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Functional Training Approach for Children Tennis Players

Suat Yıldız, Salih Pınar, Ertuğrul Gelen

Marmara University, School of Physical Education and Sports, İstanbul

Objective: To investigate the effects of functional training model on athletic performance of children.

Methods: The study included 28 children tennis players (mean age: 9.6±0.7, height: 134.1±6.8, weight: 31.3±4.1, fitness age: 3.1±1.1) who had 80% or more dominant side on lateralization test and functional movement screening (FMS) score below 75%. 10 subjects included in functional training group (FTG), 10 subjects included in the traditional training group (TTG), and 8 subjects included in the control group (CG). Training program was three non-consecutive days per week in a total of 8 weeks. CG application was implemented by all participants. FTG performed the functional training model and TTG had traditional training model additionally. Flexibility, vertical jump, speed, agility, balance and FMS tests were conducted before the training program and at the end of week-4 and week-8.

Results: There was no difference in performance measurements between CG, TTG and FTG before season ($p>0.05$), but the difference in mid-season and end of season was significant ($p<0.01$). A significant decrease in FMS score was found ($p<0.01$) in CG while no difference was apparent in other parameters ($p>0.05$). In TTG, FMS score significantly decreased ($p<0.01$), dynamic right balance ($p<0.01$) and dynamic left balance ($p<0.05$) increased while no statistically significant difference was found in other parameters ($p>0.05$). In FTG, all parameters improved and differences were statistically significant ($p\leq0.001$).

Conclusion: Functional training model appears to be a more effective work out than a model based on the traditional training in terms of increasing athletic performance.

Key words: Athletic performance, FMS, functional training, prepubertal, tennis