The following full text is a publisher's version.

For additional information about this publication click this link.
http://hdl.handle.net/2066/129672

Please be advised that this information was generated on 2017-08-01 and may be subject to change.
Movement quality: is beauty only in the eyes of the beholder?

BERT STEENBERGEN1,2
1 Behavioural Science Institute, Radboud University Nijmegen, Nijmegen, the Netherlands. 2 School of Psychology, Australian Catholic University, Melbourne, Vic., Australia.
doi: 10.1111/dmcn.12429

This commentary is on the original article by Wright et al. on pages 770–778 of this issue.

Being part of society is an essential aspect of life. Participation is one of the key features in the International Classification of Functioning, Disability and Health: Children and Youth Version model of the World Health Organization.1 For children with a compromised motor control disorder such as cerebral palsy (CP), participation in different aspects of society is not a trivial matter.2 Often, their compromised motor abilities affect a multitude of movement activities, in turn hindering participation. Essentially, motor control is not only related to what a child ‘can do’, but also to ‘how a child does it’. It is particularly this latter, often neglected, aspect of motor control that is the main focus of the paper of Wright et al.3 They have developed and tested an assessment tool (the Quality Function Measure) aimed at measuring the ‘aesthetics’ of movements in a reliable and valid way, thus focusing on quantifying ‘how a child does it’. Although it may not be that obvious at first hand, this may provide an important step towards facilitation of participation in this group of children.

Why should we be concerned with movement quality, or loosely stated, movement aesthetics? If we take a side step to sports science this becomes immediately evident. Although the Olympic motto ‘Citius, Altius, Fortius’ refers to measurable quantities (seconds, centimeters, kilograms), some sports are rated by their aesthetic quality, such as gymnastics. Clearly, winning (or, participating in the Olympics) is not only about functional skills and excelling in these, but it is also about how aesthetically well these skills are performed. While knowing the winner in sports that have clear measurable units (e.g. seconds, centimeters, kilograms) is straightforward, it becomes more complex when the aesthetic aspects need to be rated. Obviously, there exists no objective quantification of aesthetic quality, and therefore it is left to professional eye of the judges. Identifying the quality, or aesthetics, of movements into an objective measurement system is exactly the purpose of the paper by Wright et al. With this, they encounter a real challenge of quantifying something that may not completely allow quantification.

Still, the need for such quantification is also obvious from a participation point of view. Proficiency in motor skill is an important factor for participation and this not only involves the functional aspect of the skill, but also, and maybe even more so, how these skills are performed as participation is closely related to the (ap) perception of significant others. Once again, this can be illustrated through participation in sports. Studies on participation in sports activities in children with developmental coordination disorder (DCD) and CP have revealed barriers to participation.4,5 One notable barrier in children with DCD was the lack of smooth coordination and concomitant lack of confidence. This aspect hindered participation in sports activities.

From these examples it is clear that, in the long run, participation for children with CP (and DCD) might be helped by not only improving their motor function, as is common rehabilitation practice, but also by targeting their movement quality. The development of an appropriate assessment tool and subsequent testing of its reliability and validity is a necessary and valuable first step in this process. Eventually, beauty may then not only be in the eyes of the beholder.

REFERENCES
Providing a population-based perspective on the perinatal factors associated with cerebral palsy

RUSSELL S KIRBY
Department of Community and Family Health, College of Public Health, University of South Florida, Tampa, FL, USA.
doi: 10.1111/dmcn.12465

This commentary is on the original article by Trønnes et al. on pages 779–785 of this issue.

Population-based data on developmental disabilities are hard to come by, even in the age of electronic medical records and clinical informatics. It is hard to understand why such registries for cerebral palsy (CP), epilepsy, and autism spectrum disorders do not already exist; it is much easier to argue why they are needed. The fact remains that notwithstanding data longitudinally collected by the national Collaborative Perinatal Project, which had an effective sample size approximately equivalent to an annual birth cohort in Norway today,1 while the four-site Autism and Developmental Disabilities Monitoring Network data are collected from a population of children at age 8 years and include limited data for analysis of perinatal risk factors.2 But there are signs of change – all payer claims databases are beginning to emerge, organized across insured lives in health plans or across states in the United States. These data hold some promise for research into both risk factors for CP and health services utilization and outcomes.3 Even if these resources were available today, however, it would take considerable time to accumulate data covering more than a generation of pregnancies for a defined population.

As a perinatal and paediatric epidemiologist with a long-standing interest in the health and health care of children with birth defects and developmental disabilities, it is my hope that researchers focused on CP might take advantage of the opportunity afforded by the linkage of the national registries used by Trønnes et al.1 This would advance knowledge; researchers may even quantify these limitations and enable data quality improvement strategies to address those that can be controlled. These opportunities await those intrepid enough to answer the call.

REFERENCES

REFERENCES