

Dissertation: 14.6: Students' Physical Activity, Physical Education Enjoyment, and Motivational Determinants through A Three-Year School-Initiated Program (Gråstén)

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MEd **Arto Gråstén** defends his doctoral dissertation in Sport Pedagogy titled "Students' Physical Activity, Physical Education Enjoyment, and Motivational Determinants through A Three-Year School-Initiated Program". Opponent Professor **Yngvar Ommundsen** (Norwegian School of Sport Sciences, Oslo, Norway) and custos Professor **Jarmo Liukkonen** (University of Jyväskylä).

Patterns of physical activity in adulthood are often established during adolescence, making this an important period for promoting physical activity. To address this, the Sotkamo Physical Activity as Civil Skill Program was implemented to increase children's and youth' physical activity on a daily basis. The purpose of this study was to examine the effects of program on Grade 5 to 9 students' physical activity and enjoyment 2010-2013. Furthermore, the relationship between self-reported and objectively measured physical activity, the relationship between exercise motivation and physical education enjoyment, and the percentages of students who engaged in 60 minutes of moderate to vigorous physical activity on the daily basis were examined.

The program including task-involving climate and physical school environment treatment (extended break, access to sport facilities, equipment supply, and supporting task-involving motivational climate and perceived physical competence across regular physical education classes) was effective in order to prohibit declining levels of students' physical activity. The results showed that the levels of the experimental students' physical education enjoyment were higher than control students' levels across the program. In addition, elementary school boys self-reported having higher levels of moderate to vigorous physical activity compared to objective scores in spring 2013. The major cause of concern arising from the current findings was that secondary school students engaged in up to one third of their weekly moderate to vigorous physical activity during only two 45-minute physical education classes. Only 11% of girls and 19% of boys met the guidelines in the beginning of the program 2010. The percentages of physically active adolescents were considerably lower compared to the large study of WHO, in which 17% of Finnish 11 to 15 year-old girls and 28% of boys met the recommendation. However, the program increased the proportion of physically active students, the latest measurement revealed that 24% of girls and 33% of boys met the current guidelines.

Taken together, increased opportunities for school day physical activities have the potential to affect large number of students and are an efficient strategy for promot-

ing regular physical activity. To enhance students' physical activity engagement in physical education classes, the main objective should be increasing students' perceived physical competence and intrinsic motivation. In addition, schools could provide increased personalized and group activities during school days, for instance a daily extended break, access to sport facilities, and equipment. Many of these structural changes are inexpensive to implement. In the future, the biggest challenge is to sustain and increase students' physical activity and exercise motivation, especially in leisure time.

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Arto Gråstén graduated from Langinkoski High School, Kotka in 1995. He completed his master's degree in education (MEd) at the University of Lapland in spring 2002, majoring in class teacher education. After working for three years as an elementary school teacher in the municipality of Nurmijärvi, he started his studies of physical education pedagogy at the University of Jyväskylä in autumn 2005. After completing the physical and health education teacher qualification, he taught middle school boys' physical education in the city of Vantaa. Gråstén started his post-graduate studies in 2009 and worked as a researcher at the University of Jyväskylä 2011-2012. The dissertation was completed with the research grant allocated by Ministry of Education and Culture. Professor Jarmo Liukkonen and Docent Timo Jaakkola supervised the dissertation work.

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