A Study on Measuring Examination Anxiety in School Children

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Abstract

The study was conducted to measure total test anxiety among adolescents. A cross sectional experimental study was carried out comprising of low-middle socioeconomic status of co-ed school in Delhi, where in 165 school children of (9th, STD) were chosen out of which 65 were male and 65 (50%) were female students. The sample was divided into Group A 10 - 14 yrs and Group B 15 - 18 yrs. Friedman and Benda-Jacob's Test Anxiety Scale (23 items-3 sub-factors) was used in this study. Results indicated that both girls and boys showed examination anxiety (e.g. > 7). Higher scores were seen in Group B (15 - 19 yrs) in both boys and girls but P values were not significant. Total anxiety score was higher in girls but not significant and also it was seen that there was no significant difference in the sub-scores. The conclusion is that both girls and boys showed examination anxiety but are not significant enough though.

Keywords: Adolescents; Exam Anxiety; Gender Differences

Introduction

Anxiety is a phenomenon that people frequently encounter in their daily life. Anxiety can be described as the tense, unsettling anticipation of a threatening but vague event; a feeling of uneasy suspense [1]. As a result of the nature of anxiety, researchers have provided a classification of this phenomenon into different sub-categories (e.g. language anxiety, speech anxiety, social anxiety,), we will concentrate on one of these categories, namely, test anxiety.

Test anxiety is a combination of physiological over-arousal, tension and somatic symptoms, along with worry, dread, fear of failure, and catastrophizing, that occur before or during test situations [2]. It is a physiological condition in which people experience extreme stress, anxiety, and discomfort during and/or before taking a test. Researchers suggest that between 25 and 40 percent of students experience test anxiety. Test anxiety may occurs as a result of a bad individual's self-concept of academic ability when the students believed they will fail or perform poorly in the examination" Also, infrequent test preparation, high-stake examinations and discomfort with testing situation will lead to test anxiety. Test anxiety is one of the most devastating factors in educational institutes and other sittings where examining is being conducted.

Negative consequences of Exam Anxiety

This anxiety creates significant barriers to learning and performance [3]. High test anxiety has been discovered to be associated with low self-esteem, inadequate studying and accomplishment, failing grades, troublesome classroom actions and adverse behaviour toward school as a result of an intense fear of failure. Although everybody feels occasional stress when evaluated, test anxiety represents a constant personality predisposition in evaluative situations. Research suggests that high levels of emotional distress have a direct correlation to reduced academic performance and higher overall student drop-out rates. Test anxiety can have broader consequences, negatively affecting a student's social, emotional and behavioral development, as well as their feelings about themselves and school [4]. It is known to develop into a vicious cycle. After experiencing test anxiety on one test, the student may become so fearful of it happening again they become more anxious and upset than they would normally, or even than they experienced on the previous test. If the cycle continues without acknowledgement, or the student seeking help, the student may begin to feel helpless in the situation.

The results of researches about test anxiety revealed that consists of multiple affective, intellectual, physical, and behavioral components; can adversely affect achievement of difficult tasks; and adversely related to students' academic performance [5]. Twenty percent of test anxious students quit school before graduating because of repeated failure. Test anxiety is associated with fear of negative assessment, inadequate study skills, inadequate test achievement and perfectionism. Certain studies carried reports that some students even consider suicide due to being preoccupied with the test.

Review of Literature

Test anxiety as a phenomenon has received considerable attention since 1950s. It is considered to be a common educational problem, referring to a situation when students do not feel confident about their abilities, which is reflected especially in their performance and tests results.

Currently, it is challenging to estimate the number of students who are facing with test anxiety because of the lack of a large-scale epidemiological study [2]. Previous studies have reported the anxiety rate of 10% to 25% or 30% among elementary and secondary school students, although more recently, the anxiety rates were found to be much higher than 33% among school children and adolescents affected [6,7], and lately the approximation of 40% of students have been mentioned [4,8,9].

As we see from Zeidner's statement, test anxiety is strongly related to failure consequences. This connection can be noticed even in (Sarason and Sarason, 1990) stated that when the individual is not in an evaluation situation, or anticipating one, the highly test anxious individual may not worry about possibilities of failure, embarrassment and social rejection. But in evaluation situations these possibilities become active. We should also emphasize the fact that students who suffer from test anxiety do not necessarily lack in intellect or drive.

The Relationship between Test Anxiety and Academic Achievement was examined by Rizwan Akram and Nasir Mahmood, where a sample of 414 students was randomly selected from seven different science departments in a public sector university in Lahore, Pakistan. They found a significant negative relationship exists between test anxiety scores and students' achievement scores. Results showed that a cognitive factor (worry) contributes more in test anxiety than affective factors (emotional). Therefore, it is concluded that test anxiety is one of the factors which are responsible for students' underachievement and low performance but it can be managed by appropriate training of students in dealing with factors causing test.

Literature on test anxiety shows that some of the factors that influence students' reactions to tests are related to test validity, time limit, test techniques, test format, length, testing environment and clarity of test instructions (Young, 1999).

Apart from these factors, we should mention Hembree's study [10]. He found that the conditions that give rise to differential test anxiety levels include ability, gender and school grade level. Other research has suggested a difference in anxiety responses between males and females (King., *et al.* 2000); with females generally self-reporting higher levels of test anxiety symptoms than males. Cole, Truglio, and Peek (1999) in assertion of a fore mentioned studies, found that female students mentioned elevated levels of anxiety and depression and also devalue their academic competence, while male students showed a reversed trend and overvalued their competency (Locker and Cropley, 2004). Consistent with previous research, some other studies also showed that both female undergraduate and graduate students experience more test anxiety than male counterparts in spite of having higher GPAs than male students [2,10].

The question as to why females undergo higher test anxiety compared to males remains to be unanswered. It is stated that women may become more concerned about their personal inadequacies than men and as a result, experience more worry and discomfort in evaluative conditions due to the increased degree of public self-consciousness.From this point of view, it would be important to consider the role of gender when interpreting the results from outcome measures of self reported test anxiety.

As one of the important concerns in test anxiety research is the reduction of test anxiety levels. Tests have now become a common occurrence in modern day education programs and certainly in this day, almost all individuals experience tests at least once in their academic life [2]. Bradely., *et al.* [11] mentioned that these are serious information and would be a big challenge for educators to know how to prepare students for examinations properly, which reflect their best academic abilities and capabilities.

The study was intended to find out various components of anxiety among adolescents in schools. So that coping strategies based on results can be included in "Life Skills Education Program" and even specific program can be planned. In India such kind of studies are handful, so this study might enhance our knowledge about test anxiety among adolescents and help the school authority to guide the need based education programs .

Objectives

Following objectives are outlined from this study.

1. To Measure total test anxiety score among adolescents.
2. To Measure components of test anxiety among adolescents.
3. To measure difference in test anxiety score among boys and girls.

Methodology

Type of Study: It is a Cross sectional experimental study.

Reference Population: Students of class ninth standard belonging to low-middle socioeconomic status co-ed school in Delhi will be taken. Total numbers of students are 130.

Tools Used

Fried-Ben Test Anxiety Scale (FTAS) by Friedman and Bendas-Jacob (1997) with cronbach alpha – 0.82. This scale has 26 items dispersed in three dimensions namely social derogation, cognitive obstruction and tenseness with 6-point rating scale starting from '1' does not characterize me to '5' characterizes me well. Social derogation refers to the worries of being socially belittled and criticized by noteworthy others after a failure on tests while cognitive obstruction specifies a disturbed concentration, difficulty in recall, troubles in effective problem solving, before or during a stringent test and tenseness refers to the physical and affective discomfort.

- Questions 1 - 8 measure social derogation,
- Question 9 - 17 measure cognitive blocking,
- Question 18 - 23 measure tenseness.

Procedure

Aim and objectives were explained to the Principal. Data collection procedure was explained to the Principal. Written consent and assent from students were taken after explaining purpose of the study and objectives to them. Students were asked to fill up the questionnaire after explanation.

Statistical Analysis

Data for the present research was analysed using Statistical package for social science (SPSS) version 20. In the present study descriptive and correlation along with t – test along with bar graph and pie chart was performed in order to attain the result

Results

The study was done on 130 students of class IX standard which included 65 boys and 65 girls each from low-middle socioeconomic status co-ed school in Delhi.

Age (yrs)	Frequency	Percentage
10 - 14 (Group A)	70	54
15 - 18 (Group B)	60	46
Sex	Frequency	Percentage
F	65	50%
M	65	50%
Total	130	100%

***Table 1:** Showing distribution of students according to age.*

Maximum number of students were in the age group of 10-14years representing 54% of total number of students. The youngest student was 12 year old and the oldest was 18 years. Average age was 14 years.

Total sample Girls	Total exam anxiety	Social derogation	Cognitive Blocking	Nervous Tension
	TEA	SD	CB	NT
Girls (10 to 14 yrs)	12.73	4.51	4.57	3.65
Girls (15 to 18 yrs)	13.31	4.46	4.77	4.08
Total	12.88	4.5	4.62	3.76

Table 2: *Total Samples Girls: Sub score: Exam Anxiety.*

Average TEA, CB and NT are higher in older age group girls.
Where as SD score was higher in the Younger age group
Differences are not statistically significant.

Total sample Boys	Total exam anxiety	Social derogation	Cognitive Blocking	Nervous Tension
	TEA	SD	CB	NT
Boys 10 to 14 yrs.	11.65	3.9	4.48	3.28
Boys 15 to 18 yrs.	12.65	4.46	4.78	3.41
Total	12.13	4.17	4.62	3.34

Table 3: *Total Samples Boys : Sub score: Exam Anxiety.*

All scores - Average TEA, SD,CB and NT are higher in older age group
Differences are not statistically significant

Discussion

In our study, total number of students was 130 with males and females 65 each. Total number of students were divided into two groups. Group A (10 - 14 years) and Group B (15 - 18 years). Total number of students in Group A and Group B were 70 and 60 corresponding to 54% and 46% respectively. The youngest patient was 12 year old and the oldest was 18 years. Average age was 14 years.

There was significant Examination anxiety level found (e.g. > 7) in our sample comprising of girls and boys. In girls Average 'Total Exam Anxiety score' in girls of Group A (10 - 14 years) was 12.73 whereas for the Group B (15 - 19 years) was 13.31 though, this difference is not significant with p-value 0.764. Average 'Total Exam Anxiety score' in boys of group A (10 - 14 years) was 11.65 whereas for the Group B (15 - 19 years) was 12.65. This difference is statistically not significant with p-value 0.333. Total anxiety scores seemed higher in older age group and more in girls. Reason for being higher in older age can be due to two reasons that with increase in age and standard the academic load is increased and with increased maturity students are aware of repercussions about exam result which gives them more anxiety.

The average 'Social Derogation' score in girls of group A was 4.51 and 4.46 in group B with the p-value of 0.726 indicating no significant difference. The average 'Social Derogation' score in boys of group A was 3.9 and 4.46 in group B with the p-value of 0.497 indicating no significant difference. There was no difference in older age group in boys and girls but more in girls of younger age group as Girls tend to have more emotional problems, particularly vis a vis "what others will say". As the age increases they learn to handle social derogation (SD) related to body image and hence could handle SD related to Exam results.

The average 'Cognitive Blocking' score of girls was 4.57 in group A and 4.77 in Group B; with p-value of 0.975; indicating that the difference is statistically not significant. The average 'Cognitive Blocking' score was 4.48 and 4.78 in Group B; with p-value of 0.773; indicating that the difference is statistically not significant. Total CB scores seemed slightly higher in older age group. At this stage of education there is much material to recall, and so they tend to "blank out" more that could be one of the reason.

The average 'Nervous Tension' score in girls was 3.28 in group A and 3.41 in Group B with p-value 0.588 This indicates that there is no significant difference between age groups. The average 'Nervous Tension' score in boys was 3.08 in group A and 3.24 in Group B with p-value 0.385. This indicates that there is no significant difference between age groups. Total nervous tension scores seemed higher in older age group and more so in girls. Girls are more sincere in academics and also appear to get tense sooner than boys .hence more concerned about exams than boys. They are also more prone to nervous tension related problems like writers cramp, nausea, headaches, etc Reason for being higher in older age can be due to two reasons that with increase in age and standard the academic load is increased and with increased maturity students are aware of repercussions about exam result which gives them more anxiety [12-18].

Conclusion

The study population comprised of 130 students of class ninth, comprising 65 boys and 65 girls Students were taken from Dev Samaj Senior Secondary School Delhi, It is located in a town and Majority of the students come from low-middle socioeconomic status.

There was significant Examination anxiety (e.g. > 7) in our sample both in girls and boys. Higher scores were seen in Group B (15 - 19 yrs) in both boys and girls but P values were not significant. Total anxiety score was higher in girls but not statistically significant.

On comparing the Exam anxiety scores and sub-scores of Social Derogation, Cognitive blocking and Nervous tension with Age and gender, we did not find any statistically significant difference.

Schools with the full support of families and community are currently the best place to develop comprehensive programs like health education programme, the aim of school based interventions was to provide an experience that would strengthen the children's coping abilities to encounter environmental stress and disadvantages with which they have had to cope in growing up.

Measuring Exam anxiety with a standardized tool helps to assess the area in which the children have anxiety so as to plan customizes interventions. It helps in planning to have workshops not only with the students but with parents and teachers also so that they can guide their children to do well in examinations without putting pressure on them that increases anxiety.

Depending upon the area of anxiety we can plan customized intervention e.g. if scores are high in sub score Social derogation. It become important to learn handling social pressure which is possible by Life skill education (LSE) program. This Programs help to boost self esteem and help them to learn "How to handle Peer Pressure".

If we found scores high in Nervous tension subscore then also Life Skills Education Program role is important. Following things can be planned to decrease nervous tension

1. LSE to learn to cope with emotions and stress
2. Teach various Relaxation Techniques like: PMR (Progressive Muscular Relaxation), Meditation, deep breathing exercises, Visual imagery.

If we found exam anxiety is more in Cognitive blocking subscore, this can be improved by teaching various techniques to improve study habits: e.g. Mnemonics', Time Management, Visual Recall etc.

Study has been able to identify the different areas of examination anxiety which has helped the school authority to plan customized intervention.

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