Author’s response to reviews

Title: A cross-sectional examination of school characteristics associated with overweight and obesity among grade 1 to 4 students

Authors:

Scott T Leatherdale (sleather@uwaterloo.ca)

Version: 5 Date: 19 September 2013

Author’s response to reviews: see over
Dear Editor,

I am pleased to resubmit “A cross-sectional examination of the association between school policies and the built environment surrounding a school on overweight and obesity among grade 1 to 4 students” for publication in BMC Public Health. The following is my response to the editor’s only comment:

Comment 1
"It is only strange that the newly added reference is a reference for 2014: Leatherdale ST: School characteristics associated with physical activity among grade 1-4 students. Am J Health Behav 2014, 38:200-207. Maybe ask the author if the year is mistaken and should be 2013. This reference can not be found only for the moment but the author mentions that it was recently accepted, so this is quite normal."

Response
This is the correct citation for the referenced manuscript. The paper has been accepted for publication and is due to come out in the 2014 issue for this journal. I have attached a screen shot of the first page of the final proof provided to me with the appropriate citation following this letter. Please note that if there is a different format by which you would like this manuscript to be cited, I would be happy to oblige.

Please note that the University of Waterloo Office of Research Ethics approved this study. I would like to thank you for reconsidering this manuscript.

Sincerely,

[Signature]

Dr. Scott Leatherdale
Associate Professor & CCO Research Chair
School of Public Health & Health Systems
University of Waterloo

BMH 1038, 200 University Ave. West
Waterloo, Ontario
Canada
N2L 3G1

sleather@uwaterloo.ca
1-519-888-4567 ext 37812
School Characteristics and Physical Activity among Grade 1-4 Students

Scott I. Landsdala, PhD

Objectives: To examine school and student characteristics associated with physical activity in grade 1 to 4 students. Methods: Multi-level logistic regression examined factors associated with being moderately and highly active. Results: A student was more likely to be moderately or highly active if he/she attended a school that provides student access to facilities and equipment outside of school hours. Male students were more likely to be moderately or highly active and overweight or obese students were less likely to be moderately or highly active. Conclusions: Research should evaluate if implementing a school policy that provides student access to facilities and equipment outside of school hours is effective in promoting physical activity in grade 1 to 4 students.

Keywords: physical activity, children, school policy

DOI: http://dx.doi.org/10.3390/ajb.38.28

Regular participation in physical activity (PA) is critical for healthy child development. PA is associated with a decreased risk for chronic illness and obesity, and improved physical, mental, and social well-being among children. Unfortunately, PA levels are declining among children as time spent in sedentary behaviors is becoming more common. Considering that health behavior patterns of children may become resistant to change around the 6th grade, understanding the factors that impact PA among young children should be a priority.

Existing research suggests that school-level characteristics (e.g., sun, body mass index [BMI], sedentary behaviors, and obesity prevalence) are associated with PA levels in older children. However, because school-based PA can account for up to 40% of the total activity among youth population in Canada, it suggests that schools need to move beyond only examining individual student characteristics associated with youth PA. We want to understand how best to target school-based PA interventions so that they are most likely to have impact. It may be just as important to identify the school-level characteristics of children's PA. For instance, whereas there is evidence demonstrating that characteristics of the school PA policy environment or the built environment surrounding a school are important predictors of PA for students in higher grades (6 to 8) even when controlling for student characteristics, similar evidence does not yet exist for children in grades 1 to 4. Using a similar approach as research published with elementary school students in grades 5 to 8, this exploratory study is the first to examine how school-based PA policies and the number of recreation centers surrounding a school were associated with the PA levels of a sample of elementary school students in grades 1 to 4.

Methods

This cross-sectional study used data collected in 2007-2008 from a convenience sample of grades 1 to 4 students attending 20 elementary schools (Ontario, Canada) as part of the PLAY-ON study. The purpose of the PLAY-ON study was to examine the school-level factors associated with PA and overweight among a sample of elementary school students in grades 1 to 8. Given the different data collection protocols required for participants of this age range, there were 2 separate study years of the PLAY-ON host study: the first arm of the study was among respondents in grades 5 to 8 (aged 10 to 13 years) and the second arm of the study was among respondents in grades 1 to 4 (aged 6 to 9 years). Research has previously examined the school-level factors associated with overweight and PA among the grades 5 to 8 respondents in PLAY-ON. The following study examined the PA data collected from the sample of grades 1 to 4 respondents in PLAY-ON. In this component of PLAY-ON, students' PA data were collected from eligible students...