



Physical activity and motor skills: A study of child development

Your child is being invited to participate in a study entitled “Physical Activity and Motor Skills: A Study of Child Development.” This study is being conducted by Drs Vivienne Temple, Rick Bell, and PJ Naylor from the School of Exercise Science, Physical and Health Education at the University of Victoria. If you have further questions you may contact or Vivienne at 250-721-7846 or vtemple@uvic.ca or Rick at 250-721-8373 fbell@uvic.ca.

Aim and Objectives

The aim of this research is to understand the relationships between elementary children’s gross motor skills, perceptions of motor competence, physical activity levels, and aspects of health-related fitness. We want to see whether children’s actual gross motor competences, or their perceptions of their competence, influence their participation in physical activity and health-related fitness in Kindergarten, Grade 3, and in Grade 5.

Importance of this Research

Less than 15% of children in British Columbia meet Canada’s physical activity guidelines for children and a study published last year entitled the *Fitness of Canadian Children and Youth* indicates that the fitness levels of children have declined since 1981, regardless of age or sex. These statistics are alarming and point to an urgent need to help children’s stay engaged in physical activity.

Research suggests that actual motor skill competence and how children feel about their skills is the key to understanding participation (or not) in physical activity. Children’s actual skills and their feelings about their gross motor skills changes from early childhood (i.e. kindergarten) to middle and later childhood. However, the influence of this on participation in physical activity has not been studied over an extended period of time.

This research will be the first in the world to describe these relationships as children develop during elementary school. Ultimately, our intent is to help teachers, schools, and school districts enhance physical activity participation by helping children optimize their fundamental motor skills (competence) and how they feel about their skills.

Participants Selection

Your child is being asked to participate in this study because she/he is in Kindergarten in a School District 61 school.

What is involved

During scheduled physical education time your child will be videotaped performing 14 fundamental motor skills. These are the: run, hop, gallop, leap, slide, jump, catch, kick, throw, underhand roll, t-ball strike, bounce, spatial awareness, and balance. We videotape the skills so that we can accurately record the parts of each skill and to minimize the time it takes to complete all of the skills during physical education. Your child will also complete a picture-based questionnaire about how they feel about their motor skills; and height and weight will be measured. We are also asking you about your child’s age, gender, whether he/she was born prematurely, and whether your child has a disability as these factors can influence motor skill development and participation in physical activity.

You and your child may also choose to

We are also asking for volunteers to:

1. Wear a motion sensor (accelerometer) for 7-days. An accelerometer is similar to a pedometer and accurately records your child's level of physical activity. The accelerometer is unobtrusively worn on the hip via an elastic belt. It is removed at night or when bathing or swimming.
2. For parents to complete an online or mail-based survey about your child's participation in crafts, hobbies, recreational activities, and sports.

Inconvenience

Approximately 30 minutes of class time and three of your child's physical education lessons will be devoted to this project. Plus if you and your child choose to participate in the motion sensor part of the project we would ask that your child wear the device for 7-days. Some parental assistance will be needed to record when the device was worn and to help the children put on the accelerometer. If you choose to complete the survey it will take approximately 15-20 minutes to complete.

Risks

It is possible that children will be embarrassed by having their weight recorded. To minimize this risk weight will be measured in a private space on a scale with the display covered with a flap. Only the research assistant will see the display. If a child doesn't want to be weighed that will be okay; only their height will be measured.

Benefits

Your child's participation in this research will help us better understand the role that motor skill development plays in physical activity participation; and may help reverse the decline in fitness/physical activity among Canadian children. The fundamental motor skill test results will also help your child's teacher plan their physical education curriculum.

Voluntary Participation

Your child's participation in this research must be completely voluntary. Choosing not to participate in this study will in no way effect your child's physical education lessons. All children in the kindergarten class will do the fundamental motor skills in physical education, but only the data from consented children will be used for research purposes. If your child does participate, she/he may withdraw at any time without any consequences or any explanation. If she/he does withdraw from the study her/his data will not be used in the study and will be destroyed.

On-going Consent

One of the goals of this project is to track the development of motor skills and physical activity participation across the elementary years. Rather than assuming your ongoing consent, we will seek your and your child's consent when he/she enters grade 3.

Anonymity and Confidentiality

Your child's participation will not be anonymous as the fundamental motor skill data will be collected during physical education. There will be many small groups of children performing motor skills at the same time; therefore your child will only be performing in front of a few children. The data we collect will be entered into the computer without names and all presentations will refer only to group data. You will not be asked to enter your child's name online or on the mail-based survey; rather we will provide a code that we use for your child so that we connect the survey responses to your child's other data.

Dissemination of Results

Aggregated data from this project will be presented to School District 61 and at professional meetings. Additionally, articles will be published and graduate students will use the data for their theses. The fundamental motor skill data will also be provided to your child’s class teacher and to the school. Your child’s teacher will receive information about each child’s motor skills and the school will receive scores and for the class as a whole.

Disposal of Data

The video data will be erased and surveys will be shredded five years after collection. The computer files (without names) will be kept in a secure database for 15 years. An important outcome of this project is to track the development of children’s skills and physical activity longitudinally, therefore it is important to retain the Kindergarten data to compare with future data collection (i.e. grade 3 and 5).

Contacts

Individuals that may be contacted regarding this study include Dr Vivienne Temple PH: 250-721-7846 or email: vtemple@uvic.ca or Dr Rick Bell on PH: 250-721-8373 or email: fbell@uvic.ca.

In addition, you may verify the ethical approval of this study, or raise any concerns you might have, by contacting the Human Research Ethics Office at the University of Victoria (250-472-4545 or ethics@uvic.ca).

Your signature below indicates that you understand the above conditions of your child’s participation in this study and that you have had the opportunity to have your questions answered by the researchers. We also ask that your child “signs” below to indicate that he or she is happy to be involved in the study.

<i>Child’s Name</i>	<i>Child’s Signature</i>	
<i>Parent Name</i>	<i>Parent’s Signature</i>	<i>Date</i>

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Additional options

- My child agrees to wear a physical activity monitor for 7-days Yes No
- I agree to complete the participation survey Yes No

If **yes**, and you wish to complete the survey online please provide your email address so that we can send you the link to the online survey and the code used for your child’s data.

Email address: _____

If **yes**, and you wish to complete the survey by mail please provide your mailing address so that we can send you the survey.

Mailing address: _____

PLEASE COMPLETE THE INFORMATION ON THE BACK OF THIS PAGE AND RETURN IT TO SCHOOL IN THE ENVELOPE PROVIDED.

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To help us describe motor skills and physical activity participation more specifically we ask that you provide the following information about your child:

1. Date of birth: _____
(day/month/year)

2. Gender: Boy Girl

3. Was your child born prematurely? Yes No

If yes, how many weeks? _____

If yes, what was your child's birthweight? _____

4. Does your child have a disability? Yes No

If yes, please describe _____