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THE EFFECT OF CORE STABILITY TRAINING ON SPORTS FUNCTIONAL PERFORMANCES AND DYNAMIC BALANCE AMONG HEALTHY UNDERGRADUATE COLLEGE STUDENTS: A RANDOMIZED CONTROLLED STUDY

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Abstract

Background and objectives: Evidences on the impact of Core Stability Training (CST) on Sports Functional Performances (SFP) have demonstrated some positive correlation between them in few sports, however evidences lack to prove causal relationship between them, especially among normal subjects. This study attempts to investigate the effect of 'CST' on 'SFP' and Dynamic Balance among healthy undergraduate college students. **Methods:** 50 Healthy undergraduate college students were selected after initial screening process. They were randomly allocated to either core stability Training Group (TG) or Control Group (CG). Subjects in TG underwent 8-weeks of core stability training, whereas the subjects in CG were given no intervention and asked to carry out their usual activities. All the subjects underwent a pre and post intervention measurements for their level of sports functional performances such as agility running, distance running, ball throwing, vertical jumping, which were measured using 'T-test', '40-Yard dash test', 'Medicine ball throw test' 'Vertical jump height test' respectively and dynamic balance was measured using YBT Functional Goniometer. **Results:** Immediately after the 8-weeks of core stability training, sports functional performances such as ability to T- agility running ($p=0.022$), 40-Yard running ($p=0.006$), vertical jump height ($p=0.030$), have improved significantly in Training Group compared to Control Group, except medicine ball throw ($p=0.348$) and dynamic balance ($p=0.200$). **Conclusion:** 8-weeks of core stability training in healthy undergraduate college students has resulted in improved lower limb sports functional performances. This causal relationship can provide reasonable support in recommending core stability trainings in sports performance enhancement training programmes for normal subjects.

Keywords: Core Stability Training, Sports Functional Performances, Y Balance Test, Undergraduate College Students.