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Effect of sand running and weight training on selected physiological variables of kabaddi players of Davanagere district

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Abstract

Kabaddi is a sport of Indian origin played by teams of seven on a rectangular clay or sand court. At present, kabaddi is played by more than thirty five countries not only Asian country but also America, England, Australia, and West Indies, are emerging best in the kabaddi world cup. Earlier it is played by only rural peoples in particularly during the festive days. Now many numbers of rural peoples as well as urban peoples are playing this game and tournaments are conducted various levels. It is added in the Asian games and our team brought laurels to our nation and also conducted world championship and Pro-kabaddi league (Professional Kabaddi League) is organized in 2014 by star sports, in Pro-kabaddi many elite talented kabaddi players were identified. The purpose of the study was to determine the effect of Sand Running and Weight Training on selected physiological variables of Kabaddi Players. The study was delimited to Sixty College students of Kabaddi Payers of Davanagere District. The study was delimited to the students between the age group of 18 to 25. The Training period was limited to Eight Weeks. The study was further delimited to selected physiological Variables like Aerobic Capacity, Resting Pulse rate and Blood Pressure. It was hypothesized that there would be a significant effect of sand running and weight training on the selected Physiological variables of Kabaddi Players. Sixty subjects (male) of Kabaddi Payers of Davanagere District. in the age group of 18 to 25yrs were selected randomly as subjects for the study. The subjects were randomly assigned to Sand running group, weight training and Control groups each group consisted of 20 subjects. Participation in Eight weeks of sand Training and resistance training program resulted in improvement on aerobic capacity. Participation in Eight weeks of sand Training and resistance training program resulted in decrease of pulse rate.

Keywords: Sand running, weight training, physiological variables, kabaddi players

Introduction

Kabaddi is a sport of Indian origin played by teams of seven on a rectangular clay or sand court. The players attempt to tag or capture opponents and must hold their breath while retreating to home court, repeating the word 'kabaddi' to show that they are doing so. Kabaddi is our indigenous game, which requires skill and power. In India Kabaddi is a foremost sport, which is played all over the India. At present, kabaddi is played by more than thirty five countries not only Asian country but also America, England, Australia, and West Indies, are emerging best in the kabaddi world cup. Earlier it is played by only rural peoples in particularly during the festive days. Now many numbers of rural peoples as well as urban peoples are playing this game and tournaments are conducted various levels. It is added in the Asian games and our team brought laurels to our nation and also conducted world championship and Pro-kabaddi league (Professional Kabaddi League) is organized in 2014 by star sports, in Pro-kabaddi many elite talented kabaddi players were identified.

Statement of the Problem

The purpose of the study was to determine the effect of Sand Running and Weight Training on selected physiological variables of Kabaddi Players.

Delimitation

- The study was delimited to Sixty College students of Kabaddi Payers of Davanagere District.

- The study was delimited to the students between the age group of 18 to 25. The Training period was limited to Eight Weeks.
- The study was further delimited to selected physiological Variables like Aerobic Capacity, Resting Pulse rate and Blood Pressure.

Limitation

- All subjects were volunteers. Dealing with volunteers often makes it hard to choose a representative sample of the entire society of interest.
- Lack of control over the life style, habits, diet and hereditary differences of the subjects will be considered as a limitation to the study.
- Socio-economic and religious factors, which cannot be controlled by the scholar, might affect the responses of the students.

Hypothesis

It was hypothesized that there would be a significant effect of sand running and weight training on the selected Physiological variables of Kabaddi Players.

Selection of Subjects

Sixty subjects (male) of Kabaddi Payers of Davanagere District. in the age group of 18 to 25yrs were selected randomly as subjects for the study. The subjects were randomly assigned to Sand running group, weight training

and Control groups each group consisted of 20 subjects.

Selection of Variables

- Aerobic Capacity
- Resting Pulse Rate

Experimental Design

- The study was formulated as a true random group design. Two groups were exposed to experimental group and other was kept as control group. One experimental group was assigned to sand running, and other group was assigned to weight training. No training programme was given to control group.

Test Administration

- Aerobic Capacity (coopers 12 minutes run/walk)
- Resting Pulse Rate (pulse counted for one minutes)

Analysis of Data and the Result of the Study

- Ancova,
- Scheffe’s post hoc test to determine mean difference among the group.
- The level of significance obtained by the analysis of variance was fixed at 0.05 level of confidence

Results and Discussion

Table 1: Descriptive Statistics of Aerobic Capacity of the Three Group

Groups		Mean	S.D	N
Sand Training	Pre test	45.94	4.59	20
	Post test	51.19	4.64	
Weight Training	Pre test	46.25	5.80	20
	Post test	48.21	5.98	
Control	Pre test	48.66	6.40	20
	Post test	48.52	6.34	

Table 2: Analysis of covariance on Aerobic capacity of sand Training, Weight training and control group

Source	df	Sum of squares of X	Sum of squares of Y	Sum of squares of X.Y	Sum of squares of Y.X	MSS Y.X	F ratio
Between Means	2	88.81	107.59	45562.3	278.985	139.49	61.03*
Within means	57	1820	1854.47	1773.59	127.985	2.28	
Total	59	1908.8	1962.07	47335.9			

The calculated f value of 61.03 was grater than the table value of 3.159 at 0.05 level of confidence

Table 3: Scheffes Post Hoc Test for Mean Difference between Groups on Aerobic Capacity

Sand training	Weight training	Control	Mean difference	Critical Value
52.17	48.89		3.286	2.933
52.17		46.85	5.325	2.933
	48.89	46.85	2.038	2.933

Table 4: Descriptive Statistics of Resting Pulse of the Three Groups

Groups		Mean	S.D	N
Sand Training	Pre test	59.84	5.02	20
	Post test	58.45	4.50	
Weight Training	Pre test	61.60	4.61	20
	Post test	61.10	4.62	
Control	Pre test	63.05	4.90	20
	Post test	62.95	4.93	

Table 5: Analysis of covariance on Resting Pulse Rate of sand Training, Weight training and control group

Source	df	Sum of squares of X	Sum of squares of Y	Sum of squares of X.Y	Sum of squares of Y.X	MSS Y.X	F ratio
Between Means	2	102.70	204.633	2432.56	20.07	10.003	24.176*
Within means	57	1342.30	1253.70	3127.89	23.171	.414	
Total	59	1445.00	1458.33	32789.9			

The calculated F value of 24.17 was greater than the table value of 3.159 at 0.05 level of confidence

Table 6: Scheffes Post Hoc Test for Mean Difference between Groups on Resting Pulse Rate

Sand training	Weight training	Control	Mean difference	Critical Value
62.95	61.1		0.462	0.26156
62.95		58.45	1.436	0.26156
	61.1	58.45	0.974	0.26156

Conclusion

- Participation in Eight weeks of sand Training and resistance training program resulted in improvement on aerobic capacity.
- Participation in Eight weeks of sand Training and resistance training program resulted in decrease of pulse rate.

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