

Comparative Analysis of Effectiveness of Conventional Proprioceptive Training and Multistation Proprioceptive Training on Vertical Jump Performance in Indian Basketball Players

Gaurav¹, S., Pooja², A., Shishir³, N., Tanvi⁴, A.

¹Consultant Physiotherapist, Institute of Brain and Spine, Sunflag Hospital. Faridabad, Haryana

²Assistant professor, Manav Rachna International University. Faridabad, Haryana

³Assistant professor, Manav Rachna International University, Faridabad, Haryana

⁴Assistant professor, Santosh Medical College. Ghaziabad

Abstract

The purpose of the study is to investigate whether conventional (wobble board) proprioceptive training or multi-station proprioceptive training is an effective way to improve vertical jump performance. The research study included 30 basketball players divided into the two groups, Group A (n = 15) and Group B (n = 15). The group A underwent the wobble board proprioceptive training program lasting for four weeks. The group B was administered the multi-station proprioceptive training program lasting for four weeks. Both the training programs consisted of one-leg and double-leg static and dynamic balance drills. The demands and duration of those exercises increased progressively. The vertical jump height was estimated by Sergeant Jump Test at the beginning, after second week and at the end of the experiment. The results of this study indicate that Multi-station training showed greater improvements as compared to the conventional balance training and the results were significant at $p < 0.01$. Multi-station training consisted of gradually progressive activities on exercise mats, wobble boards, mini trampoline, theraband and walking on uneven surface while the conventional training consisted of training on wobble boards.

KEY WORDS: Proprioceptive Training, Multi-Station Proprioceptive Training, Wobble Boards, Theraband

Introduction

Sports today is becoming increasingly scientific and elite athletes rely as much on technique as on training. With the consequent raising of the bar and narrower winning margins, maximizing performance while avoiding injury requires continuous physiological monitoring of athletes during both training and competitions. According to *Matavulj et al (2001)*, importance of jumping performance in various kinesiology related fields is caused by several reasons. First, jump height per se

is important for success in different sport games and other athletic competitions. Second, different kinds of vertical jump served as a very popular model for studying various biomechanical and neurophysiological phenomena. Finally, it is widely accepted that the jump height represents a good predictor of muscle power and, therefore, various kinds of vertical jumps have been often employed as standard tests of movement performance *Matavulj et al (2001)*.