A COMPARATIVE STUDY OF ANXIETY AND SELF-CONFIDENCE BETWEEN UNDER-GRADUATE AND POST-GRADUATE PHYSICAL EDUCATION STUDENTS

Abstract

The purpose of the study was to measure and compare the level of anxiety and self-confidence between under-graduate and post-graduate students of physical education. A total of 200 subjects were selected consisting of 100 subjects from under-graduate physical education students and 100 subjects from post-graduate physical education students across different universities and colleges in India. Anxiety and self-confidence were selected as the variables and Competitive State Anxiety Inventory-2 (CSAI-2) developed by Martens, Vealey, and Bruton (1990) was used as the tool for collecting the data. The inventory consists of Cognitive state anxiety, Somatic state anxiety and self-confidence comprising 27 questions. Descriptive statistics and independent 't' test were applied to analyse and compare the degree of anxiety and self-confidence between under-graduate and post-graduate physical education students. The level of significance was set at 0.05. Results indicated that the calculate 't' value 2.13> 1.96 at alpha 0.05. So, there was significant difference on cognitive state anxiety between under-graduate and post-graduate physical education students. While, there were no significant difference on somatic state anxiety and self-confidence between under-graduate and post-graduate physical education students as the calculated 't' value 0.707<1.96 and calculated 't' value 1.91<1.96 at alpha 0.05 respectively.

Keywords: Physical Education, Cognitive state anxiety; Somatic state anxiety; Self-confidence.

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I. INTRODUCTION

Physical education in India is rapidly growing and made as a compulsory subject from class I to X as per the National Curriculum Framework, 2005 [1]. It deals with the physiological and psychological effect of physical activity and exercise [2]. Different types of games and sports were studied to sharpen particular sports skills and to keep the body healthy and active [2]. Students are introduced to different kinds of games and sports that improves their motor skill, health and well-being [3]. Physical education mainly consists of two courses namely Bachelor of Physical Education and Master of Physical Education which can be pursued after completing higher secondary education for the Bachelor degree and is for 4 years while the master of physical education course can only be pursued after the completion of the bachelor of physical education course and is for 2 years. A candidate must complete the course of study for the Bachelor of Physical Education and pass all papers involving theoretical subjects, practical subjects, theory teaching ability, sports specialization coaching ability and internship within a total period of 4 years commencing from his/her first admission to the bachelor of physical education Course [4]. The post-graduate course involves 8 semesters of 2 years and also has theoretical subjects, sports specialisation, theory teaching practices and internship which every student pursuing the course must complete to pass the degree [5]. The increased number of physical and theoretical subjects increase the load required to be tackled during under-graduate course. The post-graduate course required higher level of studies for a particular sports and theoretical subject opted which increases the load to be tackled although the numerical number of subjects might be less. Physical education also consists of extra-curricular activities like intramural, extramural, literary society, cultural society, etc. Students from under-graduate and post-graduate are engaged to all of these extra-curricular activities and further increases the load to be tackled [4] [5] [6]. They are also exposed to extramural activities like college games, university games, khelo India, etc. When students are exposed to competitive sport, they are more vulnerable to encounter with anxiety, self-confidence, stress, etc [7]. So, when all of these load sums up, they become more demanding to be tackle by the students. Anxiety and self-confidence then play a crucial role in the success of the student from under-graduate and post-graduate respectively [8].

Sports involves lots of stress, arousal, anxiety, confidence and we learn that anxiety is an annoying psychological state where we react to discern stress associated with the performance of an effort under oppressive circumstances. Cognitive anxiety and somatic anxiety were considered to be the components of anxiety so we can say that it is multidimensional in nature. Cognitive anxiety deals with the mental component of anxiety, where the mind which is much the processing unit is stressed by things such as fear of getting bad social image and evaluation, fear of work-related failure, and losing our self-esteem. Somatic anxiety deals with the physical component where we response in the form of increasing heart rate, increasing in our rate of respiration, and muscular tension where our muscles contracts [9].

Sport also requires confidence which unlocks our physical potential and so rightly self-confidence it the trust we put on ourselves that we can perform the wanted behaviour successfully. Although Vealey (1986) from the beginning observed that self-confidence was both temperament and a state. The latest observation shows that self-confidence in sports is a social cognitive establishment that can be more trait like or more state like, relying on the

temporal frame of reference utilized. In essence, self-confidence could be the feelings of an athlete felt today and therefore it could be unstable the next day showing that it is more state like self-confidence, or it could be part of the athletes personality and could be very stable from time to time showing that it is more trait like self-confidence [9] [10].

II. STATEMENT OF THE PROBLEM

The purpose of the study was a comparative study of anxiety and self-confidence between under-graduate and post-graduate physical education students.

1. **Methodology:** For the purpose of the study, Physical education students across India in different universities and colleges were eligible and subjects were selected using purposive sampling. The final sample consists of 100 under-graduate students and 100 post-graduate students in physical education across the country thus, making a total of 200 subjects. The purpose of the study was made clear to the subjects by giving a detail explanation in order to make sure that there was no ambiguity among the subjects regarding the effort.

   The following psychological variables listed below were selected for the study.

   Dependent variables:
   - Anxiety.
   - Self-confidence.

   Independent variable:
   - Under-graduate student.
   - Post-graduate student.

   For the purpose of analysing the selected psychological variables namely anxiety and self-confidence, Competitive State Anxiety Inventory (CSAI-2) developed by Martens, Vealey, and Burton (1990) was used for collecting the data. The inventory consists of Cognitive state anxiety, Somatic state anxiety and self-confidence comprising 27 items.

2. **Statistical Design:** The survey method was used in this research to investigate the anxiety and self-confidence level among under-graduate and post-graduate physical education students. Comparative study was used to examine and compare the psychological variables between under-graduate and post-graduate physical education students. Descriptive statistics was used to determine the mean, standard deviation and 't' test. Jamovi 2.2.5 was used to carry out calculating mean and standard deviation to find out the direction of differences. The independent 't' test of significant value 0.05 was used to determine the significant difference on the psychological variables between under-graduate and post-graduate students by testing the null hypothesis.

3. **Statistical Analysis:** In order to fulfil the objectives of the study and to arrive at a certain conclusion, a systematic treatment of data is required which consists of three stages: Tabulation of data, testing of hypothesis using appropriate statistical techniques and discussion of the results. The statistical analysis consists of the data from the samples on both the psychological variables. The samples consist of 200 physical education students of which 100 are currently under-graduate students and the other 100 are currently post-graduate students. The processing of the data consists of computing the mean which are presented from Figure 4.1 to 4.3, descriptive statistics to estimate difference between the

two groups using independent 't' test and are presented from table 4.1 to 4.3. The level of significance was fixed at 0.05. The hypothesis set forth was tested and the results obtained are discussed in details

III. RESULT

The data obtained concerning to the present study were examined by using independent 't' test to determine if there is significant difference between under-graduate and post-graduate physical education students on the psychological variables namely cognitive state anxiety, somatic state anxiety and self-confidence. For the three psychological variables separate statistical analysis was done and the results are presented in the following tables. The critical value at alpha $0.05 = 1.96$ is applicable for all tables.

In order to determine the significant difference on cognitive state anxiety between under-graduate and post-graduate physical education students, independent 't' test was applied. The result is presented in Table 1, Table 2 and Figure 1

Table 1

Independent Samples T-Test for Cognitive State Anxiety					
Cognitive State	Statistic	df	p	Mean difference	SE difference
Anxiety	2.13	198	0.034	1.47	0.690

Table 2

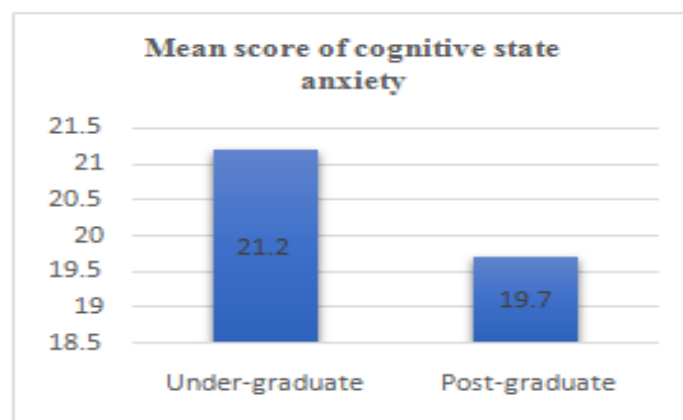| Descriptive Statistics for Cognitive State Anxiety						
Cognitive State	Group	N	Mean	Median	SD	SE
	Under-graduate	100	21.2	21.0	4.69	0.469
Anxiety	Post-graduate	100	19.7	20.0	5.06	0.506

Figure 1: Mean score of cognitive state anxiety between under-graduate and post-graduate physical education students.

Table 4.1 revealed that the calculated 't' value of cognitive state anxiety between under-graduate and post-graduate physical education students is 2.13, which is greater than the critical value at alpha 0.05 = 1.96. Therefore, there is significant difference on cognitive state anxiety between under-graduate and post-graduate physical education students.

In order to determine the significant difference on somatic state anxiety between under-graduate and post-graduate physical education students, independent 't' test was applied. The result is presented in Table 3, Table 4 and Figure 2

Table 3

Independent Samples T-Test for Somatic State Anxiety					
Somatic State Anxiety	Statistic	df	p	Mean difference	SE difference
	0.707	198	0.480	0.490	0.693

Table 4

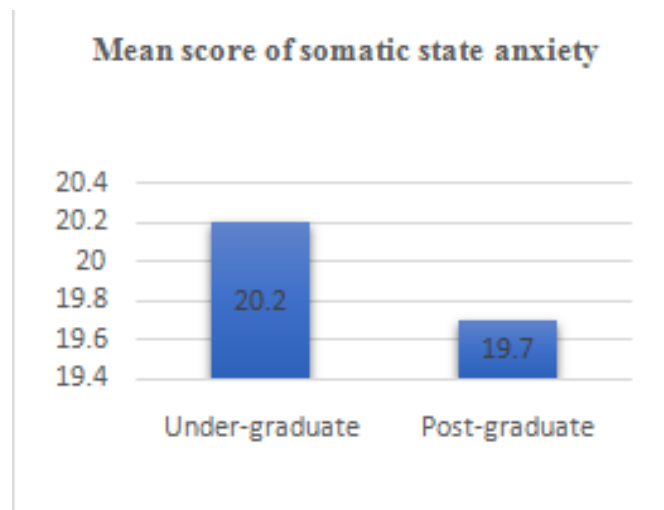| Descriptive Statistics for Somatic State Anxiety						
Somatic State Anxiety	Group	N	Mean	Median	SD	SE
	Under-graduate	100	20.2	20.0	4.74	0.474
	Post-graduate	100	19.7	20.0	5.06	0.506

Figure 2: Mean score of somatic state anxiety between under-graduate and post-graduate physical education students.

Table 4.2 revealed that the calculated 't' value of somatic state anxiety between under-graduate and post-graduate physical education students is 0.707, which is less than the critical value at alpha 0.05 = 1.96. Therefore, there is no significant difference on somatic state anxiety between under-graduate and post-graduate physical education students.

In order to determine the significant difference on self-confidence between under-graduate and post-graduate physical education students, independent 't' test was applied. The result is presented in Table 5, Table 6 and Figure 3.

Table 5

Independent Samples T-Test for Self-confidence					
Self-confidence	Statistic	df	p	Mean difference	SE difference
	-1.91	198	0.057	-1.36	0.711

Table 6

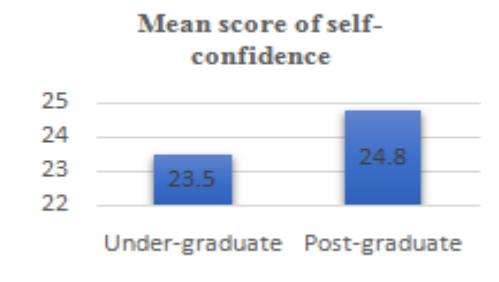| Descriptive Statistics for Self-confidence						
Self-confidence	Group	N	Mean	Median	SD	SE
	Under-graduate	100	23.5	24.0	4.61	0.461
	Post-graduate	100	24.8	25.5	5.41	0.541

Figure 3: Mean score of self-confidence between under-graduate and post-graduate physical education students.

Table 5 revealed that the calculated 't' value of self-confidence between under-graduate and post-graduate physical education students is 1.91, which is less than the critical value at alpha $0.05 = 1.96$. Therefore, there is no significant difference on self-confidence between under-graduate and post-graduate physical education students.

IV. CONCLUSION AND RECOMMENDATIONS

Within the limitations of the present study, conclusions drawn are listed below:

The finding of Table 1 concluded that the calculated 't' value was 2.13, which was greater than the critical value at alpha $0.05 = 1.96$. Therefore, there was significant difference on cognitive state anxiety between under-graduate and post-graduate physical education students. Hence, the level of cognitive state anxiety encountered during under-graduate has been higher than post-graduate as they have been engaged in more physical activity classes.

The finding of Table 3 concluded that the calculated 't' value was 0.707, which was less than the critical value at alpha 0.05 = 1.96. Therefore, there was no significant difference on somatic state anxiety between under-graduate and post-graduate physical education students. Hence, the level of somatic state anxiety encountered during under-graduate and post-graduate was considered to be similar.

The finding of Table 5 concluded that the calculated 't' value was 1.91, which was less than the critical value at alpha 0.05 = 1.96. Therefore, there was no significant difference on self-confidence between under-graduate and post-graduate physical education students. Hence, the level of self-confidence between under-graduate and post-graduate physical education students was considered to be similar.

On the basis of findings and conclusions some recommendations are made for further studies as follows:

- It is recommended that physical education teachers, coaches and sport psychologist should provide psychological training to student which may lead in avoiding the influence of anxiety on performance.
- These results can be helpful in developing psychological training programmes for under-graduate physical education students.

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