University of Victoria | Graduate Studies

Notice of the Final Oral Examination
for the Degree of Master of Science

of

CHRISTOPHER LIM

BKin (University of British Columbia, 2012)

"Individual factors that influence children's engagement on the school playground"

Department of Exercise Science, Physical and Health Education

April 25, 2019
1:00pm
McKinnon Building
Room 0025

Supervisory Committee:
Dr. Patti-Jean Naylor, Department of Exercise Science, Physical and Health Education, University of Victoria (Supervisor)
Dr. Viviene Temple, Department of Exercise Science, Physical and Health Education, UVic (Member)

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Dr. Allyson Hadwin, Department of Educational Psychology and Leadership Studies, UVic

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Abstract

Only one third of children and youth meet current physical activity (PA) guidelines. Low levels of PA can impact future PA, the probability of obesity, and delay fundamental motor skill (FMS) development. One environment associated with children's PA is the school playground. Limited research has explored how motor skill development and other child level factors may influence playground behavior.

The purpose of this study was to explore playground behaviour and determine if children's motor skills predicted playground behavior (e.g. enjoyment, frequency, intensity and type of play). A secondary objective was to explore whether other individual level variables influenced these playground behaviours (e.g. sex, physical activity, strength).

All grade 2 and 3 children from one school were recruited to participate in this cross-sectional mixed-methods study. Information about PA was collected using the Physical Activity Questionnaire for Children and the Children's Assessment of Participation and Enjoyment and about playground behavior using the Playground Enjoyment Questionnaire. The Test of Gross Motor Development - 2 and the stork stand were used to assess FMS. A handheld dynamometer assessed grip strength. Descriptive statistics and a one-way analysis of variance were calculated to determine if children's PA differed between playground areas and sex. Pearson product moment correlation coefficients examined associations among children's individual factors and playground play. Linear regression examined if children's FMS and significant individual correlates predicted playground engagement.

A total of 54 children with a mean age of 8.46yrs (SD = 0.68) participated. The sample included 31 boys (M = 8.48yrs of age (SD = 0.73) and 23 girls (M = 8.43, SD = 0.59). Correlation coefficients revealed that FMS were not significantly related to children's playground engagement. Boys frequented the field more than girls (F (1, 52) = 5.18, p = .027) and enjoyed the field (F (1, 52) = 4.07, p = .049), the courts (F (1, 52) = 6.74, p = .012) and the nature space (F (1, 52) = 4.19, p = .046) more than girls. Object control skills negatively predicted built structure play frequency (B = -.267, t = -2.39, p = .022). Gross motor quotient predicted the type of activities children engaged in the built structures (B = .055, t = 2.178, p = .035). Children's overall PA positively predicted their play frequency, intensity, and enjoyment in court areas and intensity in the field. Grip strength predicted enjoyment in field areas. Recreational PA level negatively predicted play frequency on asphalt areas.

Although, children's FMS rarely predicted where and how children engaged on school playground spaces, other child level did factors (sex, PA, and grip strength). Children's self-reports showed that friends also influenced their play behaviours. FMS development did not have a significant impact on where or how children played on the playground, which suggests that children of varying FMS may engage in the same play spaces. In the context of the socio-ecological model there were child level factors that influenced their interaction with the playground as a micro-environment, which requires further investigation.