

Kinesthetic sense, psychomotor ability developed using volleyball-specific methods

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Abstract

Background. In the current context of medical performance, we consider the development of kinesthetic sense in medical students an educational priority of maximum importance, to achieve their future professional performance, in terms of specialization in general surgery and beyond. Therefore, the development of kinesthetic sense has to start from the first year of study, and continue the following year, reaching the main educational concept within the university of physical education and sport.

Objectives. We consider that by creating and implementing a specific adequate system of action in playing volleyball for the development of kinesthetic sense, we can successfully develop these psychomotor abilities of medical students.

Methods. The research was performed in two groups of the Medical Faculty, 1st year of study, homogeneous in terms of age (19-20 years), sex (female), and general motor skills. In the experimental group 1 (n=44), a special program for the development of kinesthetic sense with volleyball-specific methods was applied, and group 2 (n=51) followed a traditional physical training program, in which other games than volleyball were introduced. The results were processed using SPSS 17.0 mixed ANOVA by calculating means, dispersions and the comparison z test for independent samples greater than 30.

Results. Data on the kinesthetic sense parameters, determined in the experimental group, supported the hypothesis that through the application of a special program for the development of psychomotor skills with volleyball-specific methods, the group subjected to the experiment stood out significantly from the control group that followed traditional teaching activities.

Conclusions. The study on the growth of parameters of kinesthetic sense in the experimental group, compared with the control group, revealed that certain elements and techniques specific to the game of volleyball can be an effective means of developing these psychomotor skills (kinesthetic sense) in relation to using specifically other branches of sports (basketball, handball, football etc). This conclusion was based on the superior results achieved in the post-test compared to the pre-test for group 1, results that were confirmed by the z value of the post-test comparison, which was 1.97, greater than 1.96, and the null hypothesis was refuted and the specific hypothesis was accepted, considering that the difference between the two means was statistically significant at the significance threshold $p < 0.05$. In addition, the test was calculated and compared to the post-test value z between the two groups, which was 2.75, greater than 1.96, also evidencing a statistically significant difference between the two means at the significance threshold $p < 0.05$.

Key words: kinesthetic sense, volleyball, medical students.