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Assisting Hand Assessment (AHA). Further development for children with bilateral cerebral palsy. Preliminary validation for a new diagnostic group.

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Introduction

Children with bilateral cerebral palsy (CP) often have difficulties performing daily activities due to upper extremity dysfunctions. Daily activities commonly require the collaborative use of the two hands together. The Assisting Hand Assessment (AHA) has shown to be a useful instrument to measure and describe how effectively children with a unilateral CP use their hemiplegic hand when performing bimanual tasks. The AHA has been used for evaluating treatment effects. A similar test is lacking for children with bilateral CP.

Objective

To investigate whether the AHA can be adjusted and used for children with bilateral CP; a pilot evaluation of the scale validity.

Method

AHA test sessions adjusted for bilateral evaluation will be conducted with 50 children ages 18 months to 12 years with bilateral CP, MACS levels I-III, GMFCS level I-IV. Validation includes evaluation of the relevance of the original AHA test items, development of new items and correlations to other assessments, the Box and Blocks test and the MACS.

Results

Preliminary results from 23 children with bilateral CP showed that 17 of the 22 AHA test items remained unchanged, five were modified and two new items were developed. The new test, called the Both Hands Assessment (BHA), produce two results: a score of bimanual ability and scores for each hand separately indicating the degree of asymmetry. The BHA-scores showed a moderate and significant correlation to MACS and Box & Block test. Further results from 50 children and a preliminary Rasch analysis will be reported.

Conclusion

Preliminary results suggest that the BHA can be used with children with bilateral CP for assessing bimanual task performance. The new instrument needs further evaluation of internal scale validity by a larger sample.

Contribution to the practice/evidence base of occupational therapy

The BHA has the potential to provide occupational therapists with a measure which evaluates and describes bimanual performance in children with bilateral CP. A valid and reliable functional tool is needed to investigate the effectiveness of different intervention approaches and can make it possible to establish evidence for interventions relevant for occupational therapy practice.