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Effect of Muscle Relaxation Training on Competitive Anxiety of Male Inter Collegiate Hockey Players

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Abstract

The present study investigated the effect of psychological skill training techniques such as progressive muscle relaxation on competitive anxiety. The three sub-scales of competitive anxiety were also examined; cognitive anxiety, somatic anxiety, and state self-confidence. The study consisted of 24 male Hockey players from Salem Sowdeswari college, Salem- 10 their age ranged from 18 to 25 years. The competitive state anxiety inventory-2 (CSAI-2) also developed by martens, vealey, and Burton (1990) were used. Subjects were randomly assigned to either a relaxation training experimental group, or a no relaxation training control group. Both the experimental groups were given training for 3 days a week and for 6 weeks in total. Paired t-test was used to test the effect of treatment groups individually between pre and post-test of all the groups on variables used in the present study. The result of the study reveals that there was significant difference in 0.05 levels of competitive anxiety among the male inter-collegiate hockey players.

Keywords: Relaxation Training, Competitive Anxiety.

Introduction

The present study is mainly concerned with hockey players was participated in the high level competitions. Now days, the game hockey is becoming as a professional sport rather than the competitive sport. So the competitiveness among the hockey players is growing up day by day with different colour. Reason for such competitiveness is arise naturally among the players, because of pressures such as equal competition, concern about fulfilling the expectation of their teachers, coaches, parents and peer group and personal needs. It leads to mental and physical stress. In high level stress, the player's are unable to show their real effort in matches though they are having the needed physical and mental resources. Hence the physical education teachers and coaches are in need to study the means and methods needed to face such competitive pressures whereby they can equip their players to perform well. As far as means and methods for high performance in sports are concerned, they are varied with the nature and type of competition such as low level competition and high level competition. In high level competition, sport is demanding high level mental toughness. Mental toughness of player can be strengthened only through the implication of internal and external pressures whereby they can easily face the competition pressures and to show their talents in time. Having this thirst, the investigator has impelled to study.

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Participants

The purpose of the study was to find out the effect of progressive muscle relaxation training on competitive anxiety of male Inter-collegiate hockey players. To achieve the purpose of the study twenty four male hockey players were selected from Inter collegiate tournaments. Their age was ranged from 18 to 25 years. The purpose of the present study was explained to then clearly where by their consent to serve as samples were obtained. The present study is an experimental one and to test the effects of varied forms of intervening strategies, the care was taken in distributing the samples to each experimental group. For this, the selected samples (N=24) were divided into two equal groups. Group I was considered as progressive relaxation training group (PRTG) in which they underwent progressive muscle relaxation practices. Group II was considered as control group and they did not undergo any practices. Both the experimental groups were given training for 3 days a week and for 6 weeks in total.

Selection of variables

Anxiety Related

- Cognitive anxiety.
- Somatic anxiety.
- Self-confidence.

Tools Used in the Study

Competitive Sport Anxiety

Competitive state anxiety was assessed by using the competitive state anxiety inuestory-2 (CSAI-2, martens et al. 1990) which is a self-report, psychometric state anxiety inventory. Consisting or 27 items. The CSAI-2 normally takes less than five minutes to complete and was administered ten minutes before competition and practice session. Before allowing subjects to begin completes the CSAI-2, instruction was explained, and researchers ensured that all instruction was completely understood. State anxiety was measured by the competition state anxiety inventory-2. (CSAI-2) matters et as 1990). The CSAI-2 asses two components of state anxiety, cognitive worry and somatic anxiety and related constricts self –confidence. The CSAI-2 contains 9 items that reference each sub-scale. Thus, each sub-scale has range from 9 to 36. Higher scores on cognitive and somatic anxiety indicate higher level of anxiety whereas higher scores on self-confidence sub-scale correspond to higher level self-confidence (Martens et al 1990 and McKay et al.1997)

Tester Competency and Reliability of Tests

To ensure that the investigator was well versed with the techniques of conduction the tests, the investigator had a number of practice sessions in testing procedure, the reliability of the data was established through test and retest method. Tester reliability was established by t attest process whereby consistencies of results were obtained by product moment correlation. The data collected from a randomly selected sample of ten subjects in test was correlated with the data taken by the expert and coefficient of correlation thus obtained is presented in Table I. Since very high correlations from .806 to .897 were obtained for the variables, the competency of the tester to administer the test was accepted. The interclass correlation coefficient obtained from selected criterion variables were presented in Table.1

Table I. Intra-class correlation co-efficient values on selected criterion variables

S.NO	CRITERION VARIABLES	C0EFFICIENT OF CORRELATIONS
1	**Cognitive anxiety**	.897
2	**Somatic anxiety**	.860
3	**Self confidence**	.806

Training Programme

Psychological Skills Training Provided to the Hockey Players

Psychological skill training involved meeting with the hockey team to provide the psychological skills training. The psychological skill training sessions were conducted once a week. The sessions lasted between 30 and 60 minutes and they were audio taped for hockey players who were unable to attend. At the conclusion of a session, the hockey players received a handout de-scribing the activities completed during that session. Additional copies of the handouts were available to hockey players who were unable to attend. The meetings were not requiring. Rather, the hockey players were free to choose whether or not to participate in the psychological skill training program.

Progressive Relaxation Training

The hockey players were comfortable with the breathing technique. This activity involved a programmatic relaxation technique called developed by Jacobson (1926, 1976). Jacobson's technique, called progressive relaxation, involves the systematic tension and relaxation of muscle groups. A hockey player is asked to inhale and tense a specific muscle grou8p for approximately five seconds. The hockey player then exhales and releases the tension from the specified muscle group, concentrating on the feelings of relaxation, this procedure is repeated for a number of muscle groups with each group begin tensed and relaxed three times. The muscles groups used with the hockey team are listed.

The Muscle Groups Used In the Progressive Relaxation Exercise

Muscle group1: right hand and fingers (make a fist)
Muscle group2: right forearm
Muscle group3: right upper arm
Muscle group4: left hand and fingers (make a fist)
Muscle group5: left forearm
Muscle group6: left upper arm
Muscle group7: head and face
Muscle group8: shoulders
Muscle group9: chest
Muscle group10: stomach and abdomen
Muscle group11: right upper leg
Muscle group12: right lower leg
Muscle group13: right foot and toes
Muscle group14: left upper leg
Muscle group15: left lower leg
Muscle group16: left foot and toes.

Statistical Techniques

The following statistical techniques were used to find out the effect of progressive relaxation training on competitive anxiety of male inter collegiate hockey players. Paired t-test was used to test the effect of treatment groups individually between pre and post tests of all the groups on variables used on the present study. As one of the objectives of present study was to test the effects of progressive muscle relaxation training on competitive anxiety, the initial test means and final test

means were tested treatment wise by using the paired sample t-test. The obtained 't' ratios of progressive relaxation training were postulated in the following table II.

Table II. Significance of mean gains/losses between pre and post test of progressive relaxation training (PRTG) on competitive anxiety of hockey players

Variables	Pre-test mean	Post-test mean	Mean diff.	Standard error mean	't'-ratio
Cognitive anxiety	21.50	20.08	1.42	.148	9.53*
Somatic anxiety	22.08	20.50	1.58	.148	10.65*
Self confidence	21.25	22.75	-1.50	.151	9.95*

*significance at 0.05 level

Table II indicates that the obtained' ratios were: 9.53 for cognitive anxiety, 10.65 for somatic anxiety, 9.95 for self confidence. The obtained' ratios on competitive anxiety. When compared with the critical value of 2.201 for degrees of freedom of 1, 112 it was found that the mean gains and mean losses statistically significant. Resulting of these confirm that six week practice of progressive relaxation training produced a significant improvements in cognitive anxiety (1.42; $p<0.05$), somatic anxiety (1.58; $p<0.05$), self confidence (-1.50; $p<0.05$), statistically significant and explained its effect positively.

Conclusions

1. The purpose of the present study was to examine if progressive muscle relaxation decreased competitive anxiety, and if so, which of the three sub-scales: cognitive anxiety, somatic anxiety, and self-confidence were most affected by the training. The only statistically significant effects found between the experimental group and the control group occurred on the cognitive anxiety, somatic anxiety and self confidence sub-scale of competitive anxiety.
2. The competitive anxiety of the subjects was tested first producing no statistical significant effects between the experimental and control group. Although, previous research suggest that various relaxation training techniques, including progressive muscle relaxation, decrease full-scale competitive a –state anxiety (Bethany and Forrest, 1998), the results of the present study did not confirm these observations.
3. The competitive state anxiety inventory (CSAI-2) (Martens, Vealey, and Burton, 1990) produced no statistical significance for the overall a-state anxiety levels between the relaxation training experimental group (group 1) and the no training control group (group 2). However, the mean scores of trait and state for group I exhibited a greater decrease from competitive anxiety.

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