

# The Research File



Summary from the Canadian Fitness and Lifestyle Research Institute and ParticipACTION

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## Physical Activity Correlates among Urban and Rural Youth



Regular physical activity (PA) is important for the healthy growth and development of children and youth. Public health initiatives aimed at improving levels of PA among youth have not had a substantial impact, with participation rates continuing to be below recommended targets. The most current data from the Canadian Fitness and Lifestyle Research Institute's (CFLRI) Canadian Physical Activity Levels Among Youth study (CANPLAY) indicate that only a very small proportion (6%) of children and youth (aged 5 to 17 years) participate in enough PA to meet national guidelines (60 minutes of moderate-to-vigorous activity daily).<sup>1</sup>

Towards the goal of identifying factors associated with PA participation, studies have found that physical activity behaviour is influenced by various psychological,

demographic, social and environmental factors. Of increasing interest is whether regional differences in participation (urban vs. rural areas) exist.<sup>2</sup> This edition of the Research File will aim to summarize the findings of a study by Loucaides and colleagues which explored differences in PA correlates between urban and rural Canadian adolescents.<sup>2</sup>

### Methods

A total of 2688 students consented to participating in a month long study in the fall of 2000. Participants (mean age was  $15.62 \pm 1.28$ ) were recruited from four schools in urban Ontario and four schools in rural central Alberta. Students completed an in-class survey measuring PA participation (i.e., frequency of participation in moderate-to-hard activity over the past week; and number of minutes spent in

these activities daily), while several other variables were included to assess potential correlates of PA (see [Table 1](#)).<sup>2</sup> Investigators identified significant relationships between correlates and PA expenditure, then followed with regression models.<sup>2</sup>

### Results

In this study, researchers found that urban and rural youth did not differ significantly in their level of PA. Results from the bivariate analyses showed the highest correlation between PA and interest in organized group activities and perceived athletic/physical ability among both urban and rural students.<sup>2</sup> Regional differences were noted,



mainly that household income was significantly correlated with PA among urban youth whereas hours spent doing homework and school grade average were significant correlates among rural youth.<sup>2</sup> Results from regression analyses showed a higher variance in PA among urban schools (43%) compared to rural schools (38%).<sup>2</sup>

Gender appeared as the sole significant predictor (among demographic variables) of PA for both urban and rural schools.<sup>2</sup> Several psychological variables (i.e., perceptions of athletic/PA ability, perceptions of health, self-efficacy, interest in organized activities and concerns about weight gain) significantly contributed to the model and explained the highest proportion of the variance (31%) in PA among urban schools.<sup>2</sup> Behavioural (i.e., transportation mode and use of recreation time) and social (i.e.: friends and family's physical activity) variables also contributed significantly to the model and explained 3% and 1% of the variance in PA behaviour.<sup>2</sup>

Similarly, among rural schools, psychological variables (i.e., perceptions of athletic/PA ability, self-efficacy, interest in organized/small-group activities) attributed to a high proportion of the variance in PA (29%). Behavioural variables (i.e., taking a physical education class, use of recreation time, and time spent in part-time work or doing homework) and social variables (i.e., friends and family's PA) also significantly contributed to the model and accounted for 4% and 2% of the variance in PA respectively.<sup>2</sup>

### Implication of findings

A number of variables were identified as being significant for PA among youth. Gender emerged as significant in both school locations, strengthening support for increased targeting of PA for girls.<sup>2</sup> That athletic/physical ability and interest in organized group activities were important predictors suggests a need for schools policies for providing physical education lessons in a group setting and/or through intramural sports.<sup>2</sup> Self-efficacy was another important psychological variable, indicating a need for the more intrapersonal interventions targeting positive cognitions.<sup>2</sup> Parents and friends continue to be strong influencers of PA among youth; this may be done through direct means (ex: transporting child to places where they can be active) or through indirect means (ex: watching their child participate in PA).<sup>2</sup> Use of recreation time was the sole behavioural variable significantly associated with PA across schools, signifying a need for promoting PA during the after-school period.<sup>2</sup> **Table 2** describes various discrepancies in correlates of PA across the school locations.<sup>2</sup>

Table 1. Outline of potential correlates of PA among youth

Domain	Variables
Demographic/biological	Gender, age, ethnicity, body mass index, household income
Psychological	Self-efficacy, perceived athletic/PA ability, perceived health, concerns about weight gain, desire to lose weight in next 12 months
Behavioural	Participation in physical education; participation in community sports; use of recreational time; mode of transportation to school; hours spent per day watching TV; hours spent per day doing homework; hours per week doing part-time work; school grade average; smoking in the last month
Social	Participation in PA among family and peers
Interest in activities	11 items (e.g., group/individual activities)

Table 2. Disparities in PA correlates among urban and rural youth

Correlates	Rural	Urban	Implications
Perceptions of health/concerns about weight		✓	-reinforce the health benefits of PA
Time spent doing homework/part-time work	✓		-promote active types of employment, or ways to be active in the workplace
Participation in PE	✓		-strengthening support of school policies for PE
Transportation mode		✓	-strengthening support of school policies for active transportation

### References:

- Canadian Fitness and Lifestyle Research Institute. Canadian Physical Activity Levels Among Youth Study (CANPLAY), Bulletin 5: How many steps is sufficient for children and youth to be healthy? 2012. Kids CANPLAY series. Available: [http://72.10.49.94/media/node/1239/files/CFLRI\\_CANPLAY%202011-12\\_B5\\_EN.pdf](http://72.10.49.94/media/node/1239/files/CFLRI_CANPLAY%202011-12_B5_EN.pdf) (accessed July 3, 2014)
- Loucaides CA, Plontnikoff RC, Bercovitz K. Differences in the Correlates of Physical Activity Between Urban and Rural Canadian Youth. Journal of School Health. 2007; 77(4):164-170.

## What have we learned?

Identifying correlates of PA is essential for promoting PA among youth. A number of psychological/biological, behavioural and social variables were significant across both urban and rural schools.<sup>2</sup>

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