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Physical exercise training program improves resting pulse rate and resting respiratory rate between volleyball players

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Abstract

The present study was investigate on 12 weeks physical exercise training program on resting pulse rate and resting respiratory rate between volleyball players. These subjects were selected randomly from Gsbv, Nilothi between the age ranges of 15-18 years Boys. The chosen players were randomly divided into two groups, Experimental group (N=10) and Control group (N=10). The physical exercise training program was designed for experimental group 1 hour, i.e., 4.30 to 5.30 PM. Five days in week (Monday to Friday). The control group was continuing followed their daily routine practice. The selected physiological variables for the study were resting pulse rate and resting respiratory rate. The mean difference was checked between pretest and posttest of volleyball players. Student paired 't' test was used and the level of significance was set ≤ 0.05 the data was analyzed with the help of SPSS software. The results of the study revealed that experimental group shows significant improvement on resting plus rate and resting respiratory rate. Significant differences were found with pre-test and post-test results with respect to resting pulse rate and resting respiratory rate after the 12 weeks physical exercise program. However, no significant change was found in case of control group on resting pulse rate and resting respiratory rate. Therefore, this physical exercise training program should be developing resting pulse rate, and resting respiratory rate between volleyball players.

Keywords: Physical exercise, resting pulse rate, resting respiratory rate, volleyball boys

Introduction

Sports training is a special process of preparing athletes based on scientific principles aimed at improving and maintaining higher performance capacity in different sports activities. It is a particular type of training designed to improve physical condition and ability to perform in a given sport. It includes strength training, corrective and restorative exercises, conditioning and cardiovascular training. It also includes mental and psychological training and advice on nutritional values. (Fox, 1984) [1].

Physical exercise to perform a number of activity in regulate to maintain and development all body fitness. It is considered vital for healthy weight; muscles, bones and reducing all type of diseases strengthen of immune system [2]. Volleyball is a dynamic, fast-paced game. The main objective of physical exercise training the development of player's performances. It is necessary to enhance their physical fitness and develop strength, flexibility and endurance. The one thing comes to mind is "speedy" while watching a volleyball player.

Method and Procedure

The sample size for present study was 20 volleyball players. These subjects were selected randomly from Gsbv, Nilothi between the age ranges of 15-18 years Boys. The chosen players were randomly divided into two groups, Experimental group (N=10) and control group (N=10). The physical exercise training program was planned for experimental group 1 hour, i.e., 4.30 to 5.30 PM five days in week (Monday to Friday). The control group was continuing followed their daily routine practice. The selected physiological variables for the study were resting pulse rate and resting respiratory rate. The assessment for resting pulse rate and resting respiratory were taken at the initial (pre-test) and at the end of training period after 12 weeks experimental (post-test).

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The duration of Physical Exercise Training Program was of 1 hour apart from warming up and cooling down. The selected physiological variables were resting pulse rate in (beats per minutes) measured and resting respiratory rate breath/minute. To compare the mean difference between pretest and posttest, student 't' test was used data was analyzed with the help of SPSS software. The level of significance was set ≤ 0.05 .

Tests and criterion measures

The table 1 shows tests used for measuring the resting pulse rate and resting respiratory rate of volleyball players.

Table 1: Tests used for measuring resting pulse rate and resting respiratory rate

Variables	Test/tools administrated	Unit of measurement
Resting pulse rate	Beats in unit	Minute
Resting respiratory rate	Breath	Minute

Statistical Analysis

The student 't' test was used to ensure their significance of

the difference in mean scores of resting pulse rate and resting respiratory rate of volleyball players at pretest and posttest after 12 weeks conclusion of Physical Exercise Training Program in the control and experimental group. The level of significance was set at ≤ 0.05 . The statistical analysis between the pretest and posttest of control group and experimental group regarding their resting pulse rate and resting respiratory rate of volleyball players has been given in table 2 and 3. There were significant differences between the pretest and posttest results.

Results

Table 2 shows no significant change in the control group after 12 weeks physical exercise program on resting pulse rate ($p=0.65$) and resting respiratory rate ($p=0.0001$) between volleyball players. Entertainingly, in the table: 3 the results of Experimental Group presented that experimental group shows significant improvement in resting pulse rate ($p=0.041$) and resting respiratory rate ($p=0.038$) between volleyball players after 12 weeks of Physical Exercise Training Program.

Table 2: Pretest and Posttest comparison on Resting pulse rate and Resting respiratory rate of Control Group between volleyball players.

Variables	Test Condition	N	Mean	Std. Deviation	Mean Difference	t- value	p- value
Resting pulse rate	Pre	10	73.5	6.4	1.300	0.4507	0.6579
	Post	10	72.2	6.5			
Resting respiratory rate	Pre	10	19.4	1.3	3.500	5.171	0.0001
	Post	10	15.9	1.7			

In this table statically data express in Mean, Standard Deviation, and statistical significance; SD-Standard

Deviation, SEM-Standard Error Mean; within study groups, Test statistics t-test.

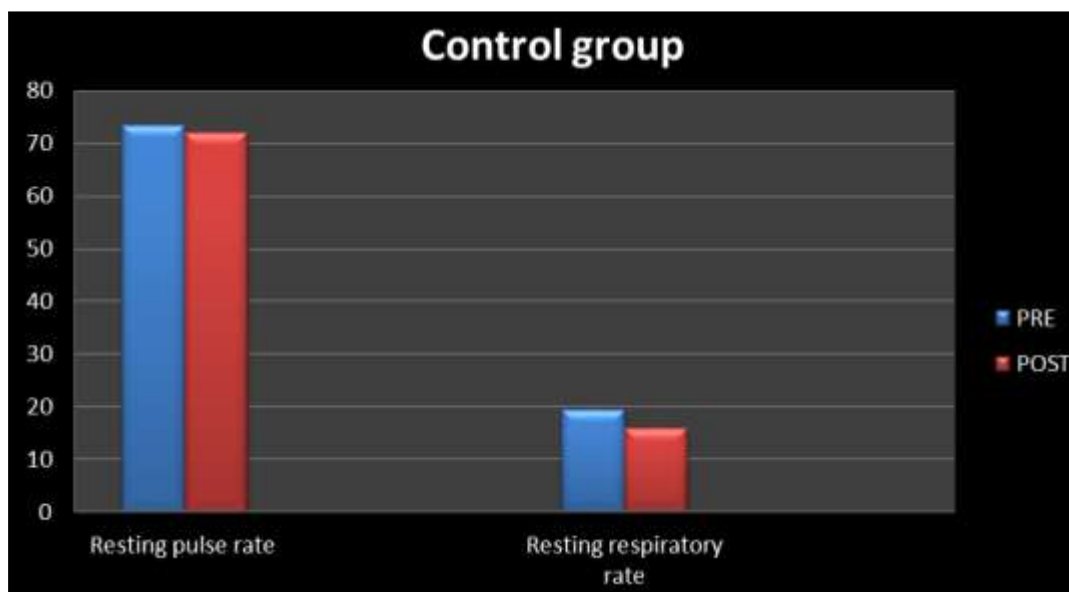


Fig 1: Bar diagram shows the mean score of Pretest and Posttest of Control Group on resting pulse rate and resting respiratory rate between volleyball players.

Table 3: Pretest and Posttest comparison on Resting pulse rate and Resting respiratory rate of Experimental Group between volleyball players.

Variables	Test Condition	N	Mean	Std. Deviation	Mean Difference	t- value	p- value
Resting pulse rate	Pre	10	72.5	6.3	1.300	2.200	0.0410
	Post	10	68.33	6.4			
Resting respiratory rate	Pre	10	19.7	1.3	3.500	2.2361	0.0382
	Post	10	13.9	1.7			

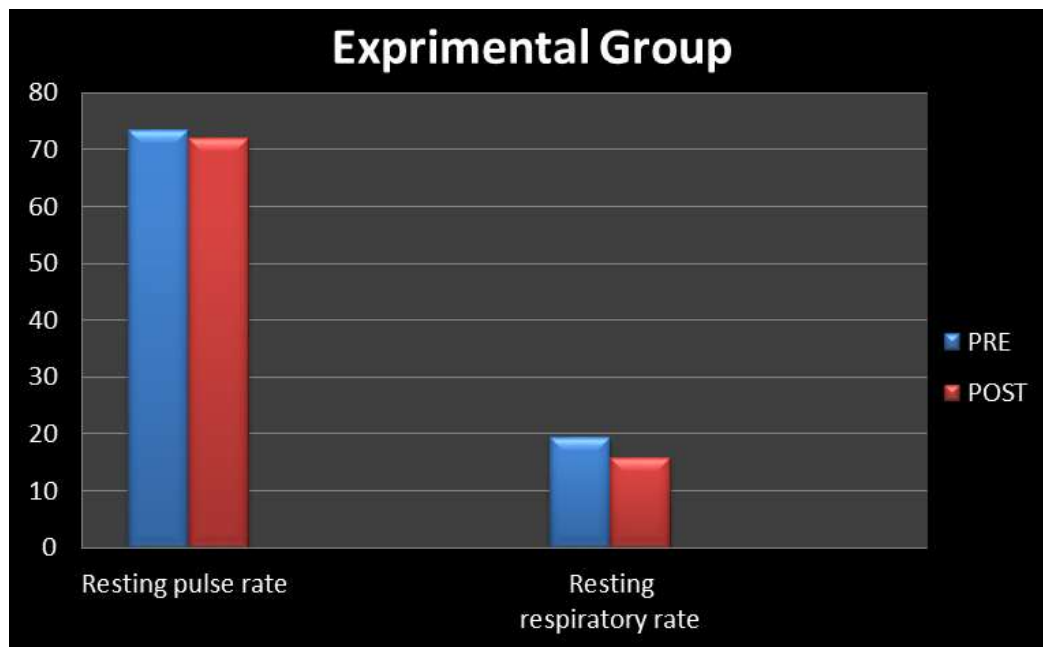


Fig 2: Bar diagram shows the mean score of Pretest and Posttest of Experimental Group on resting pulse rate and resting respiratory rate between volleyball players.

Discussion

The results of the study revealed that regarding the physiological variables like resting pulse rate and resting respiratory rate between volleyball players. The experimental group had significantly improved after the 12 weeks of physical exercise training program. In control group no significant difference was found between pretest and posttests. The results are in the following study earlier conducted by R. Senthilkumar & P.J. Sebastian (2019) ^[3] revealed that aerobic training group significantly improved in physiological variables resting pulse rate, after the 12 weeks of training and there was no significant difference was existed between pre-test and post-test of control group. In his study also observed by P. Senthil K. (2015) ^[4] SAQ training produce significant changes on selected physical, physiological variables, and skill performance variables of college men football players.

Conclusions

1. It was concluded that 12 weeks Physical Exercise Training Program significantly improved in resting pulse rate and resting respiratory rate between volleyball players.
2. Physical Exercise Training Program is one of the most suitable program means to bring about the advantageous changes over physiological variables of volleyball players. Hence, suggested those physical education professionals, coaches and the experts dealing volleyball players.

References

1. Fox EL. Sports physiology. Wm. C. Brown, 1988. https://www.sciencedaily.com/terms/physical_exercise.htm
2. Senthilkumar R, Sebastian PJ. Effect of aerobic training on selected Physical and physiological variables among Female volleyball players. Cikitusi journal for multidisciplinary research. 2019;6(4):632-641.
3. Senthikumar P. Effects of isolated and combined SAQ and Strength training on selected physical, physiological, blood lipids and skill performance variables of

- intercollegiate men football player. Unpublished Ph.D. Thesis. Bharathiar University, Coimbatore, Tamil Nadu, India, 2015.
4. Anitha DJ, Kumaravelu DP, Lakshmanan DC, Govindasamy K. Effect of plyometric training and circuit training on selected physical and physiological variables among male volleyball players. International Journal of Yoga, Physiotherapy and Physical Education. 2018;3(4):26-32. <https://doi.org/10.22271/sports.2018.v3.i4.07>
5. Toy CT. Effect of Aerobic Dance Training on Vo2 Max and Body Composition in Early Middle Aged Women. Journal of Physical Education and Exercises Sciences. 2008, (1)69.
6. Promoth KG. Effect of Step Aerobics Training on Selected Physical and Physiological Variables of Physical Education Students. Pondicherry University, Pondicherry, 2010.
7. Astrand PO, Rodhal K. Textbook of work physiology. New York: McGraw-Hill, 1986.