<thead>
<tr>
<th>Article Title</th>
<th>Times Cited</th>
</tr>
</thead>
<tbody>
<tr>
<td>The sleep disturbance scale for children (SDSC) construction and validation of an instrument to evaluate sleep disturbances in childhood and adolescence</td>
<td>298</td>
</tr>
<tr>
<td>Electronic media use and sleep in school-aged children and adolescents: A review</td>
<td>298</td>
</tr>
<tr>
<td>Rasch analysis suggested three unidimensional domains for Affiliate Stigma Scale: additional psychometric evaluation</td>
<td>25</td>
</tr>
<tr>
<td>Psychometric evaluation, using Rasch analysis, of the WHOQOL-BREF in heroin-dependent people undergoing methadone maintenance treatment: further item validation</td>
<td>21</td>
</tr>
<tr>
<td>Validation of the Farsi version of the revised Adolescent Sleep Hygiene Scale (ASHr): a cross-sectional study</td>
<td>1</td>
</tr>
<tr>
<td>Sensitivity of goodness of fit indexes to lack of measurement invariance</td>
<td>1,514</td>
</tr>
<tr>
<td>Sleep problems and internet addiction among children and adolescents: a longitudinal study</td>
<td>17</td>
</tr>
<tr>
<td>Agreement of Children and Parents Scores on Chinese Version of Pediatric Quality of Life Inventory Version 4.0: Further Psychometric Development</td>
<td>16</td>
</tr>
<tr>
<td>Psychometric properties and clinical relevance of the Adolescent Sleep Hygiene Scale in Dutch adolescents</td>
<td>8</td>
</tr>
<tr>
<td>The pediatric daytime sleepiness scale (PDSS): Sleep habits and school outcomes in middle-school children</td>
<td>223</td>
</tr>
<tr>
<td>Impact of marital coping on the relationship between body image and sexuality among breast cancer survivors</td>
<td>7</td>
</tr>
</tbody>
</table>

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Showing 30 of 61  View All in Cited References page