



Effectiveness of Exam Anxiety Reduction Intervention among Adolescents

N.Suresh Kumar

(Ph.D), Assistant Professor cum Clinical Psychologist. Department of Psychiatry, Madurai Medical College, Madurai-20.

Dr.RajaKumari

Assistant Professor, Department of Psychology, Government Arts College, Coimbatore-12.

M.Nithyanandan

Associate Professor in Nursing, College of Nursing, Madras Medical College, Chennai-3.

ABSTRACT All of us experiences anxiety in our daily life. This study intends to estimate exam anxiety among the students studying in the selected Government higher secondary school at Madurai. The objectives are to assess the level of exam anxiety before and after exam anxiety reduction intervention, to evaluate the effectiveness of exam anxiety reduction intervention and to associate exam anxiety scores of the adolescents with selected demographic variables. Charles Spielberger's (1980) Test Anxiety Inventory was used for this study. 50 students who met the inclusion and exclusion criteria was included in the analysis. Paired sample t-test was conducted to test the effectiveness and chi-square analysis was carried over to test the association among socio-demographic variables. The study showed that exam anxiety was identified in the pretest 26 (52%) adolescents with moderate level and 21 (42%) of them with Mild level. After the exam anxiety reduction intervention modules (it includes study & learning skills, time management, memory enhancement, and relaxation techniques) the level of exam anxiety among the adolescents was reduced. It was proven by student paired sample t-test method and its t-value is =2.6 and for that concurrent table value 1.96 shows that statistically highly significant at 0.05 level.

KEYWORDS :

INTRODUCTION

Anxiety is one of the most common psychological disorder among the school aged children and adolescents. The prevalence rate ranges from 4.0% to 25% with an average rate of 8% (sheik, 2000). In India parent's high expectations on children's education and related pressure for academic achievement contribute to anxiety among school children. A particularly low respond threshold for anxiety in evaluate situation characterizes test anxious students. Exam anxiety is a serious problem for student population. Almost every student experiences nervousness before or during examination. Some people become so anxious that they do poorly in examination even when they knew the material. Test anxiety can cause poor concentration distraction, mental blocks or physical symptoms such as butterfly in the stomach, sweaty palms or headaches.

The term test anxiety as a scientific construct refers to set of phenomenological physiological and behavioral responses that accompany concerns about negative association with test performance or failure of an exam or a similar evaluation situation. Negative effects of test anxiety on academic performance can be explained by interference model or the learning deficit model. The interference model proposes that anxious students are distracted due to task irrelevant cognition and negative achievements. Whereas the deficit model postulates inefficient and irregular study habits during the time of exam preparation causes them to feel more anxious. Students with high level of test anxiety are more likely to procrastinate and engage in repetition memorization strategies.

THE PREVALENCE OF TEST ANXIETY: Studies estimated wide spread prevalence rate of test anxiety in school and college population. The origin of test anxiety is trace back to lie in the higher academic expectation and pressure from parents and place their children fearing that consequences if they do not meet these expectation

Survey conducted by different researchers revealed that test is a major source of concern for children. Several studies identified "exam as the most frequently reported sources of stress" among 15 and 16 years old boys and girls, According to (Kyriacou and Butcher 1993) and (Gallagher and Miller 1996) and (Yamamoto et al 1998). "Fear of failure and criticism" are the major source of stress for the school children.

TEST ANXIETY AND TEST PERFORMANCE: The studies on of the relationship between anxiety and performance can be traced back to the early 1900s (Yerkes & Dodson 1908). Fear and related anxiety of

actual test may disrupt preparation and may cause distrust during the test to impair performance. This in turn can make the child to take avoidant approach to the test, failing to prepare adequately by denying the importance. Over all, most studies have reported negative correlation between test anxiety and performance, with coefficient of up to -0.5 and -0.6. Sarason 1963, Araki 1992, Crocker 1988 and Rosenthal & Ruban (1982) have studied that a correlation of 0.2 can actually mean a 20% difference in the numbers passing or failing a test. The evidence on the prevalence of test anxiety and the association with performance clearly delineate two main functions, first fear of exams and test situation. Secondly test anxiety has determines effect on test performance.

MANAGING TEST ANXIETY: In general psychological treatment of test anxiety has been proceeding successful in reducing the test anxiety. The most effective management approach to be those that combine skill focused approaches with negative behavior approaches. Individual focused programme along with programme that combine individual and group produce greater changes. Programme that are brief in nature produce higher results. Effective test anxiety reduction intervention programme focus attention on aspects of the problem and possibilities for prevention developmental and remedial action with these views researcher has concentrated exam anxiety reduction intervention module to test the application and its efficacy.

METHODOLOGY

SAMPLE:

The sample size of N=259 who were 10th standard adolescents students in a selected Government school at Madurai in Tamilnadu (India). The samples were administered with text anxiety inventory and 55 students were randomly selected using lottery method. These students were about to face their half-yearly examination during the conduction of the study. Students who shows no interest in the administration and who has chronic illness were excluded from the study. Only 50 samples were included in the analysis for external grounds.

TOOLS ADMINISTERED:

SOCIO DEMOGRAPHIC DATA: This intended to collect the details regarding the participants age, sex. Education of parents, mother tongue, family type, religion, medium of instruction, residence, order of birth

TEST ANXIETY INVENTORY QUESTIONS (SPIELBERGER, 1980): This test comprised of 20 items which having four responses each to evaluate exam anxiety among adolescents. It's score ranges

from maximum of 80 to minimum of 20. The psychometric properties of the test anxiety inventory is undoubted for decades by the psychologist across varied cultures.

INTERVENTION:

The intervention was designed to include the teaching the strategies to improving the study skills, learning skills, time management, memory enhancement, learning and notes taking skills, assertiveness and relaxation methods were demonstrated and the participants were included in the demonstration process. The mixture of these training were provided for the participants daily for 30-40 minutes. The training programme was continued for about four weeks and the post test was conducted.

RESULTS:

Table No. 1: Frequency distribution of socio demographic characteristics of the sample

Characteristics	Demographic Variables	F	Percentage (%)
Age	Early adolescent (13-15 years)	23	46%
	Middle adolescents (15 – 17 years)	15	30%
	Late adolescents (17 – 19 years)	12	24%
Attending to the school	From home	32	64%
	From hostel	18	36%
Religion	Hindu	46	92%
	Muslim	2	4%
	Christian	2	4%
Education of parents	Primary school	20	40%
	High school	17	34%
	Higher secondary	13	26%
Income of the family	Low income 1000-2000/ month	36	72%
	Middle income 3000-5000/ month	14	28%
Family type	Nuclear	27	54%
	Joint	11	22%
	Extended	12	24%
Place of residence	Urban	22	44%
	Rural	28	56%
Order of birth	First	16	32%
	Second	21	42%
	Third	13	26%
No of siblings	One	19	38%
	Two	18	36%
	Three	13	26%

Table 1 showed the socio demographic characteristics of the adolescents with exam anxiety. Nearly half of the study participants belonged to the age group of early adolescence (13-15 years) (46%), middle adolescence 30% and 24% of them were late adolescence. More than half of the students were (64%) attending school from home. Majority of them belonged to Hindu Religion (92%). Parent's education level was (40%) in the Primary school, 72% of them were earning 1000-2000 per month. Majority of the samples lived with Nuclear family (54%). Most of them from rural background (56%), nearly half of the samples (42%) of order birth were second and one third of study population (38%) had one sibling.

Table 2. Distribution of adolescent's exam anxiety level in the pre test N=50

Level of exam anxiety	Pre test		Post test	
	F	%	F	%
Severe exam anxiety (81 – 95)	10	20	3	6
Moderate exam anxiety (61 – 79)	27	54	26	52
Mild exam anxiety (41-60)	13	26	21	42

Table 2 shows the pre and post test level of exam anxiety, in which it is clearly evident that, after the exam anxiety reduction intervention there is decreases in severe level of anxiety from 20% to 6%.

Table No. 3: Comparison of the level of exam anxiety before and after exam anxiety reduction intervention (N = 50)

Variable	Mean	Std. dev	t-value	Sig. (2 tailed)
Pre-test	69.6	9.6	2.6	*1.96
Post-test	63	8		

*Significant at 0.05 level

Table 3 shows the effectiveness of test anxiety reduction intervention, which was statistically significant (t =2.6, P= 0.05*). There is a significant reduction in the level of exam anxiety before and after using Exam Anxiety Reduction Intervention, it is evident that the Exam Anxiety Reduction Programme is very effective.

Table No. 4: Association between post-test level of exam anxiety and demographic variables of the adolescents (N=50)

Demographic variables	Exam anxiety				Chi Square value	Table value	
	Mild	Moderate	Severe	Total			
Age	13-15	18	5	0	23	6.519	*5.99
	15-17	15	0	0	15		
	17-19	12	0	0	12		
Education of parents	Primary	10	7	0	17	8.74	*5.99
	High School	18	2	0	20		
	Higher secondary	12	1	0	13		
Birth order	First	6	10	0	16	6.07	*5.99
	Second	2	19	0	21		
	Third	1	12	0	13		

* Significance at 0.05 Levels

Table 4 shows that there was a significant association between Post Test Exam Anxiety Score and Selected Variable such as Adolescent's age (x²= 6.59 P<0.05) Education of parents (x²=8.74 P<0.05) Family type (x²= 6.8P<0.05) Order of Birth (x²= 6.073 P<0.05).

DISCUSSION:

Attending to the school is one of the indicator helps the adolescents in reducing exam anxiety by coming from family environment. Karolyn M Thompson (2003) investigated in his study that students are attending to the school from home and hostel. In the present study more than half of (64%) adolescents attending school from home and (36%) were from hostel. Education of parents is the factor which helps the adolescents' students during in their exam preparation. A study by Sibnath Deb (2009) reported in his study in Kolkata that around (14.0%) fathers and (34.0%) mothers had no formal university qualifications. In the present study nearly half of the (40%) parent's education status was at primary school level. Income of the family is essential for expenditure to the education of students. A study by Mohanakshi (2007) revealed that (76%) of the family income 80,000 - 1,00,000 per year. In the present study nearly 3/4th of the family (72%) were earning about Rs 1000-2000 per month which also contribute economic burden among the students. Family type of adolescents is one of the vital factor for maintain study habits and helps in preparing exams. A study by Pooja Chatterjee (2009) revealed in her study that two thirds (67%) of the students were from nuclear family and one third (33%) were from joint families. In this study half of the family type (54%) was from nuclear family and one fourth (24%) were from extended family. Place of residence is one of the important factor in bringing up of the children. In this study nearly half of them (56%) from rural background and (44%) were from urban settings. Order of birth is one of the guiding and motivating factors to their siblings. A study by Mohanakshi (2007) found that (50.9%) of the respondents were first born, (31.8%) were second born, and (13.3%) were third born. In the present study nearly half of students (42%) were second born, and (32%) were first born. Siblings of the family were more or less equal in that one sibling (38%) two (36%) and three (20%) are present in this study.

This study reveals that one third of adolescents were with mild anxiety (78.4%) and one fourth of students (21.4%) were with moderate anxiety. This was supported by the study conducted Carrie Abbott (2009) in Ohio reported that least anxious were (32.9%) some anxiety were (27.7%), often anxious were (18.3%) and most anxious was (21.2%). The exam anxiety is common to males and females, students' experience high test anxiety before, during and after the examination. Anxiety coping strategies used to minimize exam anxiety.

The pre-test meanvalue of students on Test anxiety was (M= 69.6; S.D= 9.6) and whereas the score obtained by the students after the intervention programme was (M= 63.0; S.D= 8). For which the Mean

difference value was (M.D= 6.6). Paired sample t-test was carried out to evaluate the effectiveness of the programme and it resulted as ($t=2.6$, $sig.=1.96^*$) which was significant at .05 level. Since the difference between the pre-test and the post-test is significant the alternate hypothesis is accepted. This result shows that the intervention is effective to reduce the test anxiety level of the students. The present findings were consistent with the study done by Ayatollah Karimi and Venkatesan (2009) Mysore, who have implemented cognitive behavioral programme that deliberately worked to reduce exam anxiety.

CONCLUSION:

The present study has identified the level of exam anxiety among the adolescents studying in selected Government school at Madurai. Findings of the current study shown that the moderate level of exam anxiety (54%) and severe (20%) were present. After the intervention program there was a decrease in the severe level of anxiety from 20 % to 6%, proving the efficacy of the intervention. The most effective treatment appears to be those that combined skill focused approaches with behavior or cognitive approaches. Individually conducted programs for group formats produced greatest changes. Programs that were brief and concise produce higher effects.

RECOMMENDATION:

The test anxiety reduction intervention programs have to be developed for primary and high school students for the effective change and produce successful results. Similar study can be undertaken with large number of samples in different setting to strengthen the evidence based practice. To evident the result further study could be carried out along with the control group.

IMPLICATIONS:

The intervention module could be created which includes both the cognitive behavioral approach along with the other therapies such as yogic meditations and breathing practices.

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