

Evaluation of the effects of specific karate exercises during multilateral training in children of primary school

Bruno Magnani¹, Manuel Rizzardini², Tiziano Gemelli², Gabriella Cusella De Angelis¹

¹Dept. of Public Health, Human Anatomy; Lab. of Functional Anatomy & Exercise (FAE), University of Pavia, Pavia, Italy - ²Degree course of physical education, University of Pavia, Pavia, Italy

The early specialization in the development of sport skills is a point of discussion among researchers, even if the general trend is to encourage multilateral activities in children. The aim of this study was to evaluate the effect of specific karate exercises added during a program of multilateral exercises in a group of school age children. A sample of 82 primary school children (39 females, 6.4 ± 0.3 y and 43 males, 6.3 ± 0.3 y) were randomly assigned to two groups: Multilateral (MG) and Special (SG). MG was composed of 19 females (MGf, 6.4 ± 0.3 y) and 22 males (MGm, 6.3 ± 0.3 y), while SG was composed of 20 females (SGf, 6.3 ± 0.3 y) and 21 males (SGm, 6.4 ± 0.3 y). During the training period of eight weeks, the MG group has played only multilateral activities, while the SG group has also done specific exercises of Karate. At the end of the training period both groups were subjected to some physical evaluation test and the results was statistically analyzed (ANOVA). Although both groups (Mg and SG) have improved significantly ($p < 0.05$) compared to the initial stage, the comparison between the two groups (MG vs SG) has not revealed significant differences in relation to the considered motor skills (speed, agility, strength, coordination), with the exception of the ability of static balance, in which the SG group showed a significant improvement compared to the MG group ($p = 0.019$). In particular, the improvement appears to be due mainly to the female component (SGf vs MGf: $p = 0.012$; SGm vs MGm $p = 0.20$). The fact that the improvement was mainly dependent on the female group deserves future investigations. The results seem to confirm the fact that the multilateral activities would be sufficient to improve motor skills in primary school children, although some neuromotor abilities could be improved through more specific exercises without creating particular damage.

References

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Keywords

Multilateral training; early specialization; primary school children; Karate exercises.