

Impact of Physical Education Teachers' Training Programme on Management of State and Trait Anxiety

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ABSTRACT: *Anxiety is a set of phenomenological, physiological and behavioural responses aroused as an apprehension the possible negative consequences of impending danger on a situation. There are much empirical evidences that show the relationship among physical activity, psychological wellbeing and anxiety reduction. In physical education teacher training curriculum there is ample scope of rigorous physical activity as well as educational and mental exercise; so the main goal of the present study was to ascertain the impact of this training in reduction of state and trait anxiety. This one was a longitudinal study carried out through quasi-experimental research design. A sample of 200 B.P.Ed students was chosen from different teacher education institutions of West Bengal by stratified random sampling technique The State-Trait Anxiety Inventory (STAI) designed by Spielberger, Gorsuch, Lushane, Vagg and Jacobs (1983) was administered on the sample in three different phases – at the beginning, in the middle and at the end of the session. From the Paired Samples “t” - test it was observed that there was statistically significant decrease in the mean of the State Anxiety Scores of STAI from the 1st phase (M = 76.22) to the 2nd phase of testing (M = 39.47) and again to the 3rd phase of testing (M = 36.59). Again, the means of the trait Anxiety Scores of STAI remained statistically unchanged from the 1st phase (M = 44.45) to the 2nd phase of testing (M = 43.69), but there was statistically significant decrease in the 3rd phase of testing (M = 41.57).*

Keywords— *Anxiety, State and Trait Anxiety, Likert type scale, Physical Education Teachers' Training Programme, Experimental Research.*

I. INTRODUCTION

Anxiety – an uneasy, fearful feeling – is the hallmark of many psychological disorders. It is often concealed and reduced by defensive behaviours such as avoidance or ritualistic action (hand washing, and other obsessive- compulsive reaction, phobic reaction, etc. for example). Anxiety is defined as an un-pleasurable emotional state, associated with psycho-physiological changes in response to an intra-psychic conflict.

Therefore, anxiety is often a diffuse, unpleasant and uncomfortable feeling of apprehension, accompanied by one or more bodily sensations that characteristically recur in the same manner in the person. It an alerting signal that warns an individual of impending danger and enable him to take measure to deal with. Anxiety and fear may exist simultaneously or follow each other. Anxiety or fear arousing stimulus may be internal, external, immediate or future, definite or vague, conflictual or non-conflictual in nature. One can, however, differentiate anxiety from fear, in that, in fear no conflict is involved and the threat is known. According to Hallam (1992) [1], anxiety is a word used in everyday conversation, and refers to a complex relationship between a person and his situation. It may refer to – (a) The behaviour of a person , (b) His appraisal of the responses and their effects, (c) His intentions towards a situation and (d) His evaluation of the resources available for dealing with it.

A particularly low response threshold for anxiety in evaluative situation characterizes test anxious students. As a result, they tend to react with threat perceptions, reduce feelings of self-efficacy, self-derogatory conditions; anticipatory failure attributions and more intense emotional reactions and arousal at the very first sign of failure. Test-anxious behaviour is typically evoked when a person believes that his/her intellectual, motivational and social capabilities are affected by the test situation (Sarason and Sarason, 1990) [2].

Anxiety is mind or body's natural response to a threat. Actually at the time of threat body triggers a number of physical and mental reactions. These reactions can be organized into three categories. Each category is connected to the others. Anything that can be done to lessen one reaction will lessen the impact of the other two categories. There are three categories of reactions are Physical (somatic), Emotional and Mental (cognitive)

Physical (somatic) reaction is the easiest place to start. Both the person concerned suffering from test anxiety and others around him can observe these symptoms. Common physical responses to test anxiety are (a) Changes in body temperature, (b) Breathing problems (tightness in chest, breathing too quickly), (c) Muscular responses (stiffness in muscles), (d) Abdominal problems (an upset stomach, feeling queasy, nausea), (e) Headache/sensory responses (dizziness, light headedness, blurred vision), (f) Cardiovascular reactions (palpitations or tightness in chest, an increase in blood pressure) etc.

Emotional responses can include (a) Mood changes, (b) Emotionally unstable responses, (c) Feelings of losing control etc. These emotional factors can override other bodily functions and can easily lead a student to avoid a task completely due to an obsessive-compulsive reaction or a panic attack or a full-fledged phobia.

Mental (cognitive) responses to test anxiety include (a) Irrational thinking, (b) Feelings of failure or rejection, (c) Forgetfulness and memory loss, (d) Loss of concentration and focus etc. These symptoms are due to negative thinking (fear of impending failure) rather than positive thinking (hope for success) and take control of the brain.

1.1 Physical Activities in Anxiety Management :

Physical activities, more specifically physical exercises, have positive impact on decreasing anxiety and depression. Participating in physical activities initiates a feeling of wellbeing and good mental health. According to the opinion of the psychologists, physical energy affects mental energy (Garachidagi & Fotuhi, 1993) [3].

Anderson et al (1997) [4] conducted a study to ascertain the effect of physical exercise on depressed patients. The experimental group participated in a 24-week programme of exercise. The result shows that the experimental group had a "decreased or low score depression" in comparison with the controlled group. Wyshak (2001) [5] also reported that physical exercises had decreased depression and other mental problems of university women students.

Respiratory exercises for two times in a week, each time for 25 to 30 minutes, for 10 weeks caused fitness of body and decreased depression and anxiety of depressed, anxious and aggressive persons (Norris, et al 1999) [6].

1.2 Physical Education :

Physical education is an important educational process that has as its aim the improvement of human performance and enhancement of human development through the medium of physical activities to realize this outcome. It is a vital element in a comprehensive well balanced curriculum and can be a major contributing factor in the development of an individual in all aspects of life: physical, emotional, mental and social. Physical education with its wide varied rich store of activities and its contributions towards attainment of the desired human objectives, has found the rightful place in the world of education.

Teachers training courses in physical education i.e. B.P.Ed. is an intensive training course in physical education. Both pedagogical and physical activities are included in the curriculum of B.P.Ed. Course. The impact of this course on the development of some psychological and physical characteristics has been studied earlier by several researchers. Adhikari, 2008 [7]; 2010 [8] and 2010a [9]

II. OBJECTIVE OF THE STUDY

We know it very well that B. P. Ed. Course (one-year teachers training programme in Physical Education) has tremendous impact on physical and psychological development of the prospective teachers in Physical Education. However, related literature reveals that there are only a few studies to probe into the effect of B. P. Ed. Course on psychosomatic development on scientific footing. The present study is designed to explore the impact of B. P. Ed. Course on the management of state and trait anxiety.

III. METHOD

The present study was carried out through the method of experimental research with one-group Pre-test – Post-test design. The details regarding sample, tools, procedure of data collection and statistical technique are reported herewith.

3.1 Participants: Colleges and University Departments, imparting B.P.Ed. Course in West Bengal were our source of sample. Total sample size of the present study was 200 B.P.Ed students. Stratified Random Sampling Technique was adopted in drawing sample. Only Bengali speaking subjects were taken.

3.2 Research Tool : The State-Trait Anxiety Inventory (STAI) [10]: This inventory was designed by Spielberger, Gorsuch, Lushane, Vagg and Jacobs (1983) not only for the assessment of the anxiety loading of the individual but also for the distinction of two aspects of anxiety viz. state anxiety and trait anxiety. **State Anxiety** is conceptualised as a transitory level of anxiety, which is often situationally determined and fluctuates with time and circumstances, whereas, **Trait Anxiety** is regarded as a latent predisposition, which is relatively stable and can be triggered by appropriate stimuli. This is considered as basic anxiety level.

STAI is a self-evaluation questionnaire. Both of the two parts of the inventory contains 20 items each. Items of

this scale have been constructed in reverse- and non-reverse-keyed format, and instructions are given asking participants to rate their agreement with a statement on 4-point "Likert type scale".

3.3 Procedure: "STAI" was administered on the subjects in three different phases during an academic session and the responses were scored as per scoring procedure, prescribed in the manual. The tool was administered in three phases –

a) In the first phase, the test was administered at the beginning of the B.P.Ed. course (in the 1st week of July, 2006); b) In the second phase the same test was administered in the middle of the course (in the 3rd week of November, 2006); and c) In the final phase the same test was administered in the completion of the course (i.e. 1st week of April, 2007 before study leave).

3.4 Statistical Analysis: Paired Samples "t" - test was done with the help of SPSS 13.0 software.

IV. RESULTS

Results Relating to Management of Anxiety

From the Table-1 it is observed that the means of the State Anxiety scores in the 1st phase of testing was 76.22, in the 2nd phase of testing was 39.47 and in the 3rd phase of testing was 36.59. Again, the means of the Trait Anxiety scores in the 1st phase of testing was 44.45, in the 2nd phase of testing was 43.69 and in the 3rd phase of testing was 41.57.

Table-1: Paired Samples Statistics of Scores in Anxiety Types of Different Phases of Study

Pair	Anxiety	Mean	N	S.D.
Pair ₁	State ₁	76.22	200	32.66
	State ₂	39.47	200	7.28
Pair ₂	State ₂	39.47	200	7.28
	State ₃	36.59	200	6.45
Pair ₃	State ₁	76.22	200	32.66
	State ₃	36.59	200	6.45
Pair ₄	Trait ₁	44.45	200	8.57
	Trait ₂	43.69	200	5.72
Pair ₅	Trait ₂	43.69	200	5.72
	Trait ₃	41.57	200	5.31
Pair ₆	Trait ₁	44.45	200	8.57
	Trait ₃	41.57	200	5.31

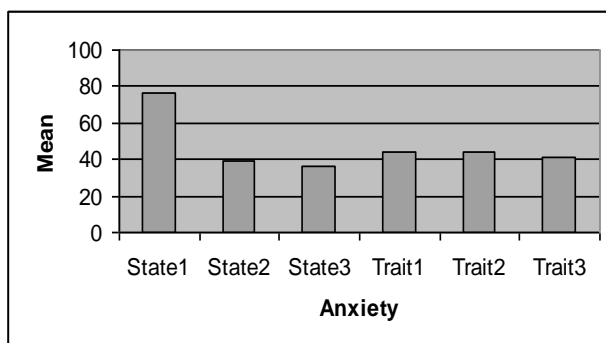


Figure - 1: Mean of Anxiety (State & Trait) Scores in Different Phases of Study

From Table - 2 it is observed that the coefficients of correlations between the scores in State Anxiety the 1st & 2nd phase of testing was 0.214 and between the 2nd & 3rd phase of testing was 0.959. It is also observed that the coefficients of correlations between the scores in Trait Anxiety the 1st & 2nd phase of testing was 0.591 and between the 2nd & 3rd phase of testing was 0.914. All correlations were highly significant (statistically).

Table-2: Paired Samples Correlations among Scores in Anxiety Facets of Different Phases of Study

Pair	Anxiety	N	Correlation	Sig.
Pair ₁	State ₁ & State ₂	200	0.214	0.002
Pair ₂	State ₂ & State ₃	200	0.959	0.000
Pair ₃	Trait ₁ & Trait ₂	200	0.591	0.000
Pair ₄	Trait ₂ & Trait ₃	200	0.914	0.000

From table - 3 it is observed that State Anxiety decreased significantly from 1st phase of testing to the 2nd phase; again from 2nd phase to 3rd phase also. In case of Trait Anxiety there was no significant change from 1st

phase of testing to the 2nd phase; but there was significant decrease from 2nd phase to 3rd phase.

Table-3: Paired Samples Test among Scored in Anxiety Facets of Different Phases of Study

Pair	Anxiety	Paired Differences		t	Sig. 2-tailed
		Mean	S.D.		
Pair ₁	State ₁ -State ₂	36.75	31.91	16.287	0.000
Pair ₂	State ₂ -State ₃	2.88	2.14	19.097	0.000
Pair ₃	State ₁ -State ₃	39.63	31.45	17.821	0.000
Pair ₄	Trait ₁ -Trait ₂	0.76	6.94	01.538	0.126
Pair ₅	Trait ₂ -Trait ₃	2.12	2.32	12.899	0.000
Pair ₆	Trait ₁ -Trait ₃	2.88	7.60	5.349	0.000

V. DISCUSSION AND CONCLUSION

In the first phase, the test was administered at the beginning of the B.P.Ed. Course (in the 1st week of July) the scores on the STAI actually exhibited the entry behaviour. After some time of running of the course in the second phase the same test was administered. No statistically significant difference was observed between the means of the Trait Anxiety Scores obtained in the two different phases of administration. Actually, the students of this physical education course come from several backgrounds to a new type of education. At first they tried to be accustomed with the curricular activities (both rigorous physical activities in the playground and class room activities at the same time). So situational anxiety might be higher and this may be the cause of non-change (rather slight increase).

In the final phase, the same test was administered at the completion of the course. The mean of the test scores was significantly (statistically) lower than the previous means. Here the impact of the B.P.Ed. Course on management of State and Trait anxiety may lie actually.

REFERENCES

- [1]. **Hallam, R. (1992).** *Counselling for anxiety problems*. London: Sage publications.
- [2]. **Sarason, I.G. & Sarason, B.R. (1990).** Test anxiety, in h. Lietenberg (ed.) *Hand book of Social and Evaluative Anxiety*, pp 475-96. New York: Plenum Press.
- [3]. **Garachidagi, M. & Fotohi, Z. (1993).** *Peace ethics. (Tr.)*. Yasaman publication of Tehran.
- [4]. **Anderson, A., Kelli, K. & William, T. (1997).** Exercise against depression. *The Physician and medicine*, 26 (10).
- [5]. **Wyshak, G. (2001).** Women college physical activity and self-reports of physician-diagnosed depression and of current symptoms of psychiatric distress. *Journal of Women Health General Based Medicine*, May, 10(4): 363-70
- [6]. **Norris, R.R., Douglas, C. & Cochran R. (1999).** The effect of physical activity and exercise training psychological wellbeing. *Journal of Psychosomatic Research*, 36(10): 55-65.
- [7]. **Adhikari, S. (2008).** Perfectionist Self-Presentation Style of Prospective General as well as Physical Education Teachers. *Indian Psychological Review*, Vol. 71, No. Special Issue.
- [8]. **Adhikari, S. (2010).** Impact of Physical Education Teachers Training Programme on Experience of Purpose of Life. *Indian Psychological Review*, Vol. 74 No. 2 Yr.
- [9]. **Adhikari, S. (2010a).** To Study the Experience of Purpose in Life of Prospective General as well as Physical Education Teachers. *Asian Journal of psychology & Education*, Vol. Vol. 43 No. 3-4 Yr.
- [10]. **Spielberger, C. D., Gorsuch, R., Lushane, R., Vagg, P and Jacobs, G. (1983).** *Manual for State-Trait Anxiety Inventory*. Palo Alto, CA: Consulting Psychologists Press.

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