Physical activity and its correlates in children: a cross-sectional study (the GINIplus & LISAplus studies).

Abstract:
Physical inactivity among children is an increasing problem that adversely affects children’s health. A better understanding of factors which affect physical activity (PA) will help create effective interventions aimed at raising the activity levels of children. This cross-sectional study examined the associations of PA with individual (biological, social, behavioral, psychological) and environmental (East vs. West Germany, rural vs. urban regions) characteristics in children. Information on PA and potential correlates was collected from 1843 girls and 1997 boys using questionnaires during the 10-year follow-up of two prospective birth cohort studies (GINIplus and LISAplus). Study regions represent urban and rural sites as well as East and West of Germany. Logistic regression modeling was applied to examine cross-sectional associations between individual as well as environmental factors and PA levels. Five of fourteen variables were significantly associated with PA. Among children aged 10, girls tended to be less active than boys, especially with respect to vigorous PA (OR = 0.72 for summer). Children who were not a member of a sports club showed a substantially reduced amount of PA in winter (OR = 0.15). Rural environments promote moderate PA,
particularly in winter (OR = 1.88), whereas an increased time outdoors primarily promotes moderate PA in summer (OR = 12.41). Children with abnormal emotional symptoms exhibited reduced physical activity, particularly in winter (OR = 0.60). BMI, puberty, parental BMI, parental education, household income, siblings, TV/PC consumption, and method of arriving school, were not associated with PA. When considering correlates of PA from several domains simultaneously, only few factors (sex, sports club membership, physical environment, time outdoors, and emotional symptoms) appear to be relevant. Although the causality needs to be ascertained in longitudinal studies, variables which cannot be modified should be used to identify risk groups while modifiable variables, such as sports club activities, may be addressed in intervention programs.