



EFFECT OF A SPECIFIC WEIGHT TRAINING PACKAGE ON PLAYING ABILITY OF COLLEGE LEVEL FOOTBALLERS.

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ABSTRACT Total 120 Football Players, within the age group of 21 to 29 years were selected as subjects of the study. They were divided into four equal groups (N=30 in each group) namely Group A, B, and C were treated as experimental group and D was treated as control group. The score of football playing ability (Mc-Donald Soccer Test) were recorded on all the subjects before the administration of specific weight training package (pre-test), and after 4 weeks, 8 weeks and 12 weeks (Post-tests) of the administration of training schedule, the post-test scores were recorded on every subject for all the parameters. Mc Donald soccer test scores of the subjects as a measure of football playing ability improved significantly with administration of differential intensity and duration with present weight training schedule. However, high intensity of such training schedule administered at least for 12 weeks could enhance the performance better than any other combinations of training intensity and duration.

KEYWORDS : Specific Weight Training Package, Football Playing Ability

INTRODUCTION:

Training improves the performance. Selecting the appropriate training methods to incorporate in the training program is important for a number of reasons. First, a focused, structured, individualized training program can increase the breathing rate and the efficient use of oxygen. Secondly it also help the body work at a higher level of exercise for a longer time because it helps to get rid of lactic acid. It also helps the body to convert more fat to energy (that is lipid metabolism). Third, it also leads to physical changes in the muscles, helping them to be more tolerant to the stresses caused by prolonged exertion, particularly by strengthening the connective tissues between muscle fiber so that they experience fewer micro traumas. Weight or resistance training focuses on building up strength, power or local muscular endurance by exercising muscle against a resistance. Moving into free space is one of the most critical skills that football players must develop. Attacking players must move off the ball into space to give an advance the maximum chance of success. It also means that players must be willing to switch positions as the situation demands. Azeem and Ameer (2010) identified weight training has motivated and attracted the youth to develop their strength and build their muscles. Bent R Ronnestad., et.al., (2011) investigating the effects of combined strength and plyometric training on power-related measurements, concluded that heavy strength training leads to significant gains in strength and power-related measurements in professional soccer players..

The purpose of this study was to know the effect of a specific weight training package on playing ability of college level football players.

Methodology: Total 120 Football Players, within the age group of 21 to 29 years, those had participated in football intramural competition of Baliapal College of Physical Education, were selected as subjects of the study. They were divided into four equal groups (N=30 in each group) namely A, B, C, and D. The subjects were acclimatized with different weight training loads for a period of 15 days before the actual experimentation. Group A, B, and C were treated as experimental group and D was treated as control group. The score of football playing ability (Mc-Donald Soccer Test) were recorded on all the subjects before the administration of specific weight training package (pre-test), and after 4 weeks, 8 weeks and 12 weeks (Post-tests) of the administration of training schedule, the post-test scores were recorded on every subject for all the parameters. Then the data were collected and put for statistical analysis to establish the significance. The subjects of the three experimental groups and the control group were selected at random and were not equated with reference to the factors examined. Hence, the difference between the initial means of the

groups at the pre test had to be taken in to account during the analysis of post test differences between the means by the process of application of analysis of covariance where the final means were adjusted for differences in the initial means and the adjusted means were tested for significance at .05 level of confidence.

Findings:

Table 1. Significance of difference between pre test and post test means of the three experimental groups and the control group in Mc Donald Soccer Test at different training intervals

Groups	Pre test mean±SE	Post test (4 weeks) mean±SE	Post test (8 weeks) mean±SE	Post test (12 weeks) mean±SE	'F' value
A (N=30)	13.633 ^a ±0.297	13.733 ^{abx} ±0.318	13.967 ^{abxy} ±0.222	14.800 ^{aby} ±0.155	4.274**
B (N=30)	13.700 ^a ±0.180	14.133 ^{abxy} ±0.142	14.667 ^{abxyz} ±0.216	15.067 ^{az} ±0.249	8.900**
C (N=30)	14.167 ^a ±0.215	14.700 ^{aby} ±0.167	15.200 ^{byz} ±0.211	15.700 ^{az} ±0.187	11.297**
D (N=30)	13.633±0.313	13.633 ^b ±0.305	13.933 ^b ±0.267	13.867 ^b ±0.324	0.266
df	3, 116	3, 116	3, 116	3, 116	
Mean square (B)	1.989	7.033	11.097	17.386	
Mean square (W)	1.986	1.816	1.589	1.693	
'F' value	1.001	3.874**	6.985**	10.267**	

* Values with different superscripts (a, b) in a column and (x, y) in a row differ significantly *p<0.05, **p<0.01, N = 120, B = Between group variance, W = Within group variance

Results obtained through Table 1 reveals that the pre test means for Mc Donald soccer test as a measure of football playing ability were 13.633±0.297, 13.700±0.180, 14.167±0.215 and 13.633±0.313 for A, B, C and D group, respectively. Randomisation of subjects in groups was realized as there was no significant difference among the groups with regard to pre test scores. Consequent upon administration of training for 4 weeks, the corresponding scores were recorded as 13.733±0.318, 14.133±0.142, 14.700±0.167 and 13.633±0.305 for four groups with significant difference among groups. Group A and B did not have any difference with either group C or D; however,

significant difference was recorded between group C and D. Similarly significant effect of training was observed after a training duration of 8 weeks on Mc Donald soccer test with average scores of 13.967 ± 0.222 , 14.667 ± 0.216 , 15.200 ± 0.211 and 13.933 ± 0.267 for A, B, C and D group, respectively. Performance of subjects under Group A and B did not have any difference with group D; similarly group B and C did not differ; however, significant difference was recorded between group C and D. Group C was found to have significantly better performance than all the groups including the control group. After 12 weeks of administration of the specific training the average score on shuttle run was recorded as 14.800 ± 0.155 , 15.067 ± 0.249 , 15.700 ± 0.187 and 13.867 ± 0.324 , respectively with significant difference among the groups. Performance of subjects under the two experimental groups B and C with administration of moderate and high intensity training schedule was found to have significantly better than that of control group. However, no difference was recorded among the three experimental groups. This may be opined that, the performance of subjects on Mc Donald soccer test improved upon scheduled training after 8 and 12 weeks in a similar fashion.

Table 2. Analysis of variance and covariance of the means of three experimental groups and the control group in Mc Donald Soccer Test

Groups	Pre test mean \pm SE	Adjusted Post test (4 weeks) mean \pm SE	Adjusted Post test (8 weeks) mean \pm SE	Adjusted Post test (12 weeks) mean \pm SE
A (N=30)	13.633 \pm 0.297	13.857 ^a \pm 0.126	14.069 ^a \pm 0.149	14.879 ^b \pm 0.196
B (N=30)	13.700 \pm 0.180	14.202 ^b \pm 0.126	14.724 ^b \pm 0.149	15.111 ^b \pm 0.196
C (N=30)	14.167 \pm 0.215	14.384 ^b \pm 0.127	14.937 ^b \pm 0.150	15.498 ^b \pm 0.198
D (N=30)	13.633 \pm 0.313	13.757 ^a \pm 0.126	14.036 ^a \pm 0.149	13.946 ^a \pm 0.196
df	3, 116	3, 115	3, 115	3, 115
Mean square (B)	1.989	2.536	6.180	12.898
Mean square (W)	1.986	0.473	0.662	1.152
'F' value	1.001	5.365**	9.341**	11.200**

* Values with different superscripts differ significantly * $p < 0.05$,

** $p < 0.01$, N = 120

B = Between group variance, W = Within group variance

The analysis of covariance for Mc Donald soccer test showed that the resultant 'F' ratio of 1.001 was not significant in case of pre test means. The adjusted post test means at 4 week were calculated as 13.857 ± 0.126 , 14.202 ± 0.126 , 14.384 ± 0.127 and 13.757 ± 0.126 for group A, B, C and D, respectively and yielded 'F' ratio of 5.365, which was found to be highly significant. Group B and C were significantly better than both A group and control group D. However, no difference was observed either between group B and C or between group A and D. The adjusted post test means at 8 weeks were 14.069 ± 0.149 , 14.724 ± 0.149 , 14.937 ± 0.150 and 14.036 ± 0.149 for group A, B, C and D, respectively. The adjusted final means at this stage yielded the 'F' ratio of 9.341 and found highly significant. Group B and C were significantly better than both A group and control group D. However, no difference was observed either between group B and C or between group A and D. Consequent upon 12 weeks of training, the adjusted post test means for A, B, C and D groups were obtained as 14.879 ± 0.196 , 15.111 ± 0.196 , 15.498 ± 0.198 and 13.946 ± 0.196 with highly significant difference among groups with calculated F value of 11.200. Here it was realized that, there was significantly better performance in all the experimental groups, compared with the control group with regard to Mc Donald soccer test. No significant difference among group A, B and C groups was obtained in the present study with regard to Mc Donald soccer test.

CONCLUSION:

The analysis of data revealed that the three experimental groups, administered with differential intensity of weight training exercises showed significant improvement in football playing ability after administration of training for a duration of 4, 8 and 12 weeks. The

control group did not show any significant increase in the performance of any variable under study.

Mc Donald soccer test scores of the subjects as a measure of football playing ability improved significantly with administration of differential intensity and duration with present weight training schedule. However, high intensity of such training schedule administered at least for 12 weeks could enhance the performance better than any other combinations of training intensity and duration.

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