



Relaxation as Related to Arousal and Performance in Handball

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Abstract

This study was to examine the effects of relaxation schedule on arousal levels and performance of college Handball players. Age ranged of the subjects between 18 to 25. It is muscle relaxation schedule for 10 min before training. Three relaxation training sessions were conducted on alternate days. Thirty players of Handball were in this training. The following measures in this training; systolic blood pressure, diastolic B.P., pulse rate, acceleration speed, explosive power and choice reaction time. The result of this study in Table1; The increase in Systolic and diastolic blood pressure is not significant. However, the increase in pulse rate is significant at 0.05 level. Table 2 Systolic B.P. goes down from 127.88 to 121.67. Similarly diastolic B.P. was found decreased to a level of 78.88 from 82.5, the latter was recorded before the relaxation programme was 79.96 compared to 90.42 recorded before the relaxation work out. However, these changes are not significant.

Key Words: Arousal, Anxiety, Systolic , Diastolic, Training, Blood Pressure.

1. Introduction:

Studies in Handball indicate that Handball players experience increased levels of arousal and anxiety. In this found that increased arousal level reflects back in the perceptual activity of the players leading to various errors at the outset of the competition.

Sports psychologists are now engaged in verifying techniques relating to psycho-regulation, so as to help the athlete to achieve a stable state before competition. The basic Psycho-regulative problems, as perceived by practitioners may be grouped into two major categories: stabilization of a favorable state and modification of an unfavorable one. To achieve this end, has reported the effectiveness of visual-motor behavior rehearsal (VMBR) on the performance of Olympic skiers. The present study keeps in view the hypothesis that too high level of stress or anxiety leads to disruption of smooth coordination, muscle tightness, impaired attentional focus and even gastro-intestinal symptoms. Thus the investigators used the muscle relaxation programme combined with mental imagery and relaxation of Handball players to test its validity with regard to Arousal and Performance.

1.1 The Purpose Significance of Study:

The purpose of this study was to examine the effects of relaxation schedule on arousal levels and Performance of college and university Handball players.

2. Research Process and Methodology:

Thirty Handball players of college were taken in this training

To achieve the purpose of the present study thirty Handball Players were randomly selected from DAV COLLEGE OF EDUCATION FAZILKA, District of Punjab. Their age ranged from 18 to 25 years. The subjects were given the relaxation schedule on a competition day one hour before the competition. Pre and post-relaxation tests were taken on the following measures of arousal and Performance: systolic blood pressure, diastolic B.P., pulse rate acceleration speed, explosive power and choice reaction time (Two choices).The blood pressure apparatus and pulpatory methods were used to record blood pressure and pulse rate. Acceleration speed was measured by using a stop watch against a 30 meter distance. Sargent jump was used to measure explosive power. The choice reaction time was recorded by using the reflexometer.

3. Results and Discussion:

The basal and pre-match blood pressure (systolic and diastolic) and pulse rate scores of the college Handball players have been presented in Table 1.

Table 1

Basal and Pre-match B.P.(Systolic and diastolic) and pulse rate scores of college Handball player's (N =30)

Parameters	Basal		Pre-match		Level of significance
	Mean	SD	Mean	SD	
Systolic B.P	118.75	7.12	127.88	9.12	Not significant
Diastolic B.P	75.49	4.25	82.50	5.77	Not significant
Pulse Rate	72.00	8.14	90.42	8.58	significant at 0.05

The increase of blood pressure, both Systolic and diastolic, and pulse rate indicate a moderate level of arousal among the Handball players. The increase in Systolic and diastolic blood pressure is not significant. However, the increase in pulse rate is significant at 0.05 level. The change in arousal parameters at the Pre-match stage may be considered as signal of disharmony in the use of some measures to stabilize the pre-match of the player.

Table 2

Pre and post-relaxation B.P.(Systolic and diastolic) and pulse rate scores of college Handball player's

Parameters	Pre-relaxation		Post-relaxation		't'
	Mean	SD	Mean	SD	
Systolic B.P	127.88	91.2	121.88	7.73	0.52
Diastolic B.P	82. 50	5.77	78.88	4.56	0.49
Pulse Rate	90.42	8.58	79.96	8.56	0.86

In table 2 the pre and post-relaxation scores of the measures of pre-match activation have been presented. The comparative look at these scores the reveals a positive impact of muscle relaxation model on Systolic and diastolic blood pressure and pulse rate. Systolic B.P. goes down from 127.88 to 121.67. Similarly diastolic B.P. was found decreased to a level of 78.88 from 82.5, the latter was recorded before the relaxation programme was 79.96 compared to 90.42 recorded before the relaxation work out. However, these changes are not significant. The implication of these physiological changes can not be underestimated as they may provide a stabilizing force to the physiologically destabilized player at the out-set of the competition. The players who are likely to perform better at a lower level of optimal arousal can be directly benefitted by the use of this technique of muscle relaxation.

Table 3

Pre and post-relaxation performance of Handball players one hour before the match (college and university level; N= 30)

Parameters	Mean	
	Pre-relaxation	Post-relaxation
30 Meter Run (Sec)	4.60	4.62
Sargent Jump (Inches)	25.00	25.10
Choice Reaction Time	13.00	10.50

The comparative scores of Performance as given in Table 3 do not indicate change in Performance in 30mt. run and in Sargent jump, the two measures relating to speed and explosive power considered important for Performance in Handball. However, there is a definite improvement in choice reaction time, recorded 10.5 cent seconds after the relaxation schedule, compared to 13 cent seconds recorded before using the relaxation schedule. It may, there for, be assumed that the use of such relaxation schedule before the match can help in the improvement of perceptual activity of the Handball players that can help in stabilizing the team at the out set of the competition. Research finding that under the impact of pre-competitive arousal the players commit more competition. The use of relaxation schedule as the one authenticated in this study may help in controlling such errors during competition in Handball.

4. Conclusions:

- Players show higher level of Systolic and diastolic blood pressure and pulse rate before the match.
- The 10 min. Relaxation schedule before competition helps in controlling and decreasing arousal.
- Relaxation schedule causes no change in specific speed and explosive power required for Performance in Handball. However, the choice reaction time was found slightly improved.

5. Implication's:

As an over simplification the relaxation schedule used in the study can be instrumental in controlling and decreasing the arousal and anxiety levels of the players before the match. The player whose optimum arousal level is less than he actually display before the competition, is recommended to use this schedule that is likely to help him acquire the optimum or near optimum state that stabilizes performance according to his capacity. This schedule helped in the improvement of choice reaction time, that is and evidence of improved perceptual activity of the players resulting in improved performance of the game.

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