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Gender and Grade Differences in Knowledge and Behaviors Related to Active Living for Adolescents

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Abstract

The purpose of this study was to examine differences by gender and grade in middle school students' physical activity and fitness (PAF) knowledge, physical activity, and sedentary behavior (SB). The study took place at one middle school located in the Southeastern region of the United States. Boys ($n = 136$) and girls ($n = 166$) in 6th ($n = 129$), 7th ($n = 96$) and 8th ($n = 77$) completed a PE Metrics written test to assess PAF knowledge. They ($N = 312$) also completed the validated Youth Activity Profile to report physical activity at school (PAS), physical activity at home (PAH), and SB. Two-way (gender by grade) multivariate analysis of variances (MANOVA) followed by Bonferroni post-hoc multiple comparison analysis were conducted. Box's M test of covariance matrices showed no statistical violation ($M = 37.78, F = .73, p > .05$). The two-way MANOVA showed significant gender (Wilks's $\lambda = .94, F = 4.40, p < .01, \eta_p^2 = .06$) and grade main effects (Wilks's $\lambda = .89, F = 4.20, p < .01, \eta_p^2 = .05$). No significant gender by grade interaction effect was detected ($p > .05$). Subsequent tests of between subjects effect located the significant gender difference in PAS favoring boys ($F = 9.3, p < .01, \eta_p^2 = .03$). Boys and girls showed no significant difference on PAF knowledge, PAH, and SB. Significant grade differences were observed for PAS ($F = 8.57, p < .01, \eta_p^2 = .06$), PAH ($F = 8.18, p < .01, \eta_p^2 = .05$), and SB ($F = 4.61, p = .01, \eta_p^2 = .03$). Sixth grade students showed significantly higher levels of PAS and PAH than 7th and 8th grade students ($p < .05$ or $< .01$). Sixth grade students further showed significantly lower SB than 7th grade students ($p < .05$). This study found boys to be more physically active during school hours than girls, and students in lower grades to be more active than higher grade students. Future school-based interventions should take into account gender and grade-based differences.

Keywords: fitness knowledge, physical activity, gender difference, grade level