



Physical Fitness, Dietary Habits and Substance Misuse: A Cross-Sectional Analysis of the Associations in 7,600 Swedish Adolescents

RESEARCH

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ABSTRACT

Introduction: Adolescence is a period of rapid physical, psychological and social changes and a time when habits are formed. This study aimed to investigate the correlation between physical fitness, alcohol consumption, tobacco consumption and dietary habits among adolescents according to the Swedish Physical power, Mental harmony and Social capacity profile (FMS profile).

Methods: Data were collected from Swedish high school students, 1st – 3rd grade (16–19 yrs), both genders, overall, 7,600 Swedish adolescents using the FMS profile, comprising physical tests and questionnaires concerning lifestyle factors (e.g. physical fitness, dietary habits, alcohol and tobacco use). Participants included in this study met the requirements of inclusion, which were having a complete set of data, e.g. had undergone all physical tests and answered all questionnaires.

Results: A total of 13% self-reported cigarette smoking, while 37% self-reported alcohol consumption. Adolescents who smoked were older (t-test = 9.09, $p < 0.001$), heavier (t-test = 4.58, $p < 0.001$) and had greater BMI (t-test = 3.96, $p < 0.001$). Adolescents who consumed alcohol were older (t-test = 8.78, $p < 0.001$), heavier (t-test = 4.03, $p < 0.001$) and taller (t-test = 3.77, $p < 0.001$). Significant differences were found for all fitness factors, with better mobility, strength and balance in adolescents who did not smoke compared to smokers (Mann Whitney Z test = 2.77, 7.13, 5.77, respectively; all $p < 0.001$). Regularity of meals and avoidance of sweets and cakes were less prevalent in adolescents who smoked (OR (95% CI): 0.63 (0.59–0.68), 0.71 (0.66–0.77), respectively).

Conclusion: Among Swedish adolescents, tobacco and alcohol use increase with age. However, physical fitness is consistently protective against tobacco consumption, and dietary habits are mostly protective against alcohol consumption. Physical fitness and low alcohol and tobacco consumption are possible health factors.

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