PUBLIC HEALTH 129 (2015) 237–243

Available online at www.sciencedirect.com

Public Health

journal homepage: www.elsevier.com/puhe

Original Research

Correlates of habitual physical activity and organized sports in German primary school children

S. Kobel*, S. Kettner, D. Kesztyüs, N. Erkelenz, C. Drenowatz, J.M. Steinacker

Ulm University, Division Sports and Rehabilitation Medicine, Ulm, Germany

ARTICLE INFO

Article history:
Received 23 October 2013
Received in revised form
1 December 2014
Accepted 1 December 2014
Available online 18 February 2015

Keywords:
Sports participation
Active lifestyle
Health promotion

ABSTRACT

Objectives: The increased prevalence of childhood obesity has also been attributed to low physical activity (PA) levels. Understanding factors affecting child PA levels is especially important considering the benefits PA offers to youth.

Study design: This study therefore examined different correlates affecting habitual PA and sports participation in primary school children.

Methods: Height and weight were measured during a school visit in 1714 children (7.1 ± .6 years). PA and behavioural correlates were assessed by parental questionnaire. The effect of various correlates on PA as well as participation in organized sports was assessed using logistic regression analysis.

Results: Significant correlates of PA and sports participation were engagement in sporting activities outside of clubs and children's weight status. Playing outdoors for more than 60 min/day was significant for PA, having well educated parents and being male. Participation in sports was influenced by children's media consumption, active travel to school and having active parents. No influence was found for migration, income, parental weight status and health consciousness.

Conclusion: In this study, a multiplicity of independent correlates of PA and sports participation, which require a broad approach to promote an active lifestyle, have been considered. Understanding these factors might support the development of effective health-promoting interventions.

© 2014 The Authors. Published by Elsevier Ltd on behalf of The Royal Society for Public Health. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/3.0/).

* *Corresponding author*. Ulm University, Division Sport- und Rehabilitationsmedizin, Frauensteige 6, Haus 58/33, D-89075 Ulm, Germany. Tel.: +49 731 500 45379; fax: +49 731 500 45390.
E-mail address: susanne.kobel@uni-ulm.de (S. Kobel).

http://dx.doi.org/10.1016/j.puhe.2014.12.002

0033-3506/© 2014 The Authors. Published by Elsevier Ltd on behalf of The Royal Society for Public Health. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/3.0/).

Introduction

The increasing prevalence of childhood obesity is a rising concern in Western countries[1] and has metabolic and genetics factors which have been attributed to a decrease in physical activity (PA) levels and increased energy intake.[2] A major long-term consequence of obesity in childhood is the risk of adult obesity and its associated comorbidities, such as hypertension, metabolic diseases and Type 2 diabetes.[3] Both comorbidities and the risk of adult obesity have been well documented.[4] Increasing PA is one important factor in addressing the problems associated with growing childhood obesity. PA is not only important for weight management but also contributes to healthy growth and overall development in childhood.[5] The World Health Organization (WHO) identified insufficient physical activity as one of the four leading modifiable risk factors for non-communicable disease and attributes annually around 3.2 million deaths to physical inactivity.[6] Further, PA is beneficial for some lipid measurements, musculoskeletal health and cardiovascular health.[7] One way to increase PA levels is regular participation in organized sports, especially in Germany where a well-established framework of sports clubs is in place and roughly 4.5 million 7- to 14-year old children regularly engage in organized sports.[8] Understanding factors which influence childhood PA and/or sports engagement is especially important considering the multitude of benefits PA offers to youth.[9]

Understanding correlates of PA and sport will also support the development of effective interventions to promote an active lifestyle, which is thought to facilitate a carryover of healthy habits into adulthood.[10] There have been several studies and reviews on correlates of youth PA[11–15] highlighting a relationship of childhood PA and gender, body mass index, parental PA, school sports participation, time spent outside, family influences and socio-economic status.[16] However, most of the previous research focussed on PA only and was conducted in North America (US and Canada), UK, Scandinavia and Australia, which have a different school system, as well as different structures regarding sports participation. There is a lack of research on primary school children in Germany, who spend significantly less time at school and therefore, have to organize their PA in the afternoons and evenings themselves. The aim of the present study was to identify factors associated with children's PA and sports participation in Germany.

Methods

Participants

Baseline measurements of 1714 primary school children (7.1 ± .6 years; 50% male) who participate in a school-based health-promotion programme[17,18] in south-west Germany were used for analysis. Children were randomly recruited from participating schools; data collection took place prior to any intervention. Parents written, informed consent as well as verbal child assent were obtained prior to data collection. The study was approved by the Ministry of Culture and Education as well as the University's ethics committee and is in accordance with the declaration of Helsinki.

Anthropometric measures

Children's height (cm) and body mass (kg) were taken in vest, shorts and bare feet by trained technicians during a school visit according to standard procedures. Standing height was measured to the nearest .1cm using a stadiometer (Seca 213, Seca Weighing and Measuring Systems, Hamburg, Germany) and body mass was measured with electronic scales (Seca 862, Seca Weighing and Measuring Systems, Hamburg, Germany) to the nearest .05kg. Subsequently body mass index (BMI) was calculated and converted to BMI percentiles (BMIPCT) using German reference data.[19] Overweight and obesity was determined above 90th and 97th percentile (BMIPCT), respectively. Parental weight status (BMI) was calculated based on self-reported height and weight.

Physical activity and sports participation

Children's weekly participation in habitual PA and organized sports was assessed via a standardized questionnaire, completed by their parents since most first grade children were unable write or read at the time of data collection. Parents were asked to specify the number of times and minutes per week their child engages regularly in organized sports and the number of days per week their child engages in more than 60 min of moderate to vigorous PA (MVPA). These questions were based on the KiGGS survey, which assessed health behaviour in 18000 German children and adolescents[20]; an additional validation against accelerometer data in a subsample showed that this is a valid and reliable instrument.[21]

Behavioural correlates

Behavioural correlates derived from parental responses were divided in child- and family/environmental-related correlates. Child-related correlates include gender, daily time spent playing outdoors, engagement in sporting activities outside of sports clubs, active travel to school, children's weight status, their screen media consumption and migration status. Family-related correlates are based on regular parental PA, parental health consciousness, maternal and paternal weight status, and education level, their net household income, size of their flat or house, access to a garden as well as whether the child is raized by a single parent.

According to German reference data,[19] children's body weight was dichotomized by overweight/obesity (above the 90th BMI percentile) and normal weight/underweight (90th BMI percentile and below). Based on recommendations of the American Academy of Pediatrics,[22] screen media consumption was dichotomized by more or less than 120 min daily. Using median split, time playing outdoors was dichotomized by more or less than 60 min. Active commute to school was dichotomized by at least three days/week (i.e. on most days of a five day week); sporting activities outside of organized sports by more or less than 60 min weekly (median split). Parental PA and health consciousness assessed in two questions ('are you physically active?': yes/no, and 'do you rate yourself as health-

Download English Version:

https://daneshyari.com/en/article/10516461

Download Persian Version:

https://daneshyari.com/article/10516461

Daneshyari.com