Reviewer’s report

Title: Effects of school-based interventions on motivation towards physical activity in children and adolescents: protocol for a systematic review

Version: 1 Date: 14 Feb 2019

Reviewer: Ferrán Catalá-López

Reviewer's report:

Thank you for submitting a revised version of your manuscript.

Please, consider the following additional comments.

Abstract

Background. Page 2. The authors' state: "This systematic review aims to collate current findings on the effects of school-based physical activity interventions on a variety of motivational outcomes towards physical activity in children and adolescents aged six to 19 years." Please, edit/replace by: "The main objective of this systematic review will be to analyze the effects of school-based physical activity interventions on a variety of motivational outcomes towards physical activity in school-aged children and adolescents."

Methods. Page 2. The authors' state: "The databases Scopus, ERIC, MedLine, PsycInfo, Psyndex and SportDiscus will be searched using a comprehensive search strategy to identify relevant (randomized) controlled intervention studies trials. interest are studies that provided physical activity components during school lessons including physical education, or during morning, lunch and afternoon breaks. Studies implementing primarily extracurricular physical activity interventions will not be considered." Please, edit/replace by: "Comprehensive literature searches will be conducted in multiple electronic databases, including MEDLINE, Scopus, PsycINFO, ERIC, PSYNDEX and SPORTDiscus. We will include randomized controlled trials and quasi-experimental studies examining the effects of school-based physical activity interventions (e.g. physical activity components during school lessons including physical education, or during morning, lunch and afternoon breaks). Primarily extracurricular physical activity interventions will not be considered."

Methods (on outcomes). Page 2. The authors' state: "Primary outcomes are students' motivation, basic psychological needs, goal orientation, enjoyment, and motivational teaching climate in physical education. Secondary outcomes are the students' physical activity behaviors in-class, during school, and in leisure time. The studies included should be published in English language in peer reviewed journals." Please, edit as follows: "The primary outcomes will be students'
motivation, basic psychological needs, goal orientation, enjoyment, and motivational teaching climate in physical education. Secondary outcomes will be the students' physical activity behaviors in-class, during school, and in leisure time (…). Only peer-reviewed articles published in English will be considered."

Methods. Page 2. The authors' state: "The methodological quality of included studies will be assessed using the Cochrane Risk of Bias Tool. A meta-analysis is not anticipated due to expected variation in interventions, populations and outcomes. The studies will be grouped according to the participants' age and results will be analyzed separately for motivational and physical activity outcomes under consideration of the theoretical background intervention strategies, and methodological quality." Please, edit/revise as follows: "Three reviewers will independently screen all citations and full-text articles, and two reviewers will abstract data. The methodological quality (or risk of bias) of individual studies will be appraised using the Cochrane Risk of Bias tool. Given the anticipated heterogeneity (on interventions, populations and outcomes), it is likely that synthesis will be mostly narrative."

Discussion. Page 2-3. The authors' state: "In order to increase and maintain physical activity levels in children and adolescents, motivation towards physical activity should be sustained. This systematic review can provide information as to which strategies implemented in the school setting are effective in increasing students' motivation towards physical activity, and hence increase their physical activity during school and after-school hours." Please, edit/revise as follows: "In order to increase and maintain physical activity levels in children and adolescents, motivation towards physical activity should be sustained. It is anticipated that the results of this systematic review will provide information as to which strategies implemented in the school setting are effective in increasing students' motivation towards physical activity, and hence increase their physical activity during school and after-school hours."

Background

Page 3. The authors' state: "Demetriou et al. (2012) found the school-based intervention effects on PA behavior to be partially mediated by self-efficacy (11)." Please, revise and acknowledge this is your own research, as follows: "In a previous study, members of our research team found the school-based intervention (…)".

Methods

Page 7. Eligibility criteria. The authors' state: "The studies under review should focus on children and adolescents aged six to 19 years without any known health issues." Please, revise as follows: "Eligible studies should focus on children and adolescents aged 6 to 19 years without any known
health issues”. Could you please, clarify whether you will exclude studies in overweight, obese children/adolescents or with any other condition?

Page 7. Eligibility criteria. Please, describe all interventions of interest (e.g. physical activity components, and give some examples) to allow their replication. Again, please, see TIDieR Checklist: http://www.equator-network.org/reporting-guidelines/tidier/

Page 8. Outcomes. Please, delete lines 187-188: "As the main objective of this systematic review is to analyze 187 effects of school-based PA interventions on the motivation of children and adolescents towards PA”.


Page 8. Outcomes. Lines 187-197. Please, be more explicit and provide an unambiguous description of the outcomes (as per PRISMA-P). For example, "change scores from baseline or endpoint score at the time point in question on a validated questionnaire”. The results of mean values of rating scales can be more sensitive than dichotomous response data. Therefore, they should also be presented even though their interpretation is less intuitive than with dichotomous response data. Change data will be preferred to endpoint data but both will have to be presented separately because we will use the standardised mean difference as an effect size measure for which pooling of endpoint and change data is not appropriate.”

Page 8. Search strategy. Lines 199-206. Please, delete and edit/revise as follows: "The primary source of literature will be a structured search of six electronic databases: MEDLINE (Ovid), Scopus (Elsevier), PsycINFO (EBSCO), ERIC (EBSCO), PSYNDEX (EBSCO) and SPORTDiscus (EBSCO). The search will include a broad range of terms and keywords. A draft search for MEDLINE (Ovid) and all the rest of databases in EBSCO is provided in Additional file”.

Page 8. Please, delete Tables 1 and 2, and include in Appendix the draft search for MEDLINE (Ovid) and EBSCO databases. Ideally, please, consult with an Expert Information Specialist/Librarian.

Page 9. Study selection. Lines 211-218. Please, revise as follows: "All articles identified from the literature search will be screened by at least two reviewers independently (YD, AK, and/or DR). First, titles and abstracts of articles returned from initial searches will be screened based on the eligibility criteria outlined above. Second, full texts will be examined in detail and screened for eligibility. Third, references of all considered articles will be hand-searched to identify any relevant report missed in the search strategy. Any disagreements will be resolved by discussion to meet a consensus, if necessary. Records will be managed with EndNote x8 (Clarivate Analytics, Philadelphia, PA, United States)."
Page 10. Data synthesis. The authors' state: "We will summarize effect estimates using the reported p-values for primary and secondary outcomes; p-values \( \leq 0.05 \) are considered significant." This is not acceptable. Rather than reporting isolated P values, results should include effect sizes and uncertainty metrics for primary and secondary outcomes. Please, extensively revise this section (and follow recommendations as per PRISMA-P, Explanation and elaboration document). Thank you. Additional information here:


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