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Influence of Isotonic Training on Selected Skill Performance Variables among Women Football Players

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Abstract

The purpose of the study was to find out the influence of isotonic training on selected skill performance variables among football players. It was hypothesized that there would be significant differences on selected skill performance variables due to the effect of isotonic training among football players. For the present study the 30 male football players from Annamalai University, Chidambaram, Tamilnadu were selected at random and their age ranged from 18 to 25 years. For the present study pre test – post test random group design which consists of control group and experimental group was used. The subjects were randomly assigned to two equal groups of fifteen each and named as Group 'A' and Group 'B'. Group 'A' underwent isotonic training and Group 'B' has not undergone any training. The data was collected before and after twelve weeks of training. The data was analyzed by applying dependent 't' test. The level of significance was set at 0.05. The isotonic training had positive influence on shooting and dribbling among football players.

Keywords: Isotonic Training, Skill performance variables, Football.

Introduction

Isotonic muscular contractions have a concentric phase, in which we lift the weight and the muscle shortens, and an eccentric phase, in which we slowly lower the weight and the muscle lengthens under tension. Isotonic involve a constant external resistance, like gravity, barbells, or dumbbells. Although the resistance is always the same, the force to move that resistance varies with the joint angle as the weight is lifted and lowered. Depending on the exercise, an isotonic movement can require more force to lift the weight at the end of the movement (squat), the beginning of the movement (dead lift), or the middle of the movement (biceps curl). The lifter also controls the speed of the movement. These components of isotonic exercise mimic our movements in life and sports, so doing isotonic exercises can be very functional. The isotonic exercises simulate life and sports activities, they are easy to do, and they don't require special equipment or a gym membership (Carl & Will, 2004).

Methodology

The purpose of the study was to find out the influence of isotonic training on selected skill performance variables among football players. It was hypothesized that there would be significant differences on selected skill performance variables due to the effect of isotonic training among football players. For the present study the 30 male football players from Annamalai University, Chidambaram, Tamilnadu were selected at random and their age ranged from 18 to 25 years. For the present study pre test – post test random group design which consists of control group and experimental group was used. The subjects were randomly assigned to two equal groups of fifteen each and named as Group 'A' and Group 'B'. Group 'A' underwent isotonic training and Group 'B' has not undergone any training. The data was collected before and after twelve weeks of training. The data was analyzed by applying dependent 't' test. The level of significance was set at 0.05.

Table 1. *Variables and test*

S.No	Variables	Tests
1	Shooting	Mor-Christian Soccer Test
2	Dribbling	

Results

The findings pertaining to analysis of dependent 't' test between experimental group and control group on selected skill performance variables among football players for pre-post test respectively have been presented in table 2 to 3.

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Table 2. *Significance of mean gains & losses between pre and post test scores on selected variables of isotonic training group (ITG)*

S.No	Variables	Pre-Test Mean	Post-Test Mean	Mean difference	Std. Dev (±)	σ DM	't' Ratio
1	Shooting	115.53	121.00	5.46	2.87	0.74	7.36*
2	Dribbling	8.64	7.76	0.87	0.21	0.05	15.49*

* Significant at 0.05 level

Table 2 shows the obtained 't' ratios for pre and post test mean difference in the selected variable of shooting (7.36) and dribbling (15.49). The obtained ratios when compared with the table value of 2.14 of the degrees of freedom (1, 14) it was found to be statistically significant at 0.05 level of confidence. It was observed that the mean gain and losses made from pre to post test were significantly improved in skill performance variables namely shooting (5.46, $p<0.05$) and dribbling (0.87, $p<0.05$) thus the formulated hypothesis is accepted.

Figure I. Comparisons of pre – test means and post – test means for experimental group in relation to skill performance variables

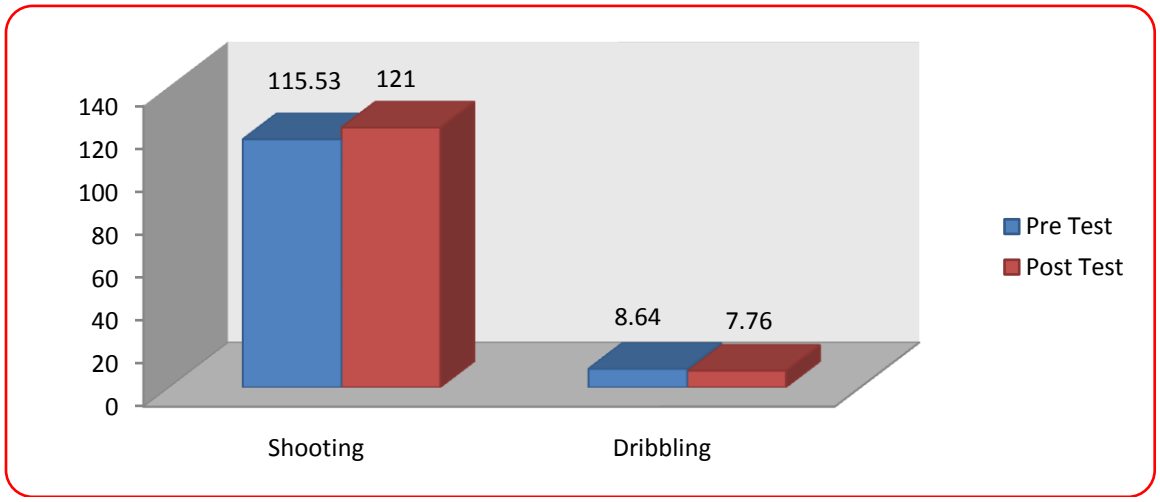


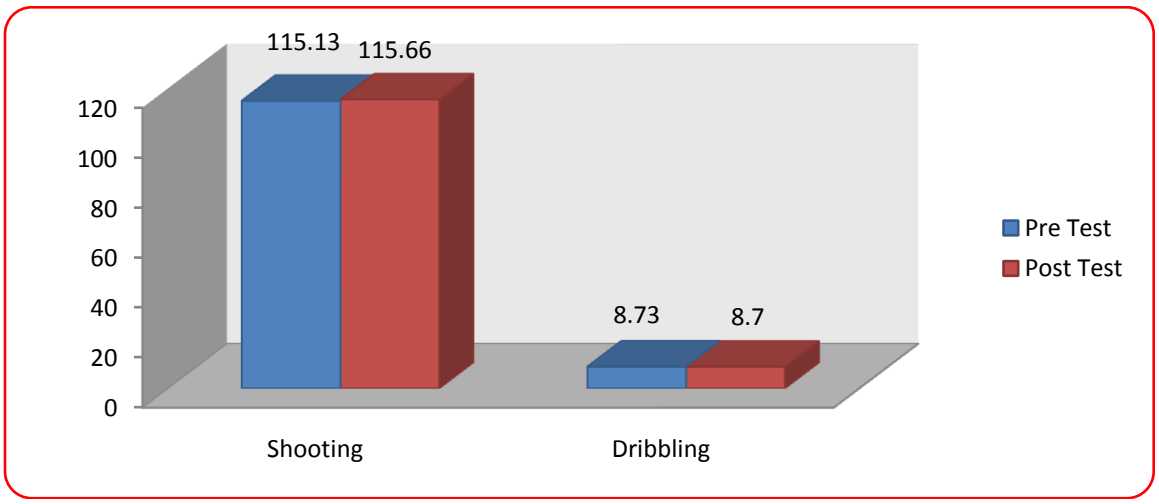
Table 3. *Significance of mean gains & losses between pre and post test scores on selected variables of control group (cg)*

S.No	Variables	Pre-Test Mean	Post-Test Mean	Mean difference	Std. Dev (±)	σ DM	't' Ratio
1	Shooting	115.13	115.66	0.53	2.50	0.64	0.82
2	Dribbling	8.73	8.70	0.02	0.21	0.05	0.48

* Significant at 0.05 level

Table 3 shows the obtained 't' ratios for pre and post test mean difference in the selected variable of shooting (0.82) and dribbling (0.48). The obtained ratios when compared with the table value of 2.14 of the degrees of freedom (1, 14) it was found to be statistically significant at 0.05 level of confidence. It was observed that the mean gain and losses made from pre to post test were not significantly improved in skill performance variables.

Figure II. Comparisons of pre – test means and post – test means for control group in relation to skill performance variables



Discussions on Findings

In case of skill performance variables i.e. shooting and dribbling power the results between pre and post test has been found significantly higher in experimental group in comparison to control group. This is possible because due to regular isotonic training which may also bring sudden spurt in skill performance variables in football players. The findings of the present study have strongly indicates that isotonic training of twelve weeks have significant effect on selected skill performance variables i.e., shooting and dribbling of football players. Hence the hypothesis earlier set that isotonic training programme would have been significant effect on selected skill performance variables in light of the same the hypothesis was accepted.

Conclusions

On the basis of findings and within the limitations of the study the following conclusions were drawn:

1. The isotonic training had positive influence on shooting and dribbling among football players.
2. The experimental group showed better improvement on shooting and dribbling among football players than the control group.

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