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Physical activity, screen-based activities and their potential determinants

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Document Version

Publisher's PDF, also known as Version of record

Publication date:
2018

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Kopčáková, J. (2018). *Physical activity, screen-based activities and their potential determinants: Active living during adolescence*. [Thesis fully internal (DIV), University of Groningen]. University of Groningen.

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Summary

Healthy active living during adolescence supports optimal health and growth of the individual. Physical activity and screen-based activities are important aspects of the health behaviour of adolescents. A low level of physical activity and a high level of screen-based activities are highly prevalent among Slovak adolescents. However, both types of behaviour are not merely opposites of each other, i.e. at the same time adolescents can be physically active and still have a high rate of screen-based activities. Moreover, physical activity and screen-based activities in adolescence have been found to be strongly associated with a wide range of health problems, though to date only a few studies have explored this relationship. Therefore, the general aim of this thesis was to examine the relationships of adolescents' physical activity and screen-based activities, and the associations of these behaviours with potential determinants (e.g. body image, motives to physical activity, school environment, degree of urbanization, perceived activity-friendly environment). Additionally, this thesis explores the role of gender, age and socioeconomic status in these associations.

Chapter 1 provides information on the key theoretical constructs of this thesis – physical activity, screen-based behaviour – and on the associations of these behaviours with their potential determinants. At the end of the chapter, the theoretical background, the general aim of the study, the research questions and the structure of the further thesis are presented.

Chapter 2 provides a description of the five study samples used in this thesis. It also provides information on the design of the study and on the measures and statistical analyses used.

Chapter 3 focuses on the association of body image with physical activity of adolescents, and on whether gender modifies these associations. We found that adolescents with a negative body image engage in regular sufficient physical activity less often than others, and that boys are more likely to be sufficiently physically active. A poor body image among girls did not affect their physical activity, whereas poor body image among boys was associated with a lower likelihood of reaching the recommended level of moderate to vigorous physical activity.

Chapter 4 explores the connection between the motives for physical activity and the level of physical activity in adolescence and whether this connection differs between boys and girls. We found that associations between motives for physical activity (social motives, health motives, “good child” motives, achievement motives) and the level of physical

activity differed somewhat by gender. We found that “good child” motives and achievement motives were associated with the level of physical activity among both boys and girls. Health motives were associated with sufficient physical activity only among boys, and social motives only among girls.

Chapter 5 regards the test-retest reliability of the motives for undertaking the physical activity items from the HBSC questionnaire among adolescents, and whether this reliability differs by gender, age group and country. We found a moderate agreement for most of these motives in the whole sample and also if stratified by gender, age group and country. After dichotomisation we observed moderate test and retest correlation coefficients for almost all examined items, such as “to have fun”; “to be good at sports”; “to win”; “to see my friends”; “to get in good shape”; “to look good”; “to please my parents”; “to be cool”; “to control weight” and “it is exciting”. The only exceptions were three motives which had weak or trivial correlations.

Chapter 6 assesses whether the accessibility of sports facilities at school, active breaks and degree of urbanization are associated with physical activity and screen-based activities of adolescents, and whether these associations are modified by degree of urbanization. We found a significant association of physical activity of adolescents with schools having an area for skating or a tennis court and having active breaks. Furthermore, we found that adolescents in small and bigger towns were more likely to be engaged in screen-based activities than those living in villages. The association of physical activity and screen-based activities with accessibility of sports facilities at school and active breaks was not modified by the degree of urbanization.

Chapter 7 explores the association of the perception of activity-friendliness of the environment with physical activity and screen-based activities among adolescents. We found that if the environment was perceived as more activity-friendly it was significantly more likely that adolescents met the recommendations for physical activity in all four European countries studied: the Czech Republic, Slovakia, Poland and Germany. Furthermore, we found that if the environment was perceived as more activity-friendly it was significantly less likely that adolescents’ undertook excessive screen-based activities, in all four European countries studied.

Chapter 8 summarises and discusses the main findings in the context of the available knowledge. We found that adolescents reported relatively little physical activity and rather many screen-based activities. These behaviours were associated with potential determinants on several levels of the socio-ecological model. Regarding the intrapersonal level this regarded the gender-specific role of body image and motives for physical activity. Regarding the level of the perceived environment this we found

a positive contribution of perceiving the environment as activity-friendly. And regarding the level of the environmental setting of behaviour this regarded the degree of urbanization, the degree of access to some sports facilities and active breaks.

Moreover, Chapter 8 also explores the strengths and limitations of the study and the study's implications for practice and policy, as well as for further research. Our findings imply a need for better understanding of the potential determinants associated with physical activity and screen-based activities of adolescents. Understanding why adolescents are active or inactive can significantly contribute to the design and delivery of preventive interventions. Preventive strategies should involve multiple levels, such as intrapersonal characteristics, the perceived environment and the behaviour settings (especially the school setting). In addition, our findings indicate that the ecological model of active living provides a useful theoretical framework for research on determinants of physical activity and screen-based activities. Our findings further suggest that adolescents can be physically active and still sedentary at the same time and that activities among adolescents should use varying approaches so that adolescents invest in active living. By adequately addressing these relatively new challenges, much can be gained for adolescent public health.

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