The Survey of Pain Attitudes: a revised version of its pediatric form

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INTRODUCTION

The Pediatric version of the Survey of Pain Attitudes (Peds-SOA) has recently been developed to measure pain attitudes in youth (1). Although it has shown acceptable levels of reliability and validity, additional studies on the psychometric properties of the questionnaire are warranted. A limited number of items in each scale (2), which might be responsible, at least in part, of the limited reliability of certain scales of the questionnaire.

The objective of this work was to develop a revised version of the Peds-SOA and assess its reliability, factorial structure and validity criteria. Data analyses

A confirmatory factor analysis (CFA) was performed to evaluate the Peds-SOA-R factor structure, on the Cronbach’s alpha coefficient was computed to evaluate the internal consistency of the scales. Weighted Least Square estimator using a diagonal weight matrix and with mean and variance -adjusted Chi-square- statistic (WLSMV)(6) was used as the factor extraction method since the items of the Peds-SOA-R were considered categorical variables given that questionnaire has just 3 possible answers.

We evaluated the Peds-SOA-R’s concurrent validity criteria by computing Pearson’s correlations between scores on the Peds-SOA-R subscales scores and the validity criterion (pain intensity, disability and pain coping strategies).

METHODS

Procedure

Eighteen secondary schools were invited to participate and 8 of them accepted. A total of 668 letters were delivered to the children and parents of those schools and 495 agreed to participate and 307 responded completely to the revised form of the Peds-SOA (Peds-SOA-R). Participants completed the assessment form during one hour school time.

Measures

Socio-demographic information Age and sex
Pain attitudes The revised version of the Peds-Survey of Pain Attitudes
Maximum intensity of the most frequent pain during the previous 3 months Numerical Rating Scale (NRS-11) (3)
Disability Functional Disability Inventory (4)
Pain coping strategies The Pain Coping Questionnaire (5)

Development of the revised version of Peds-SOA

24 items of the original Peds-SOA were preserved
49 new items developed
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A final set of 73 items in the assessment form
Two criteria to choose the best items
A pool of 35 items (5 for each scale) was included in the analyses
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RESULTS

The Peds-SOA-R has a good level of validity and reliability and the 7-factor solution suggested in previous studies with young people has been confirmed in our sample of schoolchildren.

The changes in the content of the scales, resulted in an increase of the internal consistency properties for all the scales but for Medical Cure that slightly diminished, and, as well, an improvement of the factor fit and the factorial loadings.

Further research is needed to study Peds-SOA-R psychometric properties in children and adolescents with chronic pain.

Table 1. Sample characteristics

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>Gender</th>
<th>Total N</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10–11</td>
<td>71</td>
<td>121</td>
<td>6.0</td>
</tr>
<tr>
<td>12–13</td>
<td>121</td>
<td>125</td>
<td>6.5</td>
</tr>
<tr>
<td>14–15</td>
<td>120</td>
<td>123</td>
<td>6.1</td>
</tr>
<tr>
<td>Median</td>
<td>11.5</td>
<td>125</td>
<td>6.5</td>
</tr>
</tbody>
</table>

Table 2. Pearson’s correlations between Peds-SOA-R and criteria variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Pain intensity</th>
<th>Disability</th>
<th>Pain coping</th>
<th>Pain coping</th>
<th>Pain coping</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correlation coefficient</td>
<td>-0.28**</td>
<td>-0.25**</td>
<td>-0.21**</td>
<td>-0.17**</td>
<td>-0.13**</td>
</tr>
</tbody>
</table>

REFERENCES


ACKNOWLEDGEMENTS

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Figure 2. Sample of the factor loadings of the canonical version of the Peds-SOA-R.