

Gender Differences in Objectively Assessed Physical Activity among Urban 15-Year-Olds

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Abstract : Background and aim: Physical inactivity has been linked with increased morbidity and premature mortality and adolescence has been recognised as the critical period for a decline in physical activity (PA) level. In order to properly direct interventions aimed at increasing PA, high-risk groups of individuals should be identified. Therefore, the aim of this study is to describe gender differences in: a) PA level; b) weekly PA patterns. Methods: This investigation is a part of the CRO-PALS study which is an on-going longitudinal study conducted in a representative sample of urban youth in Zagreb (Croatia). CRO-PALS involves 903 adolescents and for the purpose of this study data from a subgroup of 190 participants with information on objective PA level were analysed (116 girls; mean age [SD]=15.6[0.3] years). Duration of moderate and vigorous PA was measured during 5 consecutive by a multiple-sensor physical activity monitor (SenseWear Armband, BodyMedia inc., Pittsburgh, USA). Gender differences in PA level were evaluated using independent samples t-test. Differences in school week and weekend levels of activity were assessed using mixed ANOVA with gender as between-subjects factor. The amount of vigorous PA had to be log-transformed to achieve normality in the distribution. Results: Boys were more active than girls. Duration of moderate-to-vigorous PA averaged 111±44 min/day in boys and 80±38 min/day in girls (mean difference=31 min/day, 95%CI=20-43 min/day). Vigorous PA was 2.5 times higher in boys compared to girls (95%CI=1.9-3.5). Participants were more active during school days than on weekends. The magnitude of the difference in moderate-to-vigorous PA was similar in both gender (p value for time*gender interaction = 0.79) and averaged 19 min/day (95%CI=11-27 min/day). Similarly, vigorous PA was 36% lower on weekends compared with school days (95%CI=22-46%) with no gender difference (p value for time*gender interaction = 0.52). Conclusion: PA level was higher in boys than in girls throughout the week. Still, in both boys and girls, the amount of PA reduced markedly on weekends compared with school days.

Keywords : adolescence, multiple-sensor physical activity monitor, physical activity level, weekly physical activity pattern

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