

Poster presentation

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The Dutch translation of the Childhood Health Assessment Questionnaire: an explorative study of the ceiling effect

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Background

Adding 8 more demanding items to the original Childhood Health Assessment Questionnaire (CHAQ) lowers the ceiling effect of this questionnaire [1]. In this cross-sectional study the score distribution of two categorical response options of the revised CHAQ was explored.

Materials and methods

Five Dutch tertiary centres for paediatric rheumatology recruited 63 JIA patients (48 female).

Demographic, clinical and CHAQ data were obtained. We applied the domain scores of the original CHAQ (CHAQ30orig) and the plain mean scores of the revised CHAQ that made use of two categorical response options (ChaQ30itemCAT I/II and ChaQ38itemCAT I/II).

Descriptive statistics were calculated and normal distribution was tested by the Kolmogorov-Smirnov test. A ceiling effect was defined by 15% or more patients scoring the highest possible score [2].

Results

The JIA patients were 11.7 (6.8–16.8) years old and diagnosed as polyarthritis (30), systemic arthritis (13), persisted oligoarthritis (13) and extended oligoarthritis (7).

The mean disease duration was 4.9 (1 month – 14.1 year.) year.

The CHAQ30orig and CHAQ30itemCat I showed a ceiling effect (both 20%)*. The median scores, KS-statistics, p-values, and interquartile range (IQR) are presented in table 1.

Conclusion

For JIA patients at the mild end of disability, the continuum of Cat II response options, in which the JIA patients compared their physical ability among healthy peers, of the CHAQ38 provides a better sensitivity than the original score options.

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Table 1: Ceiling effect, KS-test results and Interquartile range of original and revised CHAQ.

	Question-naire	Median score (range)	% at ceiling (0-score)	KS-statistic	P-value	IQR (P75-P25)
Cat I	Chaq30orig	0.50 (.00 – 2.50)	20*	1.23	.10	.06
	Chaq30item	0.19 (.00 – 1.55)	20*	1.49	.02	.02
	Chaq38item	0.26 (.00 – 1.70)	9.5	1.24	.09	.03
Cat II	Chaq30item	-0.17 (-1.45 – 40)	0	1.29	.07	.05
	Chaq38item	-0.24 (-1.52 – .42)	0	1.04	.23	.25

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