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Impact of School-Based Gymnastic Program on Skill-Related Fitness in Early Adolescent Students

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Abstract : The aim of this study was to determine the effects of gymnastics program in school on skill-related fitness in early adolescent students. The study involved 58 adolescent students (12.82±0.54 years; Height 156.81±8.16 cm; 53.46±12.31 kg) from primary school divided into two groups, following the randomization. The gymnastic group was involved in a 12 week of gymnastics classes, while the control group only participated in usual PE classes which consisted of multi-sport activities. The variables were selected within the several fitness batteries, measuring coordination (polygon backwards), upper and lower body strength standing long jump and medicine ball throw), speed (20 m sprint) and agility (4x10 test). Pre-test to post-test values showed significant improvements in all tested variables ($p<0.05$), except for the 4x10m test, where there were no significant improvements in neither of the groups ($p>0.05$). Significant interactions of time by group were observed for coordination, sprint speed, standing long jump and medicine ball throw ($p<0.05$). The results showed significant increase in skill-related fitness of the participants in the gymnastic group compared to the control group. Therefore, participation in gymnastics must be recommended as a positive foundational activity for school-aged children, from early childhood to adulthood. Additionally, the results can provide useful information in optimizing the training loads of pupils involved in gymnastic training throughout PE classes.

Keywords : effects, PE classes, physical fitness, training
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