

Testing a Motivational Model of Physical Education on Contextual Outcomes and Total Moderate to Vigorous Physical Activity of Middle School Students

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Abstract — Given the rising trend in obesity in children and youth, age-related decline in moderate- to- vigorous-intensity physical activity (MVPA) in several Western, African, and Asian countries in addition to limited evidence of behavioral, affective, cognitive outcomes in physical education, it is important to clarify the motivational processes in physical education classes behind total MVPA engagement. The present study examined the full sequence of the Hierarchical Model of Motivation in physical education including motivational climate, basic psychological needs, intrinsic motivation, contextual behavior, affect, cognition, total MVPA, and associated links to body mass index (BMI) and gender differences.

A cross-sectional data comprised self-reports and objective assessments of 770 middle school students ($M_{\text{age}} = 13.99 \pm .81$ years, 52% of girls) in North-East Finland. In order to test the associations between motivational climate, psychological needs, intrinsic motivation, cognition, behavior, affect, and total MVPA, a path model was implemented. Indirect effects between motivational climate and cognition, behavior, affect and total MVPA were tested by setting basic needs and intrinsic motivation as mediators into the model.

The findings showed that direct and indirect paths for girls and boys associated with different contextual outcomes and girls' indirect paths were not related with total MVPA. Precisely, task-involving climate mediated by physical competence and intrinsic motivation related to enjoyment, importance, and graded assessments within girls, whereas task-involving climate associated with enjoyment and importance via competence and autonomy, and total MVPA via autonomy, intrinsic motivation, and importance within boys. Physical education assessments appeared to be essential in motivating students to participate in greater total MVPA. BMI was negatively linked with competence and relatedness only among girls.

Although, the current and previous empirical findings supported task-involving teaching methods in physical education, in some cases, ego-involving climate should not be totally avoided. This may indicate that girls and boys perceive physical education classes in a different way. Therefore, both task- and ego-involving teaching practices can be useful ways of driving behavior in physical education classes.

Keywords — Achievement Goal Theory, assessment, enjoyment, Hierarchical Model of Motivation, physical activity, Self-determination Theory