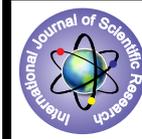


Test Anxiety and Academic Performance of School Students



Psychology

KEYWORDS : Test anxiety, Academic achievement, High, Low anxiety.

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ABSTRACT

The present study aimed to investigate the effects of test anxiety on academic achievement of school students. The respondents comprised of 100 school students (50 boys and 50 girls) studying in class XI, selected by random basis from different high schools of Ranchi town. Sarason's Test Anxiety Scale for Children (TASC) was used to assess test anxiety and percentage of total marks obtain by the students in their Board exam was considered as the academic achievement score. They were classified into three groups, high moderate and low anxiety group on the basis of there score obtained in the test anxiety scale. The results revealed that there was a significant difference in academic achievement of high, middle and low test anxiety group. Male students showed a higher percentage in moderate level of test anxiety whereas female students had higher level of test anxiety than males.

Introduction

Test anxiety has become a more frequently studied construct in educational psychology and a primary concern in the testing and assessment field. Zeidner (1988) defines test anxiety as the set of phenomenological, physiological and behavioural responses that accompany concern about possible negative consequences or failure on an exam or similar evaluative situations.

Mc Donald (2001) defined test anxiety as the experiences of marked psychological distress when faced with evaluative situation. Spielberger (1966) described test anxiety as an 'ego threat' including fear of judgment, damage of self esteem and negative outcomes of testing. DSM-IV-TR; (2000) indicated that test anxiety most closely aligns with the classification of social phobia which centers on the fear of performance in social situations due to the threat of embarrassment. A considerable amount of theory based research has been conducted by Sarason (1975, 1980 & 1986); Spielberger, 1975 and Wine, 1980. A number of conclusions were drawn from findings of the previous researches. First, high test anxious students tends to perform more poorly on cognitive tasks than do low test anxious students. Second, high test anxious subjects tend to report a greater incidence of task relevant thoughts during performances. Third, differences in performance among high and low test anxious students are enhanced if the task is difficult or complex.

According to Liebert and Morris (1967) there were two distinguishable components of test anxiety, one cognitive and the other emotional. The cognitive component, which they have labeled as "worry" was identified cognitive concern about one's performance (e.g., thinking about the consequences of failure. The "emotionality" component referred to autonomic or physiological reactions that occur in the test situation. Worry scores show a consistent negative relationship to performance expectancies, as well as to actual performance on cognitive tasks. In contrast no consistent relationship has been found between emotionality scores and subjects performance expectancies or actual performance. Wine (1980) has suggested that test anxious subjects perform poorly during task performance because they tend to divide their attention between self-relevant and task relevant matters. In contrast, low-anxious subjects focus more of their attention on the task at hand.

Test anxiety in general expected to have negative effect on performance. High anxiety is experienced before the examination in all the students specially when they are pressured to make high scores in the examination, their anxiety is found to increase (Defenbacher, 1978). Research findings outlined the different explanations of test anxiety including cognitive deficits, poor study skills, high personal standards, high expectation and differences in personality. Tobias (1985) proposed that previous low test scores are caused by inadequate study skills, which in tern caused test anxiety. Research investigating the causes of test anxiety has led to two models, the interferences model and the skill deficit modal (Birenbaum, 2007). The interference model states that anxious students are plagued by worry that interference with

their ability to retrieve information during a test. The skill deficit model states that high anxious students' problems occur before the test in the form of inadequate learning that results in poor performances. Thus test anxiety is simply an emotion that results from an awareness of being unprepared for the test.

Numerous studies have suggested that students who experience test anxiety performed more poorly on examination than their less anxious peers Abu-Rabia, 2004; Fengquiang et.al. 2006; Sena, et.al. 2007; Putwain, 2008; Putwain et.al. 2010; Weems et.al. 2010.

Sarason (1975) argued that test anxiety is a major devastating factor for all academic performance from elementary level to university level. Spielberger and Vagg (1955) suggested that test anxiety is one of the variable that are most commonly related to poor performance among students. High standards and greater accountability have contributed to an alarming rise in test anxiety in students, Drummond (1996), Cassady and Johnson (2002) observed that low and moderate level of anxiety have been associated with significantly high achievement scores. Students with low test anxiety do not worry and are able to concentrate on their test performance. Previous research indicates that high level of test anxiety in children contributes to the development of detrimental motivation, self depreciation and conformity, negative evaluation difficulty in concentrating and off-task thoughts (Zatz & Chasin, 1985). Vitasari, et.al (2010) observed that as the difficulty level of the test increases, the performance of the high as compared to the low anxious person progressively deteriorates. Sarason (1975) believed that test anxiety is a kind of self occupation which is identified with inferiority complex and doubt about one's ability and often results in lack of concentration, adverse physiological reactions and academic performance failure. Mokashi (2007) reported that anxious children display poorer recall than less anxiety children and it is believed that the anxiety creates distraction stimulation that deflects attention from relevant incoming information and therefore impairs memory and intellectual abilities. The degree of anxiety associated with intellectual mastery occurs under two conditions – when expectancy of success or failure is moderate and when motivation is high but expectancy of success is low. In the first instance the child was maximally uncertain about how he will perform on a test and this uncertainty generates anxiety. The child would be much less anxious if he knew definitely he would pass or fail the child values competence on a particular intellectual task but expects to fail, anxiety is likely to be generated.

Research has consistently found gender difference in test anxiety (Zeidner, 1998; Chapell et al., 2005 & Sharma & Gandhi, 1971) with female participants scoring higher than male participants on self report measures of test anxiety (Sena et.al.2007; Costello et.al, 2003 & Soffer, 2008).

Objective

To examine the effects of test anxiety on academic performance of high school students and to see which sex had more test anxiety.

Sample

Fifteen to eighteen year old adolescents studying in class XII belonging to middle income families comprises the sample for the present study. Out of 100 adolescents 50 were males 50 were females. They were randomly selected from different schools of Ranchi town.

Instruments

- (i) Hindi adaptation of Sarason’s test anxiety scale for children (TASC) by Kumar (1985) was used to measure test anxiety of the school students. The test consists of 30 items of Yes/ No type. The total number of yes answers denote the raw scores of test anxiety.
- (ii) The percentage of total marks obtained by the students in their Board exam was considered as the academic achievement score.

Procedure

The test anxiety scale was administered on students with proper instruction. Scoring was done with the help of scoring key. On the basis of their scores of TASC, they were categorized as the high, middle and low test anxious group. Students whose total score was one standard deviation or more above the mean, formed the high anxiety group students whose test anxiety scores were one standard deviation or more below the mean formed the low anxiety group and students with score between the high and low groups formed the moderate group. Statistical analysis were performed using SPSS programmed (14.0 version). Descriptive statistics, including mean, SD and percentage were used for group comparisons. t – test was done to find out the difference between sub-groups.

Result and Discussion

The data have been analyzed according to aim hypothesis of the research. Table – I, Table – II, Table – III and Table – IV present the results of the study.

Table – I

Extent of Test Anxiety among adolescents

Level of Test Anxiety	Male		Female		Total	
	N	%	N	%	N	%
High	20	40	30	60	50	50
Moderate	20	40	10	20	30	60
Low	10	20	10	20	20	20

Maximum students (50%) showed high level of anxiety. Male students have shown greater extent of moderate level of anxiety (40%), where as female students exhibit more high level of anxiety (60%). Male and female had similar level of low anxiety.

Table – II (a)

Comparison among high, middle and low anxiety male and female group on academic achievement scores.

Test Anxiety									
Groups	Low			Moderate			High		
	N	Mean	SD	N	Mean	SD	N	Mean	SD
Male (N = 50)	10	42.3	6.71	20	63.8	5.63	20	45.35	3.95
Female (N = 50)	10	44.5	2.33	10	65.2	9.96	30	45.57	10.09

Table – II (b)

Group Compared	t	P value
Low Vs High anxiety male	0.45	NS
Low Vs High anxiety female	0.67	NS
Low Vs Middle anxiety male	6.39**	0.01
Low Vs Middle anxiety female	8.70**	0.01
High Vs Middle anxiety male	5.06**	0.01
High Vs Middle anxiety female	10.42**	0.01

The result showed that there was a significant difference in academic achievement among high, middle and low test anxiety group. It was observed that students with high as well as low anxiety group had lower academic performance and students with moderate level of test anxiety had comparatively better academic achievement. The result was supported by earlier findings by Goldman (1971), Tobias (1979) and Sarason (1980). Abolghasemi (1999) reported that moderate anxiety motivate individuals to make an appropriate and timely effort to achieve a goal. It seems clear from this findings that high anxious students perceived examination situations as dangerous or threatening and become worried and anxious.

Table – III

Comparison between male and female adolescents on test anxiety scale.

Group	N	Mean	SD	M.D	t
Male	50	19.21	4.28	3.28	0.01
Female	50	22.46	4.87		

The result given in Table – III indicate significant gender difference in the test anxiety level of students (t = 0.01; p = <0.01). The female students reported higher level of test anxiety as compared to the male student. The results are agreement with earlier findings of Soffer (2008), Keeves (1985), and Chapell et.al (2005).

Table – IV

Correlation coefficient between test anxiety and academic achievement

	N	r	P
Male	50	-0.56	0.01
Female	50	-0.13	0.01
Total	100	-0.54	0.01

The result showed that test anxiety was negativity correlated with academic achievement (r = -0.54), which indicates that academic achievement is low when test anxiety is high. Similar relationship between test anxiety and academic achievement was revealed by other investigators (Yousefi et.al, 2010 & Vitasari, et.al. 2010). They found that individuals with high levels of anxiety tend to do worse on cognitive tests.

Conclusion

- The findings of the present research suggest that test anxiety adversely affects the performance of the school students.
- Female students have higher percentage in high level of test anxiety than male students.

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