ORIGINAL RESEARCH

A study to assess the effectiveness of structured teaching programme (STP) on strategies for reducing test anxiety among school students at selected schools in Bhopal, M.P.

[1]Reetesh Kumar Ahirwar, [2]Joseph Jeganathan

[1]Assistant Professor, Department of Nursing, Mansarovar Nursing College Bhopal, M.P., India
[2]Assistant Professor, Department of Nursing, College of Health and Sports Sciences, University of Bahrain

Corresponding author
Reetesh Kumar Ahirwar
Assistant Professor, Department of Nursing, Mansarovar Nursing College Bhopal, M.P., India
Email: reetesh07ahirwar@gmail.com

ABSTRACT
Aim: A study to assess the effectiveness of structured teaching programme (STP) on strategies for reducing test anxiety among school students at selected schools in Bhopal, M.P. **Material and methods:** The present study was carried out in the School at Bhopal. From the eligible population 60 samples (n=60) were selected by using simple random sampling technique of lottery method. **Results:** The mean percentage of cognitive aspect is 65.84 with standard deviation of 6.01; mean percentage of respondents on psychological aspect is 63.87 with standard deviation of 1.92, mean percentage of respondents on social aspect is 59.3 with 1.85; mean percentage of physiological aspect is 59.12 with standard deviation of 3.4. The overall mean percentage is 63.22 with standard deviation of 10.34 on pre-test test anxiety. **Conclusion:** The present study reveals that there was a significant reduction in test anxiety after giving structured teaching programme on strategies for reducing test anxiety among School Students. It also reveals that there was significant association between post-test test anxiety and demographic variables such as educational status, type of family & place of living.
Keywords: structured teaching programme (STP), Anxiety, school students

INTRODUCTION
Anxiety is a basic human emotion consisting of fear and uncertainty that typically appears when an individual perceives an event as being a threat to the ego or self-esteem. In some instances, such as avoiding dangerous situations, anxiety can be helpful. However when taken to extremes, it may produce unwanted results.[1-5]

Stress comes in all forms and is an unavoidable consequence of life. Transient feeling of anxiety and stress is a part of life for every individual. In the course of normal development transient feeling of anxiety is experienced and usually mastered by every child and adolescent. Anxiety may be focused around certain issues or situation. A mild degree of anxiety and stress may be stimulating, motivating, and may help to overcome stress; but high degree of stress may be disrupting. Adolescence is a transition period that involves physiological, psychological and social changes. Emotional problems such as symptoms of anxiety and depression may develop due to these changes. Although many of these problems may not meet diagnostic thresholds, they may develop into more severe disorders and may have an impact on their functioning.[6-15]

Testing is a primary tool for measuring students' comprehension of course material in many courses. Test anxiety experienced by students may adversely affect the ability of testing to measure student's comprehension of course material.

NEED FOR STUDY
Anxiety can affect each student in different ways; there are several symptoms that are quite common. Some of these are emotional, which include feelings of fear, disappointment, anger, depression, or helplessness. Other symptoms are more behavioral, ranging from fidgeting or pacing to substance abuse or other self-destructive behaviors. There are also physiological symptoms, which include fast heartbeat, feelings of nausea, headaches, sweating, and other disruptions in bodily functions. Finally, many people

experience cognitive symptoms, such as negative thinking about oneself, racing thoughts, loss of memory and "blanking" out.[16-25]

STATEMENT OF THE PROBLEM
"A study to assess the effectiveness of structured teaching programme on strategies for reducing test anxiety among School Students at selected School in Bhopal M.P.".

OBJECTIVES
1. To assess the pre-test level of test anxiety among School Students in selected School.
2. To provide structured teaching programme on strategies for reducing test anxiety among School Students in selected School.
3. To assess the post-test level of test anxiety among School Students in selected School.
4. To compare pre and post-test level of test anxiety among School Students in selected School.
5. To find out the association between the level of post-test test anxiety and selected demographic variables among School Students in selected School.

ASSUMPTION
This study assumes that
1. Test anxiety is a normal phenomenon among University students.
2. Test anxiety negatively affects the performance.
3. Structured teaching programme may help the University students to reduce test Anxiety.

HYPOTHESIS
H1: The post-test mean test anxiety will be significantly less than pre-test mean test anxiety among the University students.
H2: There will be significant association between level of post-test test anxiety and demographic characteristics of University students.

OPERATIONAL DEFINITION
1. Effectiveness:
It means the extent to which the specific intervention strategies adopted by the researcher to achieved the desired objectives.
2. Structured Teaching Programme:
In this study structured teaching programme means a programme of information which includes a class related to test anxiety and strategies for reducing test anxiety to educate the School Students and thereby making an effort to reduce test anxiety.
3. Strategy:
Strategies are the interventional techniques which are used for reducing test anxiety.
4. Test anxiety:
Test anxiety is a psychological condition in which a person experiences distress before, during, or after a test or other assessment to such an extent that this anxiety causes poor performance or interferes with normal learning.

DELIMITATION
1. The study period was limited to 6 weeks.
2. The study was limited to School Students of School, Bhopal, M.P.
3. The study did not use any control group.

RESEARCH METHODOLOGY
RESEARCH APPROACH: This chapter deals with the types of research approach used, setting of the study, the different variables used, the population, sampling technique and sample selection, the inclusion criteria and exclusion criteria, the development of the tool, the validity and the reliability of the tool, the description of the tool, collection of data, pilot study, procedure of data collection and plan for data analysis which was used in assessing the effectiveness of structured teaching programme on strategies for reducing test anxiety among School students.
RESEARCH DESIGN: In this study one group pre-test, post-test quasi-experimental design was adopted.
STUDY SETTING: The present study was carried out in the ----------------School at Bhopal.
POPULATION: Population was School Students in -----------------School at Bhopal.
SAMPLE AND SAMPLE TECHNIQUE: From the eligible population 60 samples (n=60) were selected by using simple random sampling technique of lottery method.

CRITERIA FOR SAMPLE SELECTION
The sample for the study was selected based on the following criteria:
Inclusion criteria
The study includes
- Selected School at Bhopal.
- Both male and female students.
- Students who were willing to participate.

Exclusion criteria
- Students who were absent at the time of data collection.
- Students who were physically ill.

DATA COLLECTION INSTRUMENT
Section 1: Demographic data of the students
This was used to collect information on age, sex, educational status, family income, type of family, religion, medium of instruction in 10th standard, place of living and attending private tuition.
Section 2: Modified Westside Test Anxiety Scale
This was used to collect and record the data on test anxiety of Students. Modified Westside Test Anxiety Scale was developed from Westside Test Anxiety Scale by Richard Driscoll. The Westside Test Anxiety Scale was modified because it consists only 10 items and there is no item regarding physiological symptoms of test anxiety. The modified tool consists

859

of twenty items in a statement form, with a five point rating scale in English. The scale is constructed to measure cognitive, psychological, social and physical impairment which is related to exam. All the questions are in a positive statement form. The tool consists of 10 questions from cognitive aspect, 3 questions from psychological aspect, 2 questions from social aspect & 5 questions from physiological aspect.

Each statement had five alternative responses. In this extremely carries 5 marks, high carries 4 marks, moderately carries 3 marks, lightly carries 2 marks, and not at all carries 1 mark. The test anxiety score is calculated by sum of scores of the twenty questions divided by 20. The maximum score is 5 and minimum score is 1.

DATA ANALYSIS AND INTERPRETATION
Table–1: Frequency and percentage distribution of demographic variables among School

Demographic variables	Frequency	Percentage (%)
Age in years		
a. 15	6	10
b. 16	19	31.67
c. 17	28	46.67
d. 18	7	11.67
Sex		
a. Male	32	53.33
b. Female	28	46.67
Educational status		
a. 11th STD	27	45.00
b. 12th STD	33	55.00
Family income (In Rupees)		
a. Rs. 5000 and below	2	3.33
b. Rs. 5001 to 10,000	26	43.33
c. Above Rs 10,000	32	53.33
Type of family		
a. Nuclear	45	75.00
b. Joint	15	25.00
Religion		
a. Hindu	43	71.67
b. Christian	4	6.67
c. Muslim	12	20.00
d. Others	1	1.66
Medium of instruction in 10th Standard		
a. English	46	76.67
b. Kannada	14	23.33
c. Others	0	0.00
Place of living		
a. Urban	33	55.00
b. Rural	27	45.00
Attending private tuition		
a. Yes	9	15.00
b. No	51	85.00

The table 1 depicts that 6 (10%) of students were 15 years, 19 (31.67%) were 16 years, 28 (46.67 %) were 17 years and 7 (11.67%) were 18 years. With regard to sex, 32 (53.33%) were males where as 28 (46.67%) were females. In relation to educational status, 27 (45%) were studying in 11th Standard and 33 (55%) were studying in 12th Standard. The family income of majority of respondents 32 (53.33%) were above 10,000, whereas 26 (43.33%) were between rupees 5001-10,000, 2 (3.33%) had rupees 5000 and below. The majority of respondents 45 (75%) belongs to nuclear type of family where as 15 (25%) belong to joint type of family. With regard to religion, maximum numbers 43 (71.67%) were Hindus where as 4 (6.67%) were Christians, 12 (20%) were Muslims and 1 (1.66%) were others. According to medium of instruction in 10th standard 46 (76.67%) were from English medium, 14 (23.33%) were from Kannada medium & none of them from other medium. In relation to place of living 33 (55%) were from Urban area where as 27 (45%) were from rural area. The majority of respondents 51 (85%) were not attending private tuition; whereas 9 (15%) were attending private tuition.
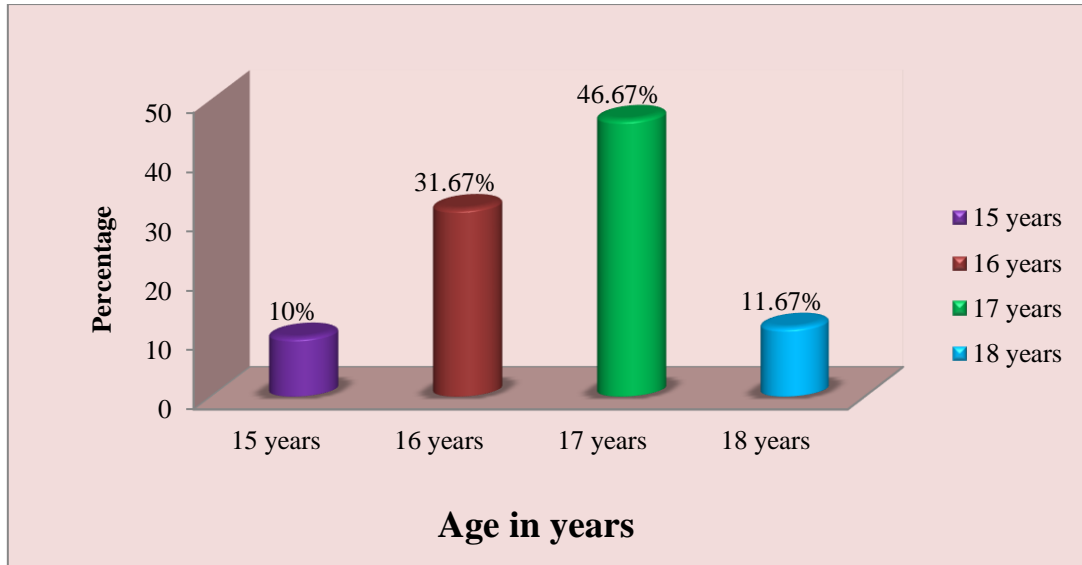
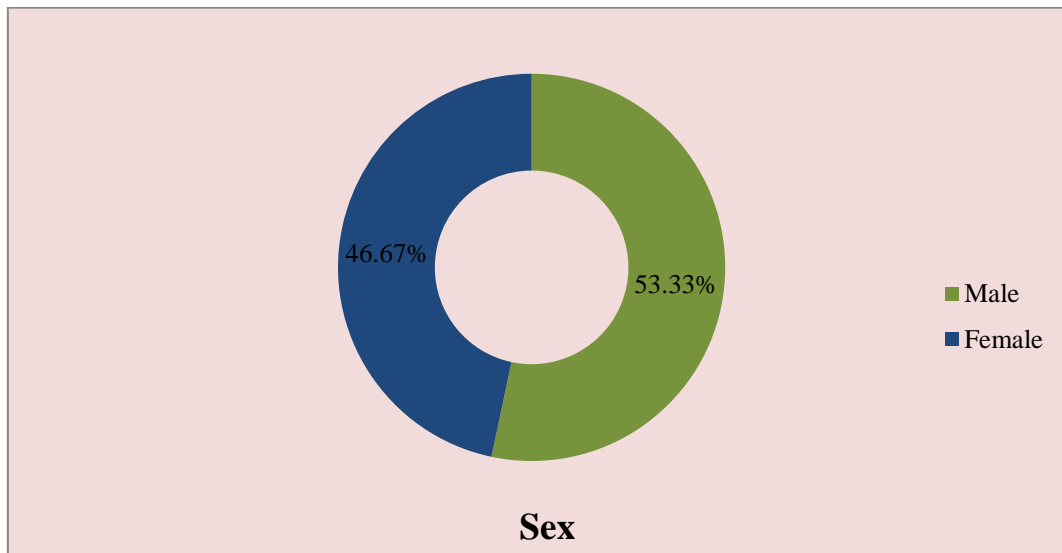**Fig-1 Distribution of age in years among School Students**

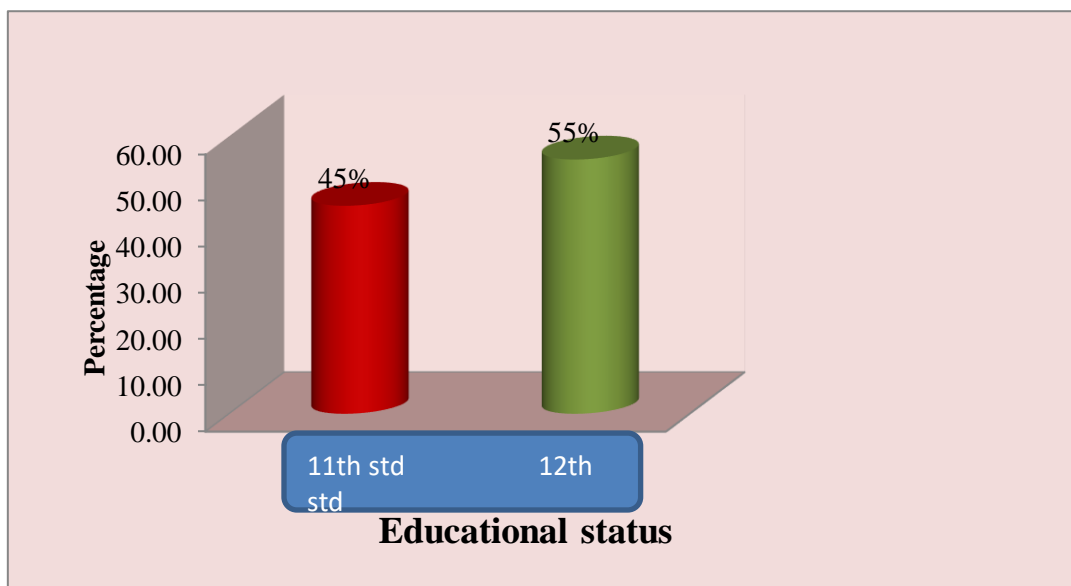**Fig-2 Distribution of sex among School Students**

Fig-3 Distribution of educational status among School Students

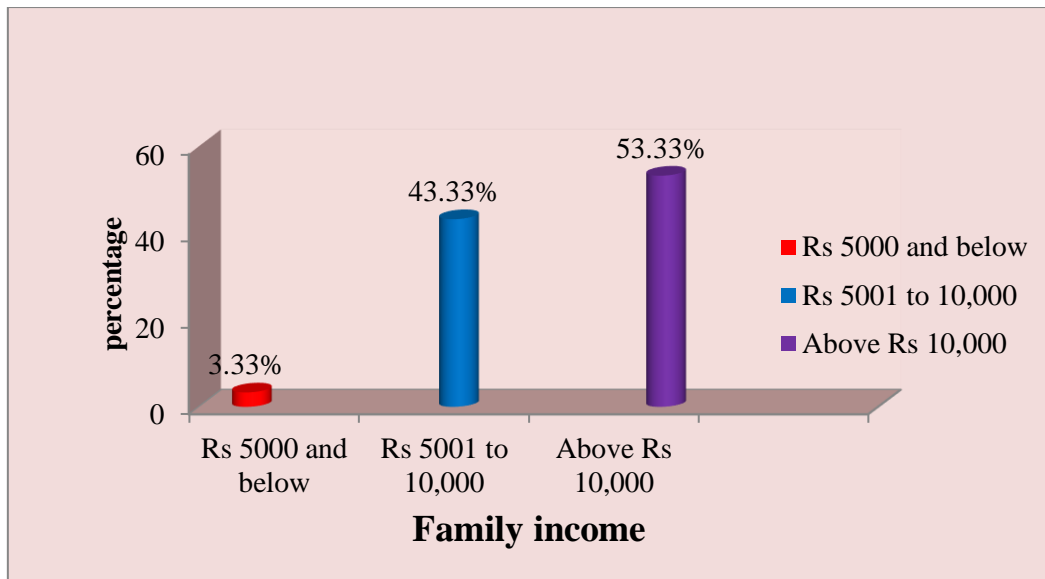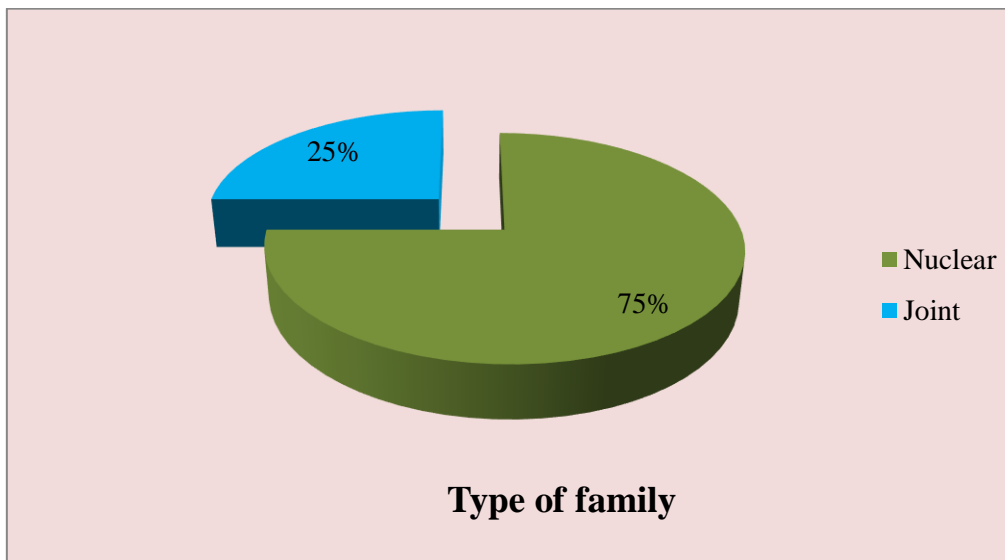**Fig-4 Distribution of family income among School Students**

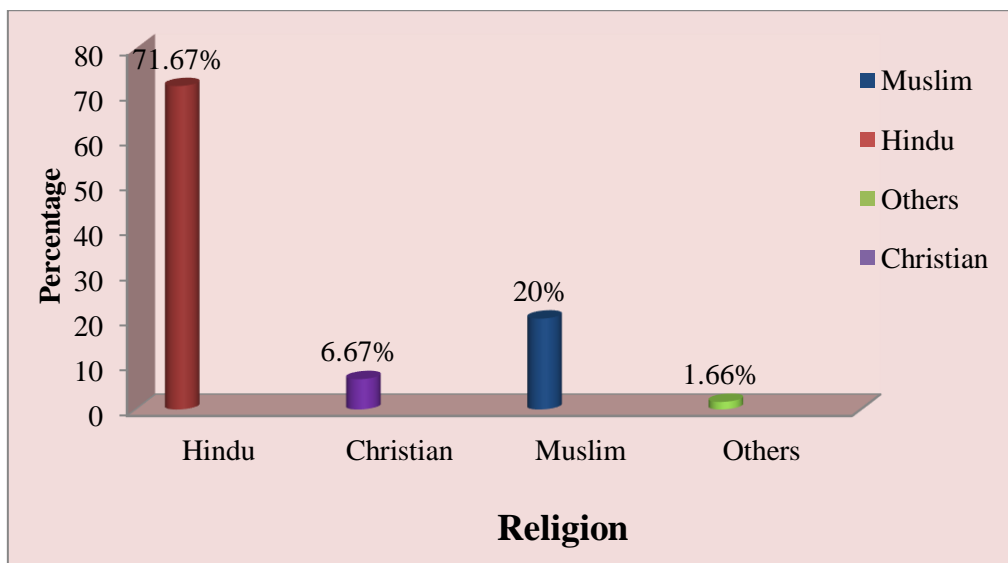**Fig-5 Distribution of type of family among School Students**

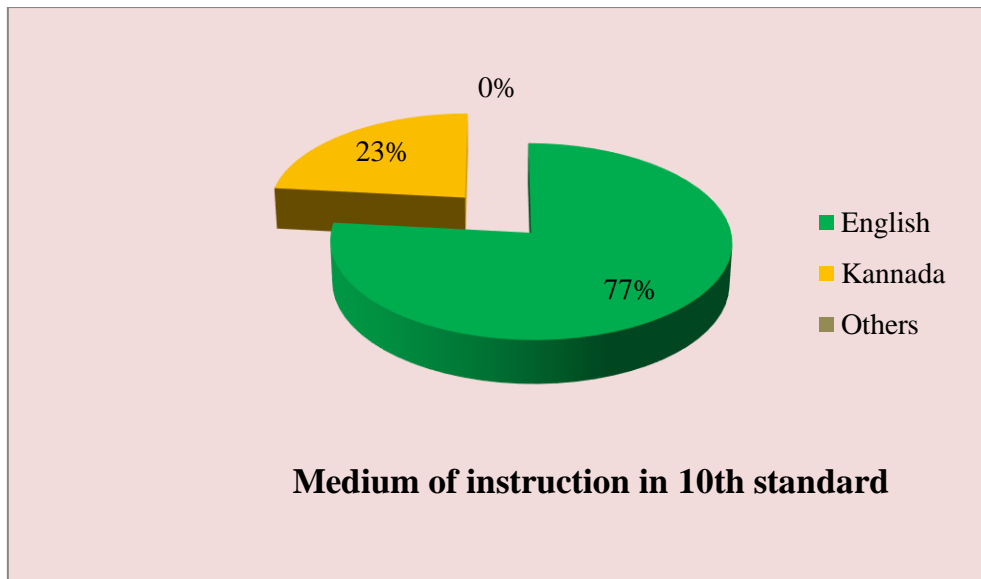**Fig-6 Distribution of religion among School Students**

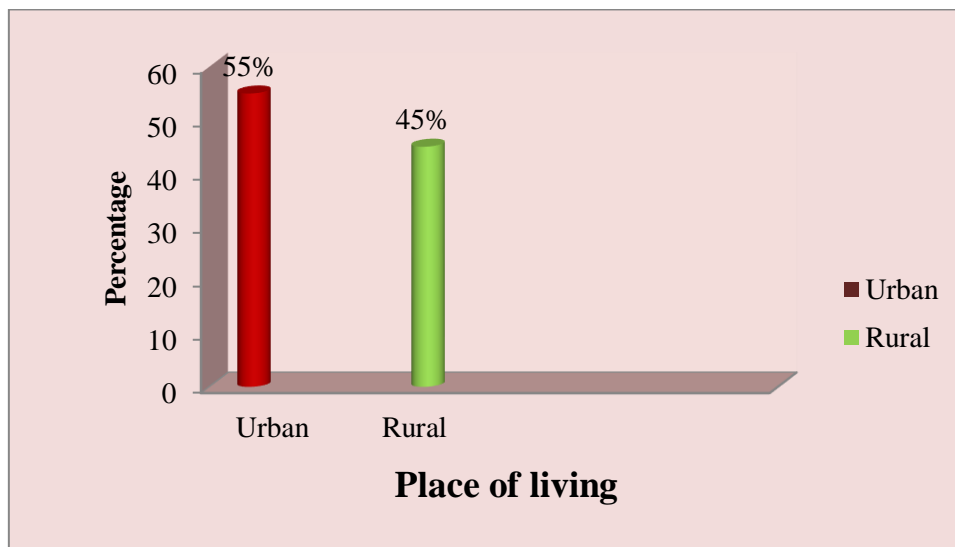**Fig 7 Distribution of medium of instruction in 10th standard among School Students**

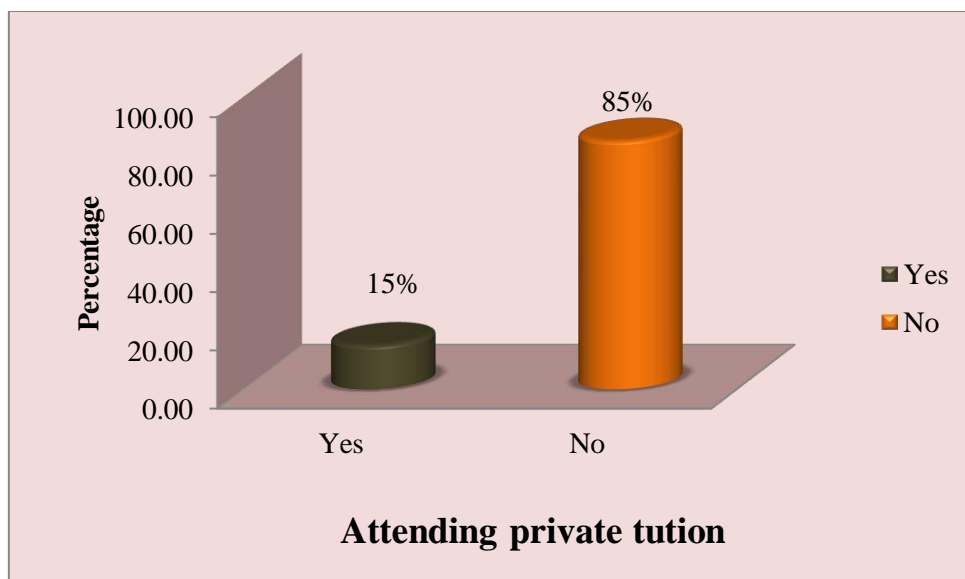**Fig-8 Distribution of place of living among School Students**

Fig-9 Distribution of attending private tuition among School Students

TABLE-2 Frequency and percentage distribution of pre-test level of test anxiety among School Students

Level of test anxiety	Frequency	Percentage (%)
Comfortably low test anxiety	0	0
Normal test anxiety	4	6.67
High normal test anxiety	19	31.67
Moderately high test anxiety	17	28.33
High test anxiety	16	26.67
Extremely high test anxiety	4	6.67

The above table 2 depicts the frequency and percentage distribution of pre-test level of test anxiety among School Students, none of them had comfortably low test anxiety, 4 (6.67%) of them had normal test anxiety, 19 (31.67%) of them had high normal test anxiety, 17 (28.33%) of them had moderately high test anxiety, 16 (26.67%) of them had high test anxiety and 4 (6.67%) had extremely high test anxiety before structured teaching programme.
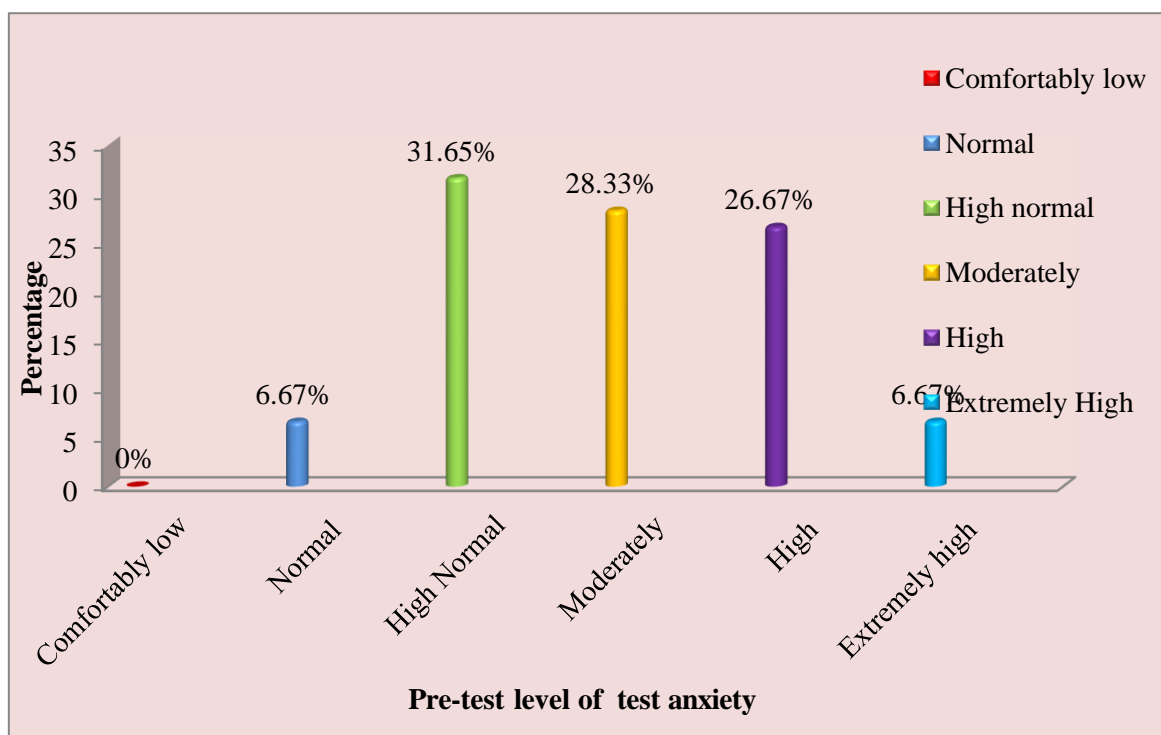
Fig-10 Pre-test level of test anxiety among School Students

TABLE 3: Frequency and percentage distribution of post-test level of test anxiety among School Students

Level of test anxiety	Frequency	Percentage (%)
Comfortably low test anxiety	16	26.67
Normal test anxiety	26	43.33
High normal test anxiety	18	30
Moderately high test anxiety	0	0
High test anxiety	0	0
Extremely high test anxiety	0	0

The above table 3 shows the frequency and percentage distribution of post-test test anxiety among School Students 16 (26.67%) had comfortably low test anxiety, 26 (43.33%) had normal test anxiety, 18 (30%) had high normal test anxiety and none of them had moderately high test anxiety, high test anxiety and extremely high test anxiety after structured teaching programme.
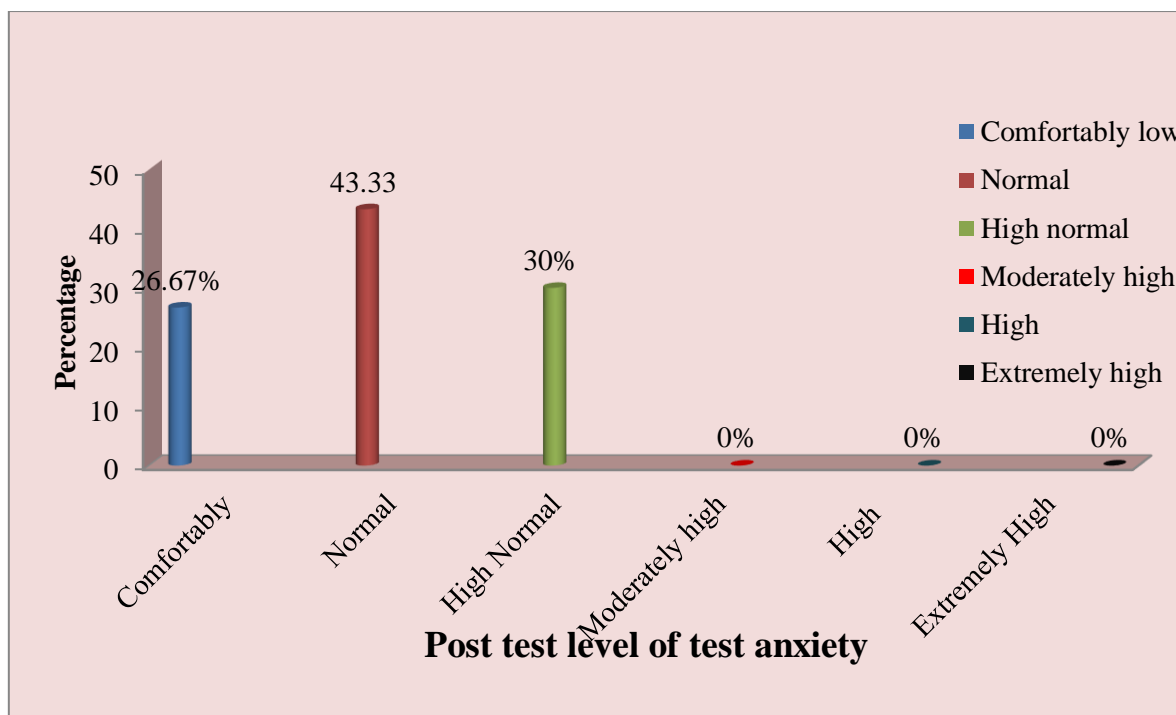
Fig-11 Post-test level of test anxiety among School Students

TABLE-4: Mean, Standard Deviation, Mean Percentage of pre-test level of test anxiety among School Students

Aspects of test anxiety	Statements	Range score	Mean	SD	Mean%
Cognitive aspect	10	20-44	32.92	6.01	65.84
Psychological aspect	3	6-14	9.58	1.92	63.87
Social aspect	2	2-10	5.93	1.85	59.3
Physiological aspect	5	8-22	14.78	3.4	59.12
Overall aspect	20	43-83	63.22	10.34	63.22

Table-4 shows the mean, standard deviation, mean percentage of pre-test level of test anxiety among School Students. The table shows the mean percentage of cognitive aspect is 65.84 with standard deviation of 6.01; mean percentage of respondents on psychological aspect is 63.87 with standard deviation of 1.92, mean percentage of respondents on social aspect is 59.3 with 1.85; mean percentage of physiological aspect is 59.12 with standard deviation of 3.4. The overall mean percentage is 63.22 with standard deviation of 10.34 on pre-test test anxiety.

TABLE-5: Mean, Standard Deviation, Mean Percentage of post-test level of test anxiety among School Students

Aspects of test anxiety	Statements	Range score	Mean	SD	Mean%
Cognitive aspect	10	13-31	22.63	4.75	45.26
Psychological aspect	3	4-11	6.53	1.61	43.53
Social aspect	2	2-7	4	1.59	40
Physiological aspect	5	7-15	10.43	2.3	41.72
Overall aspect	20	28-58	43.6	7.82	43.6

Table-5 shows the mean, standard deviation, mean percentage of post-test level of test anxiety among School Students. The result shows the mean percentage of cognitive aspect is 45.26 with standard deviation of 4.75; mean percentage of psychological aspect is 43.53 with standard deviation of 1.61; mean percentage of social aspect is 40 with standard deviation of 1.59 and mean percentage of physiological aspect is 41.72 with standard deviation of 2.3. Overall the result indicated that the School students scored mean percentage of 43.6 with standard deviation of 7.82 on post-test test anxiety.

Table 6: Comparison of pre-test and post-test level of test anxiety among School Student

Mean	SD	Mean %		
		Mean	SD	Mean %
Pre test	100	63.22	10.34	63.22

Post test	100	43.6	7.82	43.6
Effectiveness		19.62	5.34	19.62

Table 6 shows comparison of pre-test and post-test level of test anxiety among School Students. The mean percentage of pre-test test anxiety is 63.22 with standard deviation of 10.34 and means percentage of post-test test anxiety is 43.6 with standard deviation of 7.82. The difference between pre-test and post-test mean percentage is 19.62

TABLE 7: Comparison of mean and standard deviation of pre and post-test level of test anxiety among School Students

Aspects of test anxiety	Respondents Knowledge						Paired 't' test
	Pre test		Post test		Enhancement		
	Mean	SD	Mean	SD	Mean	SD	
Cognitive Aspect	32.92	6.01	22.63	4.75	10.28	3.42	23.36***
Psychological Aspect	9.58	1.92	6.53	1.61	3.05	1.69	13.99***
Social Aspect	5.93	1.85	4	1.59	1.93	1.27	11.77***
Physiological Aspect	14.78	3.4	10.43	2.3	4.35	2.17	15.53***
Overall aspect	63.22	10.34	43.6	7.82	19.62	5.34	28.47***

NS= not significant. S= Significant, * $p < 0.05$ level, ** $p < 0.01$ level, *** $p < 0.001$ level

The above table 7 shows mean standard deviation & paired t-test value on the four aspects of test anxiety in pre & post-test. Mean reduction of post-test score of cognitive aspect is 10.28, psychological aspect is 3.05, social aspect is 1.93 and physiological aspect is 4.35.The data indicated that post-test score were significantly less than pre-test score t=28.47 at p<0.001 level. The results evidences that the post-test test anxiety is significantly less than the pre-test test anxiety. Hence research hypothesis H_1 was accepted. The result indicated that the structured teaching programme was effective.

Table 8: Association between post-test level of test anxiety and demographic variables of the School Students (n=60)

Sl. No	Demographic variables	No	Low		Normal		High normal		Moderate		High		Extremely high		χ^2 square
			No	%	No	%	No	%	No	%	No	%	No	%	
1	Age in years														
	a. 15	6	1	1.67	4	6.67	1	1.67	0	0	0	0	0	0	7.97
	b. 16	19	6	10	11	18.33	2	3.33	0	0	0	0	0	0	df 6
	c. 17	28	7	11.67	9	15	12	20	0	0	0	0	0	0	N.S
	d. 18	7	2	3.33	2	3.33	3	5	0	0	0	0	0	0	
2	Sex														
	a. Male	32	11	18.33	15	25	6	10	0	0	0	0	0	0	4.62
	b. Female	28	5	8.33	11	18.33	12	20	0	0	0	0	0	0	df 2 N.S
3	Educational status														
	a.1st Year PUC	27	5	8.33	19	31.67	3	5	0	0	0	0	0	0	15.34***
	b.2nd Year PUC	33	11	18.33	7	11.67	15	25	0	0	0	0	0	0	df 2 **S**
4	Family income														
	a.Rs 5000 and below	2	0	0	1	1.67	1	1.67	0	0	0	0	0	0	1.34
	b.Rs. 5001 to 10,000	26	5	8.33	13	21.67	8	13.33	0	0	0	0	0	0	df 4
	c.Above Rs 10,000	32	10	16.66	13	21.67	9	15	0	0	0	0	0	0	N.S
5	Type of family														
	a. Nuclear	45	8	13.33	23	38.33	14	23.33	0	0	0	0	0	0	7.92
	b. Joint	15	8	13.33	3	5	4	6.67	0	0	0	0	0	0	df 2 **S**
6	Religion														
	a. Hindu	43	11	18.33	18	30	14	23.33	0	0	0	0	0	0	
	b. Christian	4	1	1.67	1	1.67	2	3.33	0	0	0	0	0	0	3.32
	c. Muslim	12	4	6.67	6	10	2	3.33	0	0	0	0	0	0	df 6
	d. Others	1	0	0	1	1.67	0	0	0	0	0	0	0	0	N.S
7	Medium of instruction														
	a. English	46	16	26.67	24	40	6	10	0	0	0	0	0	0	27.31***
	b. Hindi	14	0	0	2	3.33	12	20	0	0	0	0	0	0	df 4
	c. Others	0	0	0	0	0	0	0	0	0	0	0	0	0	**S**
8	Place of living														
	a. Urban	33	7	11.67	15	25	11	18.33	0	0	0	0	0	0	1.17

	b. Rural	27	9	15	11	18.33	7	11.67	0	0	0	0	0	0	df 2 N.S
9	Attending private tuition a. Yes	9	12	20	22	36.67	17	28.33	0	0	0	0	0	0	2.52
	b. No	51	4	6.67	4	6.67	1	1.67	0	0	0	0	0	0	df 2 N.S

The table-8 envisages that χ^2 test was used to find out the association between post-test level of test anxiety and Demographic variables of School Students. The variables such as educational status [χ^2 =15.34, df=2S], type of family[χ^2 =7.92, df=2S] and medium of instruction in 10th standard[χ^2 =27.31, df=S] were significant at 0.001 level i.e. p<0.001. The rest of the socio-demographic variables were not significantly associated with post-test test anxiety. The results of Chi-square analysis indicated that there was significant association between post-test level of test anxiety and educational status, type of family & place of living of School Students. So the research hypothesis H_2 was accepted.

DISCUSSION
Demographic variables of the School Students
Based on age: - According to age 10% of students were 15 years, 31.67% were 16 years, 46.67 % were 17 years and 11.67% were 18 years. Based on sex :- With regard to sex, 53.33% were males where as 46.67% were females. Based on educational status:- In relation to educational status, 45% were studying in 11th std and 55% were studying in 12th Std. Based on family income:- The family income of majority of respondents 53.33% was above 10,000, whereas 43.33% were between rupees 5001-10,000, 3.33% had rupees 5000 and below. Based on type of family:- The majority of respondents 75% belongs to nuclear type of family where as 25% belong to joint type of family. Based on religion:- With regard to religion, maximum numbers 71.67% were Hindus where as 6.67% were Christians, 20% were Muslims and1.66% were others. Based on medium of instruction in 10th standard:- According to medium of instruction in 10th standard 76.67% were from English medium, 23.33% were from Kannada medium & none of them from other medium. Based on place of living:- In relation to place of living 55% were from urban area where as 45% were from rural area. Based on attending private tuition:- The majority of respondents 85% was not attending private tuition, where as 15% was attending private tuition. Similar study was done by others authors.[26-45]

Assessment of pre-test & post-test level of test anxiety among School Students
The table-2 presents the frequency and percentage distribution of pre-test level of test anxiety among School Students, none of them had comfortably low test anxiety, 6.67% of them had normal test anxiety, 31.67% of them had high normal test anxiety, 28.33% of them had moderately high test anxiety, 26.67% of them had high test anxiety and 6.67% had extremely high test anxiety before structured teaching programme. The table 3 presents the frequency and percentage distribution of post-test test anxiety among School Students 26.67% had comfortably low test anxiety, 43.33% had normal test anxiety, 30% had high normal test anxiety and none of them had moderately high test anxiety, high test anxiety and extremely high test anxiety after structured teaching programme. Table 4 presents the mean, standard deviation, mean percentage of pre-test level of test anxiety among School Students. The table shows the mean percentage of cognitive aspect is 65.84 with standard deviation of 6.01; mean percentage of respondents on psychological aspect is 63.87 with standard deviation of 1.92, mean percentage of respondents on social aspect is 59.3 with 1.85; mean percentage of physiological aspect is 59.12 with standard deviation of 3.4. The overall mean percentage is 63.22 with standard deviation of 10.34 on pre-test test anxiety. Table 5 presents the mean, standard deviation, mean percentage of post-test level of test anxiety among School Students. The result shows that the mean percentage of cognitive aspect is 45.26 with standard deviation of 4.75; mean percentage of psychological aspect is 43.53 with standard deviation of 1.61; mean percentage of social aspect is 40 with standard deviation of 1.59 and mean percentage of physiological aspect is 41.72 with standard deviation of 2.3. Overall the result indicated that the School students scored mean percentage of 43.6 with standard deviation of 7.82 on post-test test anxiety. Similar study was done by others authors.[46-53]

CONCLUSION
The present study reveals that there was a significant reduction in test anxiety after giving structured teaching programme on strategies for reducing test anxiety among School Students. It also reveals that there was significant association between post-test test anxiety and demographic variables such as educational status, type of family & place of living. The rest of the socio-demographic variables were not significantly associated with post-test anxiety.

REFERENCES
1. Harris, Henry.L.Coy, Doris.R. Helping students cope with test anxiety. ERIC Counceling and Student Services Clearinghouse. September 2003: 4.
2. Arpit Sikri. Exam stress; Natural feeling learn to deal with it.Child development and adolescent health center.VIMHANS. September 2009.
3. M.Rutter. Adolescent transition period. Journal of adolescent health. September 1992; 13: 451-460.
4. Burns, David. Anxiety at the time of the final exam: relationships with expectations and performance.

Academic and educational journal.November 2004; 80(2): 119-124.

5. Kathy.J.Brockway, Salina,Gary.s.Robson. Get a grip: Exam anxiety and beyond. Youngstown University. 2003; 10-11.

6. Jolyn.D.Whitaker Sena, Patricia.A.Lowe, Steven.W.Lee. Significant predictors of test anxiety among students with and without learning disabilities. Journal of Learning Disabilities. July 2007; 40(4): 360-376.

7. Donna L. Mealey, Timothy R. Host. Coping with Test Anxiety. 1992; 40(4): 147.

8. McCleaster, Sandra. Test anxiety in students. FOCUS: Journal for Respiratory Care & Sleep Medicine. 1 January 2004.

9. David parsons. Is There an Alternative to Exams? Examination Stress in Engineering Courses. International Journal of Engineering Education.2008; 24 (6): 1111-1118.

10. Anup Sud. Test Anxiety Research in India: Twentieth Century in Retrospect. March 2001; 13(1): 51-69.

11. Tamara. D. Hanoski. Test anxiety: What it is and how to cope with it. Student Counselling Services. 28 January 2003.

12. David.B.Ross, Richard Driscoll. Test anxiety:Age Appropriate Interventions. Tennes. October 2006: 13.

13. Mazzone, Luigi, Ducci, Francesca, Scoto, Maria Cristina et al. The role of anxiety symptoms in school performance in a community sample of children and adolescents. BMC public health Journel. 3 December 2007; 7: 347.

14. Astrid Gregor. Examination anxiety-Live with it, Control it Or Make it Work for you. School Psychology International. 26(5); 2005: 617-635.

15. T. B. Singh. Workshop on Managing Exam Anxiety among School Students. journal of psychological research. 2009; 1(2).

16. Moshe Zeidner. Adaptive Coping With Test Situations. 1995; 30(3): 123-133.

17. Rafia Rafiq, Saima Ghazal and Yasmin N. Farooqi. Test Anxiety in Students: Semester vs. Annual System. Journal of Behavioural Sciences. 17(1); 2007.

18. R. A. Olatoye. Students' test anxiety, motivation for examinations and science achievement in junior secondary schools in Ogun State, Nigeria. International Journal of Psychology and Counselling. December 2009; 1(10): 194–198.

19. Silke Neuderth, Burkhard jabs, Armin Schmidtke. Strategies for reducing test anxiety and optimizing exam preparation in German university students. September 2008: 785-790.

20. Barry. B.Hart, Chrissi Hart . Managing examination anxiety. February 2006: 84-88.

21. Paul G, Elam B, Verhulst SJ. Student's perception on deep breathing meditation to reduce testing stresses' Southern University School of Medicine. 19(3); March 2007 :287-292.

22. Yehuda .S, Rabinovitz .S, Mostofsky D.I . Mixture of essential fatty acid lowers test anxiety. 8(4); August 2005: 265-267.

23. Elizabeth Omotunde Egbochuku, Beauty Obodo, Ndidiamaka Oyedoyin Obadan. Efficacy of Rational-Emotive Behaviour Therapy on the Reduction of Test Anxiety Among Adolescents in Secondary Schools. European Journal of Social Sciences. 6(4); November 2008: 82.

24. Fayegh Yousefi, Mariani Bte Mansor, Rumaya Bte Juhari, Marof Redzuan, Mansor Abu Talib, V. Kumar, et al. Memory as a mediator between test anxiety and academic achievement in high school students.2009; 35(2): 274-280.

25. Sagar Sharma, Anup Sud. Examination Stress and Test Anxiety: A Cross-Cultural Perspective. **September 1990; 2(2): 183-201.**

26. David Shinji Kondo. Strategies for coping with test anxiety. Anxiety,Stress& Coping.1997; 10(2) :203-215.

27. Aysan F, Thompson D, Hamarat E. Test anxiety, coping strategies, and perceived health in a group of high school students: a Turkish sample. 2001 December; 162(4): 402-11.

28. David William Putwain , Liz Connors ,Wendy Symes . Do cognitive distortions mediate the test anxiety-examination performance relationship?. Educational Psychology.1 January 2010; 30(1): 11 -26.

29. Putwain.DW. Test anxiety in U.K school children: prevalence and demographic patterns. September 2007; 77(3): 579-93.

30. Malathi A, Damodaran A. Stress due to exams in medical students--role of yoga. Indian J Physiol Pharmacol.1999 April; 43(2): 218-24.

31. Busari, A. O. & Osiki, J. O. Test anxiety management for students: a cognitive behavioural programme. African Journal of Medicine and Medical Sciences.

32. David W Putwain, Kevin A Woods, Wendy Symes. Personal and situational predictors of test anxiety of students in post-compulsory education. The British Journalof Education.March 2010; 80.

33. **Marianne McManus.** Group desensitization of test anxiety. 4 June 2002; 9(1): 51-56.

34. J C Cassady, R E Johnson. Cognitive test anxiety and academic performance. Contemporary Educational Psychology.2002; 27(2): 270-295.

35. Sujit S. Sansgiry and Kavita Sail. Effect of Students' Perceptions of Course Load on Test Anxiety.Am J Pharm Educ. 2006 April 15; 70(2): 26.

36. Teresa Tatum, Duane A. Lundervold, Patrick Ament. Abbreviated upright behavioral relaxation training for test anxiety among School students. International Journal of Behavioral Consultation and Therapy. 2006; 100.

37. Jerry L. Deffenbacher. Cognitive and physiological components of test anxiety in real-life exams. Cognitive Therapy.1986; 10(6): 635-644.

38. Beverly D. Payne, Janet E. Smith, David A. Payne. Sex and Ethnic Differences in Relationships of Test Anxiety to Performance in Science Examinations by Fourth and Eighth Grade Students: Implications for Valid Interpretations of Achievement Test Scores. *The Journal of Early Adolescence* Fall .1983; 43(1): 267-270.

39. Janice E. Williams. Gender-related worry and emotionality test anxiety for high-achieving students. April 1996; 33(2): 159–162.

40. Lee, Clement Kok Meng. Test anxiety and academic performance : the effect of a class based stress management programme. 2003.

41. Toyobo Oluwole Majekodunmi. Test anxiety as a factor in undergraduates' academic performance at the nigerian premier university of education. Toyobo Journal. 2000.

42. Deborah C. Beidel, Marquette W. Turner and Karen N. Trager. Test anxiety and childhood anxiety disorders in

African American and white school children. Journal of Anxiety Disorders. April-June 1994; 8(2): 169-179.

43. Bodas J, Ollendick TH, Sovani AV. Test anxiety in Indian children: a cross-cultural perspective.October 2008; 21(4): 387-404.

44. Ora Peleg-Popko, Avigdor Klingman & Abu-Hann Nahhas. Cross-cultural and familial differences between Arab and Jewish adolescents in test anxiety. September 2003; 27(5): 525-541.

45. Sagar Sharma, Shahla Parnian &Charles D. Spielberger. A cross-cultural study of the test anxiety levels in Iranian and Indian students .1983; 4(1): 117-120.

46. Noriyuki Araki. Test anxiety in elementary school and junior high school students in japan. Anxiety, Stress & Coping. 1992; 5(3) : 205-215.

47. Richard Driscoll, Knoxville Tn. Bruce Holt & LorynHunter.Accelerated Desensitization and adaptive probation students. 2005; 10: 13.

48. **Donald H. Meichenbaum**. Cognitive modification of test anxious School students . Journal of Consulting and Clinical Psychology. December 1972; 39(3): 370-380.

49. Hashmat S, Hashmat M, Amanullah F, Aziz S. Factors causing exam anxiety in medical students. Dow University of Health Sciences. 28April 2010.

50. 50.Charles J.Holahan,Frank C.Richardson,Stephen P.Puckett & Keith F.Bell.Evaluation of two test-anxiety reduction treatments in a secondary prevention program. American Journal Of Community Psychology.1979; 7(6): 679.

51. Tuncay Ergene. Effective interventions on test anxiety.2003; 24(3): 313-328.

52. Akande.A. Influence of urban–rural upbringing on Nigerian student's test anxiety.1990; 67(3): 1261-2.

53. YU. Jia-jia, **WANG Yi-jun, XU Jin-jie, LI Min, CHEN Xue, DING Nan,** et al. Relationships between family related factors and middle student's test anxiety in the urban and rural areas of Harbin.Chinese Journal of Child Health Care.2010.