

# RMDQ-23 is not for children – an investigation of comprehension and content validity among 11-14 year old children

Andreas T. Christensen<sup>1,2</sup>, Lise L. Oddershede<sup>1,3</sup>, Lise Hestbæk<sup>2,4</sup>, Henrik H Lauridsen<sup>4</sup>

<sup>1</sup>Private Chiropractic Practice, Denmark

<sup>2</sup>Nordic Institute of Chiropractic and Clinical Biomechanics, University of Southern Denmark, Campusvej 55, 5230 Odense M, Denmark

<sup>3</sup>The Spine Centre of Southern Denmark, Østre Hougvej 55, 5500 Middelfart, Denmark

<sup>4</sup>Research Unit for Clinical Biomechanics, Department of Sports Science and Clinical Biomechanics, University of Southern Denmark, Campusvej 55, 5230 Odense M, Denmark

## Background

A multitude of questionnaires have been developed to estimate functional restrictions among adults with low back pain, the most common being the Roland Morris Disability Questionnaire. The 23-item version (RMDQ-23) was developed for adults between 20-67 years and is validated in Danish. However, to date no Danish questionnaires estimating the level of function in children and adolescents under the age of 20 exists. The objective of this study was to evaluate if the RMDQ-23 is a valid questionnaire measuring functional deficits in children between 11-14 years (5<sup>th</sup> to 7<sup>th</sup> grade).

## Aim

The study aim was to determine the content validity and if the items of the RMDQ-23 are understandable in a cohort of 11-14 years old children with low back pain. Secondly, recommendations on age-specific modifications are suggested.

## Methods

The RMDQ-23 was provided to 64 children of 11-14 years. Subsequently, 62 children were interviewed, of whom 20 suffered from current low back pain. Based on the children's answers from the interviews, problem domains were generated.

## Results

Overall, the children had difficulties understanding the timeframe of "today" and several did not know the meaning of the word "ischias". The children mentioned problems with duplicate and irrelevant items and suggested to include items asking about leisure activities. In addition, the language was considered difficult and improvements to the layout were also suggested.

## Conclusion

The results indicate that children with low back pain aged 11-14 find certain items irrelevant and have difficulties understanding the wording of several items included in the RMDQ-23. We conclude that the RMDQ-23 is not a valid questionnaire measuring function in children aged 11-14 years. Based on these findings, we suggest either to modify the RMDQ-23 or to develop a new instrument for this age group.