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

Dr. Lamlun Buhril

Associate Profesor

SAI-LNCPE

Trivandrum, Kerala

2018lamlun@gmail.com

Paukhankhup

MPES

SAI-LNCPE

Trivandrum, Kerala

khuppaite97@gmail.com

**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. The variables selected for the study were anxiety and self-confidence and the tool for the collection of data was Competitive State Anxiety Inventory-2 (CSAI-2) developed by Martens, Vealey, and Bruton (1990). The inventory consists of 27 questions and has been divided into three components: Cognitive state anxiety, Somatic state anxiety and self-confidence. 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:** Cognitive state anxiety; Somatic state anxiety; Self-confidence.

**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 in Part-A (Theory), Part-B (Practicum), Part-C (Teaching Practice) Part-D (Coaching Ability), and Part-E Internship within a total period of Eight Years commencing from his/her first admission to the bachelor of physical education Course [4]. The post-graduate course is associated with Duration of the course is 2 years (four-semesters) and a candidate must complete the Course and pass the final examination within four academic years from the first admission to this programme. During the four-semester course, students will be taught and provided experience in the following areas: Part-A (Theory Subjects), Part-B (Sport/Game Specialization), Part-C (Teaching Practice Theory) and Part-D (Internship) [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 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 an important role in the success of the student from under-graduate and post-graduate respectively [8].

In sport settings, anxiety refers to “an unpleasant psychological state in reaction to perceived stress concerning the performance of a task under pressure.” Anxiety is also multidimensional in the sense that it is believed that there are both cognitive and somatic components to anxiety. Cognitive anxiety is the mental component of anxiety caused by such things as fear of social negative evaluation, fear of failure, and loss of self-esteem. Somatic anxiety is the physical component of anxiety and reflects the perception of such physiological responses as increased heart rate, respiration, and muscular tension [9].

Sport psychologists define self-confidence as the belief that you can successfully perform a desired behaviour. Although Vealey (1986) originally viewed self-confidence as both a disposition and a state, the latest thinking is that sport self-confidence is a social cognitive construct that can be more trait like or more state like, depending on the temporal frame of reference used. In essence, confidence might be something an athlete feel today and therefore it might be unstable which represent state self-confidence, or it might be part of your personality and thus be very stable which represent trait self-confidence [9] [10].

**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.

**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 consist 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 variables were selected for the study.

Dependent variables:

1. Anxiety.
2. Self-confidence.

Independent variable:

1. Under-graduate student.
2. 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 use to collect the data. It consists of 27 items that assess the intensity of cognitive anxiety, somatic anxiety, and self-confidence.

**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.

**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

**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 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 4.1, Table 4.1.1 and Figure 4.1.

**Table 4.1**

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

**Table 4.1.1**

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

**Figure 4.1: 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 4.2, Table 4.2.1 and Figure 4.2.

**Table 4.2**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 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 4.2.1**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 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 4.2: 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 4.3, Table 4.3.1 and Figure 4.3.

**Table 4.3**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 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 4.3.1**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 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 4.3: Mean score of self-confidence between under-graduate and post-graduate physical education students.**

Table 4.3 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.

**CONCLUSION AND RECOMMENDATIONS**

Within the limitations of the present study, the following conclusions may be drawn:

The finding of Table 4.1 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 4.2 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 4.3 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:

1. 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.
2. These results can be helpful in developing psychological training programmes for under-graduate physical education students.

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