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Tackling the trio of intention, perceived control and self-identity for promoting physical activity among girls and boys in elementary school

Submission date
03/07/2017

Recruitment status
No longer recruiting

Registration date
13/07/2017

Overall study status
Completed

Last Edited
26/11/2021

Condition category
Other

[_] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol

Background and study aims
Few children engage in sufficient moderate-to-vigorous physical activity at elementary school, despite the related health benefits. Previous studies have identified the most efficient behaviour change methods for influencing physical activity among children. The aim of this study is to test the effect of a program promoting at least 30 minutes of daily school-based physical activity.

Who can participate?
Children in grades 5 and 6 at participating schools

What does the study involve?
Participating schools are randomly allocated to either deliver the physical activity program or the standard curriculum. The physical activity program (IMove30+) is delivered over 14 weeks and includes physical activity, active learning and awareness-raising activities with children, parents and educational staff, as well as monitoring the children's participation in physical activity. Before and after the program children's physical activity levels, height, weight and waist, and screen time are measured.

What are the possible benefits and risks of participating?
The children receive personalized follow-up to help them to adopt an active lifestyle, and they contribute to the advancement of knowledge in this field and to the improvement of the interventions offered to the participants. There is an increased risk of injury while taking part in physical activities, but particular attention will be paid to safety during meetings. There is no particular psychological risk associated with this type of study.

Where is the study run from?
Université Laval (Canada)

When is the study starting and how long is it expected to run for?
July 2015 to March 2016

Who is funding the study?
Université Laval (Canada)

Who is the main contact?
Mrs Tania Santina
tanya.santina.1@ulaval.ca

Contact information

Type(s)
Scientific

Contact name
Mrs Tania Santina

Contact details
Faculty of Nursing
Université Laval
Québec
Canada
G1V 0A6
+1 (0)418 656 2131
tanya.santina.1@ulaval.ca

Additional identifiers

Protocol serial number
2014-274 Phase IV/16-11-2015

Study information

Scientific Title
Tackling the trio of intention, perceived control and self-identity for promoting physical activity among girls and boys in elementary school: a quasi-experimental study

Acronym
CRT

Study objectives
The primary hypotheses were as follows:
1. Children in the experimental group, including both girls and boys belonging to different BMI classes, would significantly increase their general PA level compared to the control group
2. A larger proportion of children in the experimental group would engage in at least 30 minutes of daily Moderate to Vigorous Physical Activity (MVPA) at school after the intervention (i.e., 14 weeks from baseline) compared to the control group

The secondary hypotheses were that children exposed to the intervention, as compared to the control group, would:
1. Significantly decrease their BMI, waist circumference and screen time

2. Report a significantly higher intention to engage in MVPA at school, demonstrate a higher self-identification as a sporty child and perceive more behavioral control and facilitating factors and fewer barriers
3. Changes in PA level would be moderated or mediated by changes in psychosocial variables

Ethics approval required
Old ethics approval format

Ethics approval(s)
The ethics board of the Human Research Ethics Committees, 16/11/2015, ref: 2014-274 Phase IV /16-11-2015

Primary study design
Interventional

Study design
Quasi-experimental study

Study type(s)
Prevention

Health condition(s) or problem(s) studied
Promotion of school-based physical activity

Interventions
A quasi-experimental trial was used with pre- and post-intervention measures and two parallel groups: an experimental group (the IMove30+ program) compared with a control group (standard curriculum). Two schools were involved, including all fifth- and sixth-grade classes (17 classes, experimental school k=9, control school k=8). These two schools were selected from 11 candidates because these two were similar with regard to the total number of students, the school fees and the education levels offered. The two schools were both secular school with co-education of girls and boys, and both had certified physical education teachers, a school nurse and two recesses lasting 25 minutes each. Both were willing to engage in a reformed curriculum along with school staff activities in order to promote school-based PA. To prevent contamination and for practical reasons, the school was chosen as a unit of randomization. Prior to starting the trial, participating schools were randomly allocated to the intervention and control arms, using a lottery draw.

The IMove30+ program is a school-based intervention promoting at least 30 minutes of daily school-based MVPA among children in elementary school. The program was designed to be offered in an Arabic context over one semester (14 weeks) and repeated as many times as desired. It was developed using the Intervention Mapping process (Bartholomew et al., 2016), which is characterized by the participation of stakeholders (e.g., children, school managers, nurses and teachers) and based on an extensive literature review of the factors influencing children's PA and of the active components of previous effective programs. Considering that most studies explored factors influencing PA during leisure time (i.e., out of school) among Western countries, an additional survey was conducted in a Lebanese school context and described elsewhere (Santina et al., 2017). Following this survey, 5 determinants of school-based MVPA were identified and used to guide the selection of the behavior change methods used in IMove30+ (Kok et al., 2016): (a) intention (associated behavior change methods: action and coping planning); (b) self-identity (change methods: giving opportunities to perceive oneself as a

role model and experiencing valued self-identity); (c) perceived behavioral control; (d) perceived barriers (change methods: behavior adoption facilitation, providing rewards); and (e) gender (change method: providing enjoyable opportunities for girls) (Santina et al., 2017). The program included 8 components:
1. 10 minutes of daily structured MVPA delivered daily by the teacher during academic lessons (i. e., during a short break in the classroom) and comprising motor skill tasks such as jumping
2. 20 minutes of daily structured (e.g., dance, soccer) or unstructured (e.g., Dragon Chain, Tank Assault) MVPA during lunch recess
3. Learning activities on PA based on an assignment booklet used by children (Annexe H)
4. Parental information
5. Educational staff involvement
6. Monitoring system of the children's participation in PA
7. Events at school (e.g., biking and hiking trips, a PA celebration day)
8. Environmental changes (e.g., updated procedures for using sport equipment, improving the attractiveness of the playground).

Fidelity to program delivery was promoted and successfully achieved through intervention manuals, training and direct observation by a member of the research team. Details on the intervention development and content can be found elsewhere (Santina, Beaulieu, Gagné, & Guillaumie, under review). In the control group, children followed the usual school curriculum during the study period (i.e., one class of 50-minute physical education per week and unsupervised activities during recess).

Intervention Type
Behavioural

Primary outcome(s)
1. Children's general PA levels, measured by the Physical Activity Questionnaire for Older Children (PAQ-C)
2. Proportion of children engaged in at least 30 minutes of daily Moderate to Vigorous Physical Activity at school during the previous week
Measured at baseline (in December 2015) and at the end of the intervention after 14 weeks (in March 2016)

Key secondary outcome(s)
1. Anthropometric measures (height, weight and waist circumference) measured in a clinical exam by dieticians
2. Psychosocial variables and screen time, measured using a self-administered questionnaire
Measured at baseline (in December 2015) and at the end of the intervention after 14 weeks (in March 2016)

Completion date
24/03/2016

Eligibility

Key inclusion criteria
1. Children in grades 5 and 6 in participating schools
2. Signed the child assent form
3. Parent/guardian has signed an informed consent form

Participant type(s)
All

Healthy volunteers allowed
No

Age group
Child

Sex
All

Total final enrolment
374

Key exclusion criteria
Children who had a medical condition or physical injury that hindered testing or participation (e.g., cardiovascular or metabolic diseases, asthma or disabilities)

Date of first enrolment
21/11/2015

Date of final enrolment
25/11/2015

Locations

Countries of recruitment
Canada

Lebanon

Study participating centre
Université Laval
Facuté des sciences infirmières
Québec
Canada
G1V 0A6

Sponsor information

Organisation
Université Laval

ROR

https://ror.org/04sjchr03

Funder(s)

Funder type
University/education

Funder Name
Université Laval

Alternative Name(s)
Laval University, ULaval, Séminaire de Québec, Universitas Laval, UL

Funding Body Type
Government organisation

Funding Body Subtype
Universities (academic only)

Location
Canada

Results and Publications

Individual participant data (IPD) sharing plan
The datasets generated during and/or analysed during the current study are not expected to be made available due to the parental consent and children assignment forms used.

IPD sharing plan summary
Not expected to be made available

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article		14/03/2020	26/11/2021	Yes	No
Other publications	step-by-step development of the programme	18/12/2019	26/11/2021	Yes	No