



The first part of the study (1) was a pilot study to determine the feasibility of the study. The pilot study was conducted in a small group of participants. The results of the pilot study were used to inform the design of the main study.

The second part of the study (2) was a randomized controlled trial. The trial was conducted in a large group of participants. The results of the trial were used to determine the effectiveness of the intervention.

The third part of the study (3, 4) was a follow-up study. The follow-up study was conducted in a group of participants who had completed the trial. The results of the follow-up study were used to determine the long-term effectiveness of the intervention.

The fourth part of the study (5-8) was a subgroup analysis. The subgroup analysis was conducted to determine the effectiveness of the intervention in different subgroups of participants.

The fifth part of the study (9) was a sensitivity analysis. The sensitivity analysis was conducted to determine the robustness of the results of the trial.

The sixth part of the study (10) was a cost-effectiveness analysis. The cost-effectiveness analysis was conducted to determine the value for money of the intervention.

The seventh part of the study (11) was a health economic analysis. The health economic analysis was conducted to determine the overall impact of the intervention on the health system.

The eighth part of the study (12) was a patient and public involvement study. The patient and public involvement study was conducted to ensure that the needs and views of patients and the public were taken into account in the design and conduct of the study.

The overall design of the study is a sequential, multi-stage design. The design is based on the principles of evidence-based medicine and patient and public involvement.

The study is a randomized controlled trial. The trial is conducted in a large group of participants. The results of the trial are used to determine the effectiveness of the intervention.

The study is a follow-up study. The follow-up study is conducted in a group of participants who had completed the trial. The results of the follow-up study are used to determine the long-term effectiveness of the intervention.

The study is a subgroup analysis. The subgroup analysis is conducted to determine the effectiveness of the intervention in different subgroups of participants.

The study is a sensitivity analysis. The sensitivity analysis is conducted to determine the robustness of the results of the trial.

The study is a cost-effectiveness analysis. The cost-effectiveness analysis is conducted to determine the value for money of the intervention.

The study is a health economic analysis. The health economic analysis is conducted to determine the overall impact of the intervention on the health system.

The study is a patient and public involvement study. The patient and public involvement study is conducted to ensure that the needs and views of patients and the public are taken into account in the design and conduct of the study.

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Study design overview

The study design overview is a summary of the key elements of the study design. It includes the following information:

- The study is a randomized controlled trial.
- The trial is conducted in a large group of participants.
- The results of the trial are used to determine the effectiveness of the intervention.
- The study is a follow-up study.
- The follow-up study is conducted in a group of participants who had completed the trial.
- The results of the follow-up study are used to determine the long-term effectiveness of the intervention.
- The study is a subgroup analysis.
- The subgroup analysis is conducted to determine the effectiveness of the intervention in different subgroups of participants.
- The study is a sensitivity analysis.
- The sensitivity analysis is conducted to determine the robustness of the results of the trial.
- The study is a cost-effectiveness analysis.
- The cost-effectiveness analysis is conducted to determine the value for money of the intervention.
- The study is a health economic analysis.
- The health economic analysis is conducted to determine the overall impact of the intervention on the health system.
- The study is a patient and public involvement study.
- The patient and public involvement study is conducted to ensure that the needs and views of patients and the public are taken into account in the design and conduct of the study.

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Reliability of the PLKQ

"The first step in the process of creating a new product is to identify a market need. This is often done through market research, which involves gathering information about the target market and its needs. Once a market need has been identified, the next step is to develop a concept for a product that meets that need. This is often done through brainstorming and prototyping. The final step in the process is to create a business plan and secure funding to bring the product to market." (Business Plan, 2018)

Original questionnaire with open-ended questions (as of 2009-09-02). (PDF 662 kb)

Version 1 of the Cognitive domain questions (as of 2012-02-14). (DOCX 1747 kb)

Final version of the Physical Activity knowledge questions (as of 2013-06-28). (DOC 236 kb)

Abbreviations

CAPL: Canadian Assessment of Physical Literacy; PLKQ: Physical Literacy Knowledge Questionnaire

Acknowledgements

The assistance of Dr. Weimo Zhu and Dr. Elena Boiraskaia in analyzing the PLKQ item difficulty, and of Mr. Joel Barnes in providing data on completion time, is greatly appreciated.

Funding

The financial support and expertise of the following organizations have made a significant contribution to the development of the Canadian Assessment of Physical Literacy: Active Healthy Kids Canada; Canadian Association of Health, Physical Education, Recreation and Dance / Physical and Health Education Canada; Canadian Institutes of Health Research; Champlain Cardiovascular Disease Prevention Network; Champlain Local Health Integration Network; Children's Hospital of Eastern Ontario Research Institute; Ontario Ministry of Health Promotion; Ontario Physical and Health Education Association; Ottawa Catholic School Board; ParticipACTION; Public Health Agency of Canada; RBC Learn to Play; and Upper Canada District School Board. Publication charges for this article have been funded by the RBC Learn to Play project and the Public Health Agency of Canada, delivered in partnership with ParticipACTION.

Availability of data and materials

The datasets supporting the conclusions of this article are available from Dr. Patricia Longmuir or Dr. Mark Tremblay (contact via www.haloresearch.ca or www.capl-ecsf.ca).

About this supplement

This article has been published as part of BMC Public Health Volume 18 Supplement 2, 2018: Canadian Assessment of Physical Literacy. The full contents of the supplement are available online at <https://bmcpublihealth.biomedcentral.com/articles/supplements/volume-18-supplement-2>.

Authors contributions

PEL led validity and reliability data collection and analyses, and wrote the manuscript. ML led curriculum review and initial question development. CB led data collection for the validity and reliability assessment. SJW collected reliability data over a 7-day interval and revised question content. MST and ML conceived of the physical literacy knowledge assessment. All authors were responsible for reviewing and revising the manuscript for important intellectual content. All authors approved the final manuscript.

Ethics approval and consent to participate

Ethics approval was obtained from: Ottawa - Children's Hospital of Eastern Ontario Research Ethics Board, University of Ottawa Research Ethics Board, Ottawa-Carleton District School Board, Ottawa Catholic School Board, Conseil des écoles catholiques du Centre-Est, Conseil des écoles publiques de l'Est de l'Ontario, Upper Canada District School Board; Toronto - Durham District School Board; Windsor - University of Windsor Research Ethics Board and the Windsor Essex Catholic District School Board. The parents of participants provided written informed consent, and the participants provided verbal assent to study participation.

Consent for publication

Not applicable.

Competing interests

The authors declare that they have no competing interests.

Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

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