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Analysis of gender-specific influence on physical fitness in students

Alexander ISAEV ¹ ✉, Vladimir ZALYAPIN ¹, Vadim ERLIKH ¹, Ruslan GAINULLIN ²

¹ Research Center for Sport Science, Institute of Sports, Tourism and Service, South Ural State University, Chelyabinsk, Russia; ² Bashkir State Medical University, Ufa, Russia

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BACKGROUND: The review of literature gives an idea of importance of body sensing and gender-specific features in physical adaptation and competence, fitness assessment, and health-related targets of students engaged and not engaged in sports. The activity patterns change with age. An early and long-time intervention should be compensated by the decrease of physical activity in adolescence and adulthood taking into account gender specifics. The objective of the research was to reveal possible gender-related interactions between the different groups of various physical parameters and to analyze the influence of gender differences on morphofunctional indicators and physical fitness indicators.

METHODS: The research involved the comparative analysis of background data of the morphofunctional state and physical fitness in first-year students (boys and girls). Thirty-two girls and 23 boys without obvious health problems or limitations were recruited as participants and started the physical conditioning in a group. The group had three training sessions per week in accordance with the university physical education program and two more sessions dedicated to the chosen sport. The conditioning was based on the method for developing aerobic local-regional muscle endurance.

RESULTS: The significant differences were observed between running and dynamometer test results in boys and girls, and boys' values were higher. Median value of leaning rest indicated the higher levels in girls. The gender-specific differences were found for the whole set of the morphofunctional indicators (the only exception was Skibinski Index).

CONCLUSIONS: The values of orthostatic test results and Skibinski Index suggest the significant variability within the study sample. Along with that, variability of these indicators is much higher in girls than in boys. Comparative analysis of the physical fitness indicators in boys and girls shows the significant difference in their levels. Generally, boys have higher levels of physical activity and overall endurance than girls.

KEY WORDS: Sex differences - Data interpretation, statistical - Physical fitness



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