

# Accepted Manuscript

The Windmill-task as a new quantitative and objective assessment for mirror movements in unilateral cerebral palsy: a pilot study

Ingar Marie Zielinski, MSc, Bert Steenbergen, Prof, Anna Schmidt, MSc, Katrijn Klingels, Prof, Cristina Simon Martinez, MSc, Pascal de Water, Brian Hoare, PhD



PII: S0003-9993(18)30176-X

DOI: [10.1016/j.apmr.2018.01.035](https://doi.org/10.1016/j.apmr.2018.01.035)

Reference: YAPMR 57182

To appear in: *ARCHIVES OF PHYSICAL MEDICINE AND REHABILITATION*

Received Date: 3 January 2018

Accepted Date: 23 January 2018

Please cite this article as: Zielinski IM, Steenbergen B, Schmidt A, Klingels K, Simon Martinez C, de Water P, Hoare B, The Windmill-task as a new quantitative and objective assessment for mirror movements in unilateral cerebral palsy: a pilot study, *ARCHIVES OF PHYSICAL MEDICINE AND REHABILITATION* (2018), doi: 10.1016/j.apmr.2018.01.035.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Running head: The Windmill-task to assess mirror movements

## **The Windmill-task as a new quantitative and objective assessment for mirror movements in unilateral cerebral palsy: a pilot study**

Ingar Marie Zielinski, MSc<sup>1</sup>, Bert Steenbergen, Prof<sup>1,2</sup>, Anna Schmidt, MSc<sup>1</sup>, Katrijn Klingels, Prof<sup>3,4</sup>, Cristina Simon Martinez, MSc<sup>3</sup>, Pascal de Water<sup>1</sup>, Brian Hoare, PhD<sup>5</sup>

**1** Behavioural Science Institute, Nijmegen, The Netherlands. **2** Australian Catholic University, School of Psychology, Melbourne, Australia. **3** Department of Rehabilitation Sciences, KU Leuven – University of Leuven, Leuven, Belgium **4** Rehabilitation Research Center (REVAL), Biomed, Hasselt University, Hasselt, Belgium **5** Department of Paediatrics, Monash University, Clayton, Victoria, Australia.

Correspondence to: I M Zielinski, Postbus 9104, 6500 HE Nijmegen, The Netherlands. Email: [ingar\\_zielinski@yahoo.de](mailto:ingar_zielinski@yahoo.de)

The study was performed at Monash Children's Hospital, Melbourne, Australia from 11-2015 to 04-2016. Children were recruited as a convenience sample from a cohort of children previously recruited for a larger study (ACTRN12614000631606).

### **ACKNOWLEDGEMENTS**

We want to thank all the children and their families who took part in this study. We also want to kindly acknowledge Mark van de Hei from the technical support group of the Radboud University Nijmegen for his valuable and professional assistance in developing the Windmill-task. This work is part of a doctoral dissertation that was supported by grants from (in alphabetical order): Hersenstichting Nederland, Johanna KinderFonds, Stichting Rotterdams Kinderrevalidatie Fonds Adriaanstichting, Phelps Stichting voor Spastici, and Revalidatiefonds.

### **CONFLICTS OF INTEREST**

The authors have stated that they had no interests which might be perceived as posing a conflict or bias.

### **FINANCIAL DISCLOSURE**

We certify that no party having a direct interest in the results of the research supporting this article has or will confer a benefit on us or on any organization with which we are associated AND, if applicable, we certify that all financial and material support for this research (eg, NIH or NHS grants) and work are clearly identified in the title page of the manuscript.

Download English Version:

<https://daneshyari.com/en/article/8753549>

Download Persian Version:

<https://daneshyari.com/article/8753549>

[Daneshyari.com](https://daneshyari.com)