Notice of the Final Oral Examination
for the Degree of Doctor of Philosophy

of

JEFF CRANE

MSc (Texas Woman’s University, 2009)
BEd (Acadia University, 2008)
BKIN (Acadia University, 2005)

“An Examination of the Relationships Between Fundamental Motor Skills, Perceived Physical Competence, and Physical Activity Levels During the Primary Years”

School of Exercise Science, Physical & Health Education

Thursday, September 1, 2016
9:00 a.m.
David Turpin Building
Room A144

Supervisory Committee:
Dr. Viviene Temple, School of Exercise Science, Physical & Health Education, University of Victoria (Supervisor)
Dr. Sandra Gibbons, School of Exercise Science, Physical & Health Education, UVic (Member)
Dr. Patti-Jean Naylor, School of Exercise Science, Physical & Health Education, UVic (Member)
Prof. John T. Foley, Department of Physical Education, State University of New York at Cortland (Outside Member)

External Examiner:
Dr. Nick Forsberg, Department of Health, Outdoor and Physical Education, University of Regina

Chair of Oral Examination:
Dr. Lynne Young, School of Nursing, UVic

Dr. David Capson, Dean, Faculty of Graduate Studies
Abstract

Canadian children have policy and infrastructure rich environments, but their physical activity levels are among the lowest in the world. The disconnection between opportunities to be active and actual physical activity suggests that factors other than policies and resources need to be investigated in the Canadian context. Finding ways to increase physical activity levels is critical in order for children to obtain adequate levels throughout childhood. Fundamental motor skill proficiency and positive perceptions of physical competence have been previously identified as factors that may contribute to physical activity engagement across childhood. This dissertation examined the developmental trajectories of fundamental motor skill proficiency (FMS), perceptions of physical competence (PPC), physical activity (MVPA), and sedentary behaviour (SB) from kindergarten to grade 2, in both cross-sectional and longitudinal samples of children. Three interrelated studies were conducted to address the overall purpose.

The aim of study 1 was to examine the change in the relationship between fundamental motor skill proficiency and perceptions of physical competence from early to the beginning of middle childhood. The Test of Gross Motor Development–2 (TGMD-2) and The Pictorial Scale of Perceived Competence and Social Acceptance for Young Children were used to measure FMS and PPC from kindergarten to grade 2 (n=250). Motor skills improved from kindergarten to grade 2, while PPC was high in both kindergarten and grade 2. Mixed design analyses of variance revealed overall significant effects for object control skills and PPC from kindergarten to grade 2. Furthermore, boys had higher object control skills and girls had higher locomotor skills and perceived physical competence.

The aim of study 2 was to examine the levels of physical activity and sedentary behaviours sequentially from kindergarten to grade 2. A sample of 176 cross-sectional and 21 longitudinal participants wore Actigraph GT1M accelerometers for ≥ 10hrs per day for 7 days to measure physical activity and sedentary behaviour. Physical activity levels were lower in grade 2, while sedentary behaviour was higher. Pearson product-moment correlations revealed sedentary behaviour tracked more consistently over time than MVPA or total physical activity.

The aim of study 3 was to examine whether perceptions of physical competence mediated the relationship between motor competence as the predictor variable and both physical activity and sedentary behaviour as dependent variables among children in grade 2 or 3. The TGMD-2 measured FMS and Actigraph GT1M accelerometers measured physical activity and sedentary behaviour for 129 grade 2–3 children. The Pictorial Scale of Perceived Competence and Social Acceptance for Young Children and The Self-Perception Profile for Children were used to assess PPC. Overall, PPC did not mediate the relationship between object control skills and MVPA or SB. Also, the path between object control skills and MVPA was significant for boys as were the paths between MVPA and SB for boys and girls.