We cordially invite you to the public defence of the doctoral dissertation in fulfilment of the requirements for the degree of DOCTOR IN PHYSICAL EDUCATION AND MOVEMENT SCIENCES of Mister WOUTER COOLS.

The defence will take place on:
Monday, April 26 at 17:30
In Promotion room Aloïs Gerlo (D2.01) located on the campus of Etterbeek

FLEMISH PRESCHOOL CHILDREN’S FUNDAMENTAL MOVEMENT SKILL PERFORMANCE IN RELATION TO INDIVIDUAL AND FAMILY CORRELATES

Promoter: Prof. dr. K. De Martelaer
Co-promoters: Prof. dr. C. Andries
Prof. C. Samaey

Prof. dr. P. Van Roy
Dean of the Faculty of Physical Education and Physiotherapy

Please confirm your presence before April 24, 2010: Wouter.Cools@vub.ac.be

How to reach the Vrije Universiteit Brussel
Pleinlaan 2 – 1050 Brussel
[T] 02/629.27.19 – 27.26 – 27.27 – 39.57
[F] 02/629.27.01
[E] faelk@vub.ac.be
Presentation of the dissertation

Developing fundamental movement skills (FMS) is an important part of a preschool child’s development. These skills support also the motor competence to sustain lifelong participation in physical activities and sports. The aim of this PhD study is to gain insight into the current fundamental movement skill performance level of four- to six-year-old preschool children and into the relationship between developmental level of these skills, child specific and family related factors.

Measurement of fundamental movement skills

Several movement skill tests can be used to measure FMS performance. To select an appropriate test for our target group of preschool children, 7 different tests were compared. The Motoriktest für Vier- bis Sechsjährige Kinder (MOT4-6) was selected for this study as it complied most with the requirements of the target group. Additional research concerning validity and reliability of the selected test was performed. High inter-rater reliability was shown when a trained rater was compared to an experienced rater. A study comparing the MOT 4-6 and the Movement ABC test results, showed high classification agreement of children. Interrelated agreement between the gross movement skill components of both tests was moderate and weak between the fine movement skill components.

Subsequently we examined FMS performance of 1208 four- to six-year-old preschool children. The children’s scores were compared to the normative data from the test’s manual. The results showed that 35% of the preschool children is classified as under average to weak, 59% of the children showed average performances and only 6% has above average FMS performance. These results support findings from similar studies and underline that there is a number of preschool children that may have a potential of skillfulness that is currently not stimulated to continue its development.

The relationship between FMS, child specific and family related factors

The relationship between the preschool children's FMS performance level and child specific as well as family related factors was examined in the second part of this study. This study matched children's FMS performance data to reported data from a parental questionnaire. In the final sample, data from 846 preschool children were analysed with a multiple moderated regression analysis.

The results from the study show that preschool children with a higher body mass index have lower FMS performances. Participation in formal activities, outdoor play and participation in sports weeks are related to higher FMS performance in preschool children. Among family related factors, children’s higher FMS performance is related to higher educational level of parents, higher frequency of receiving new play equipment, higher use of active transport, higher parental importance rating on movement skill development and higher population density of the living area. Lower FMS performance was found for children whose parents gave high importance rating on sufficient sleep and had high frequency of inquiring the PE teacher on the child’s motor development.

These results underline the importance of goal-oriented interventions. Paying special attention to preschool children with parents who have a lower educational level and children with a higher BMI is recommended.

Curriculum Vitae

Wouter Cools obtained a Professional Bachelor in Physical Education and Recreation at the Artesis Hogeschool Antwerpen (former Hogeschool Antwerpen) in 1999. He worked as a PE teacher between 1999 and 2000. Subsequently, he continued his studies doing a bridging programme to obtain his Master in Physical Education (Sports Management) at the Vrije Universiteit Brussel in 2003. Since 2003, he works at the department of movement education and sports training of the Vrije Universiteit Brussel and since 2007, also at the department of teacher training. He is an active member of the Klim en Bergsport Federatie, the Vlaamse Vereniging voor Watersport and staff member of the faculty's winter sports education programme. His teaching and research interests mainly focus on movement skill development, physical activity, education and technology.