BOSUBALL TRAINING AND ITS IMPACT TOWARDS PHYSICAL VARIABLES OF HANDBALL PLAYERS

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KEYWORDS

Bosuball training, Speed, Agility, Balance.

ABSTRACT

To achieve the purpose of this study the investigators selected thirty handball players from Bengaluru, India and their age ranged from 18 to 25 years. Training occurred three times per week with at least one day of rest between sessions for twelve weeks. A total of 30 handball players were enlisted and divided into two groups: experiment (15) and control (15). The players in the experiment group participated in 12-week training sessions, while the players in the control group did not get any treatment. Speed was assessed by 50 metre dash, agility was assessed by 'T' agility run test and balance was assessed by stork stand. The test items were carefully administered with skillfull hands and proper precautions were given. Single group design was used in this study. Dependent 't' test was computed to find out the difference between initial and final means. The study found that bosuball training is a successful strategy for developing speed, agility and balance with handball players.

1. Introduction

A bosu ball is a rubber hemisphere that has been inflated and secured to a rigid platform. The tool is commonly used for balance training, but it is also thought to help build muscle and strength. In essence, a bosu ball is a semi-sphere with a rubber bouncy ball top and a flat bottom. Exercises that can be performed on both sides are referred to as "both sides up" [Nevin, 2013]. When the dome side is facing up, the device remains stable, but the bosu ball produces an unstable surface. This stable/unstable combination enables a wide range of users, including elite athletes, the elderly, the young, and those who are injured. When the dome is facing up, the device can be used for sports drills and aerobic exercises. The device can be flipped so that the platform is facing upwards. Although the device can be used for other forms of exercise, it is very unstable in this position [Neeraj et al. 2014]. It is also known as the "blue half-ball" because it looks like a stability ball that has been cut in two. The creators now prefer the acronym "Both Sides Utilised" During a workout, the bosu ball can help strengthen the core because it takes more effort to balance than a stationary surface. This could lead to an increase in the number of calories burned. Turning the ball flat side up can help you become more balanced. Gaining stability and balance is important for musculoskeletal health in many ways and can help avoid injury [Demir, 2019]. The bosu ball works best when used with core exercises and body weight alone. According to studies, performing sit-ups on a bosu ball results in a slightly higher level of core involvement than performing them on a floor or bench [Abdus et a. 2024].

The three core athletic skills of running, jumping, and throwing are perfectly combined in handball. As a result, it is not only a sport that is solely competitive but also one that many people can participate in for training and health reasons. The player needs to be able to start fast, run steadily, deceive his opponent, pick up the ball or catch it in the air quickly, pass the ball to teammates with accuracy, and perform a variety of throws. In other words, his arms, legs, and body must all be trained in harmony [Aldijana et al. 2014]. As the name of the game suggests, hands play the most important role; hands being naturally the deftest members of the body, the growing popularity of Handball is easily explained. Many kinds of throws to score a goal are possible. The Handball player is inspired to use his hands as a means of carrying out his ideas. Of course the game is also faster than other ball games [Barbara, 2011].

2. Methodology

To achieve the purpose of this study the investigators selected thirty handball players from Bengaluru, India and their age ranged from 18 to 25 years. Training occurred three times per week with at least one day of rest between sessions for twelve weeks. A total of 30 handball players were enlisted and divided into two groups: experiment (15) and control (15). The players in the experiment group participated in 12-week training sessions, while the players in the control group did not get any treatment. Speed was assessed by 50 metre dash, agility was assessed by 'T' agility run test and balance was assessed by stork stand. The test items were carefully administered with skillfull hands and proper precautions were given. Single group design was used in this study. Dependent 't' test was computed to find out the difference between initial and final means.

3. Results

The results were presented in the following tables,

Table 1. Significance of mean gains & losses between pre and post test scores on selected variables of bosuball training group

S.No	Variables	Pre-Test Mean	Post-Test Mean	Mean difference	Std. Dev (±)	σ DM	't' Ratio
1	Speed	7.45	7.12	0.33	0.44	0.22	7.27*
2	Agility	10.23	9.75	0.48	0.61	0.42	4.81*
3	Balance	42.34	45.11	2.77	1.12	0.64	5.86*

An examination of table-1 indicates that the obtained 't' ratios were 7.27, 4.81 and 5.86 for speed, agility and balance respectively. The obtained 't' ratios on selected variables were found to be greater than the required table value of 2.14 at 0.05 level of significance for 14 degrees of freedom. So it was found to be significant. The results of this study showed that statistically significant and explained its effects positively.

Figure 1. Shows the pre and post test mean scores on selected variables of bosuball training

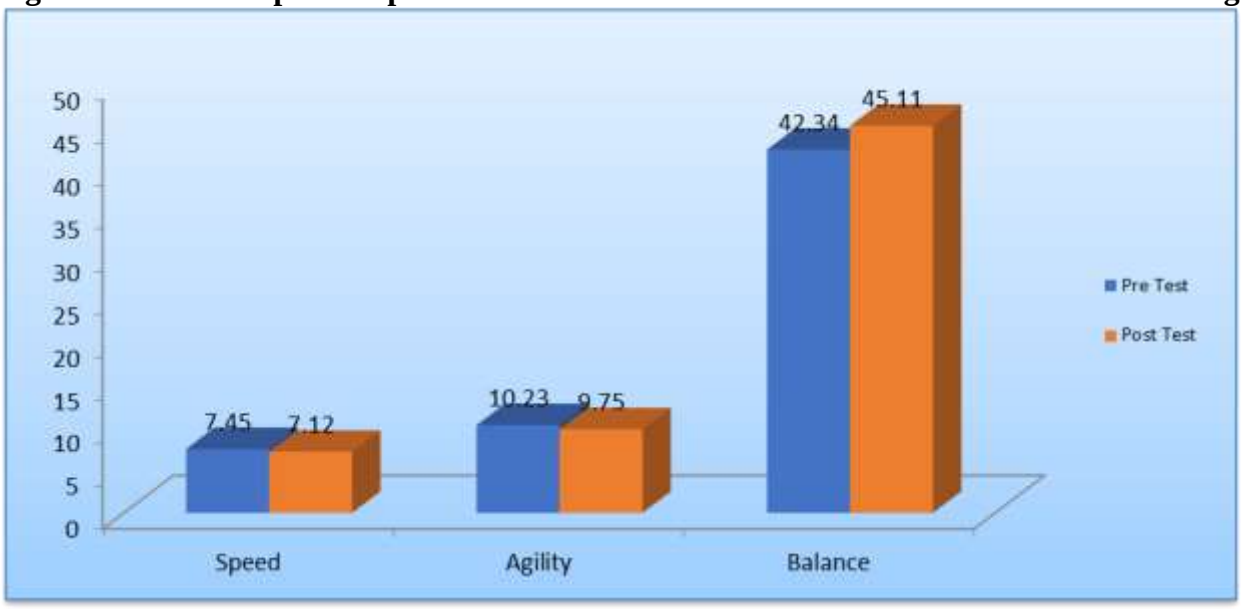
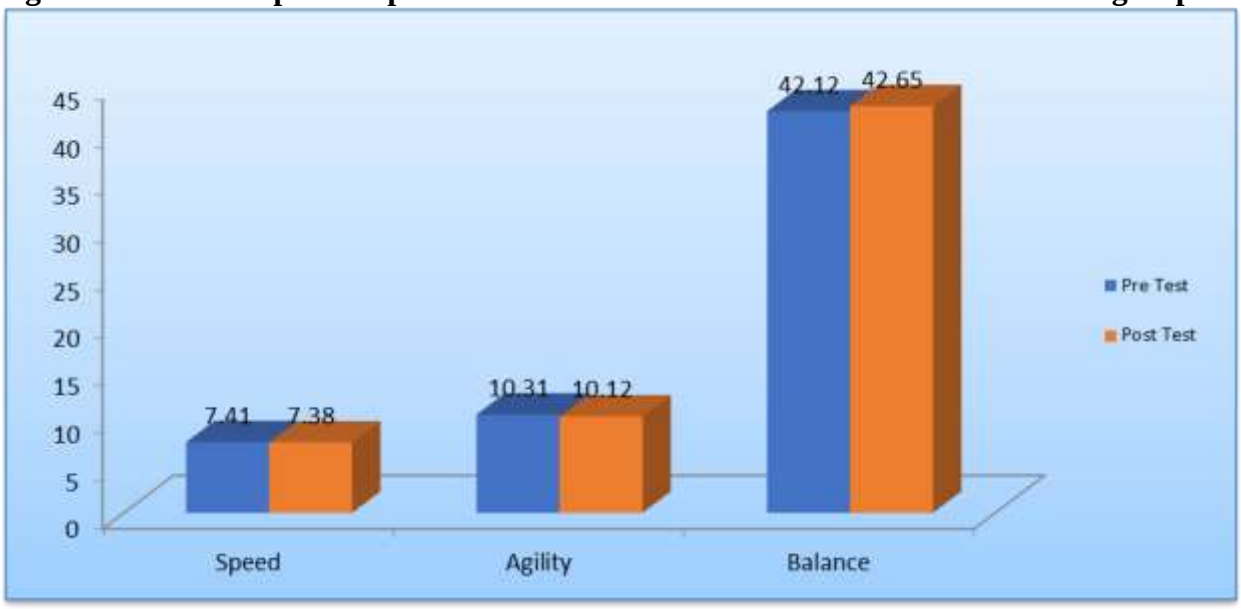


Table 2. Significance of mean gains & losses between pre and post test scores on selected variables of control group

S.No	Variables	Pre-Test Mean	Post-Test Mean	Mean difference	Std. Dev (±)	σ DM	't' Ratio
1	Speed	7.41	7.38	0.03	0.31	0.16	1.45
2	Agility	10.31	10.12	0.19	0.42	0.22	0.67
3	Balance	42.12	42.65	0.53	1.34	0.84	1.22

An examination of table-1 indicates that the obtained 't' ratios were 1.45, 0.67 and 1.22 for speed, agility and balance respectively. The obtained 't' ratios on selected variables were found to be lesser than the required table value of 2.14 at 0.05 level of significance for 14 degrees of freedom. So it was found to be insignificant.

Figure 2. Shows the pre and post test mean scores on selected variables of control group



4. Discussion on Findings

When it comes to physical attributes like speed, agility, and balance. It was discovered that the experimental group's pre- and post-test scores were noticeably better than the control group's. Consistent training makes this possible, but it can also abruptly alter the physical variables of handball players. The study's findings unequivocally demonstrate that some physical variables are greatly affected. Therefore, in light of it, the previously established hypothesis was accepted.

5. Conclusion and Future Scope

According to the study, bosuball training helps handball players improve their speed, agility, and balance over the long run. There were no relative effects observed in the control group. Modern coaching and training methods can improve players' performance, sharpen their abilities, and promote the sport.

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