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SCIENTIFIC ATTITUDE AND TEST ANXIETY AMONG 8TH STD. STUDENTS

Roopashree. B. J.
Principal, S.V.S College of Of Education, Tumkur.

Short Profile

Roopashree. B. J. is Principal at S.V.S College of Of Education, Tumkur. She has completed M.Sc., M.Ed., PGDHE., K-SET., and Ph.D. She has Professional Experience 14 years.

ABSTRACT:

The present investigation was meant to study the influence of scientific attitude on test anxiety of viii std. students. The study comprised 200 students from three different types of schools of Tumkur City. The tools used for data collection were scientific attitude scale by Avinash grewal and test anxiety scale by L.N.K.Simha. The obtained data were analysed by using pearson product moment correlation and by using student't' test .The results revealed that a significant positive influence of scientific attitude on test anxiety of 8th std. students of Tumkur City and significant difference was found between high, moderate and low level scientific attitude students with respect to their test anxiety.

KEYWORDS

scientific attitude, test anxiety, etc,

INTRODUCTION :

Citizens of tomorrow are children attending today's schools. Those children in their capacity of being the future administrators, engineers, doctors and last but not least the citizens of the country must be brought up in a way worthy of the obligations which they owe to their community and their country at large. They should normally possess the best physical and mental health for performing their duties. But unless something is done to help the child, he will continue to suffer from anxiety due to heavy work load.

Scientific attitude is the most important outcome of science teaching. Though some people view that scientific attitude as the byproduct of science teaching, yet a majority of the people consider it as equally important as knowledge aspect. Scientific attitude is a very significant concerns it process of science education in this concern to develop science attitude.

The teachers should always remember that without a questioning mind and a spirit of enquiry, studies in science will only mean acceptance to dogma and will never lead to development of scientific attitude in the learner. They should make to practice and observe science so that they get the opportunity to feel and develop the components of scientific attitude in their mind.

In education, this scientific attitude not only develops the discipline but also develops intellectual, cultural, moral, aesthetic, utilitarian as well as vocational values. Hence science is now made compulsory subject in every system of education right from elementary stage to develop scientific attitude.

Test anxiety is more commonly experienced by high anxious individuals that is, by those people who have an innate learned dispositional tendency to perceive a wide variety of wants as threatening.

Test anxiety is an important psychological factor which effect learning anxiety is always associated with any testing situations. It worries everyone when taking a test which decides the future of the students. Test anxiety refers to bundle of worries of a person who is interested to know his performance is spite of his abilities and age. It is too well known that test and examinations will dominate the Indian system of education and consequently students and their parent are often worried about the outcomes of such test and examinations.

Thus test anxiety is not restricted to the students along but it affects all these concerned with it. However opinions are decided in respect of the affects of test anxiety on attitude.

REVIEW OF RELATED LITERATURE:

Alexander Decker, (2012) studied the relationship between study habits, test anxiety and science achievement, Michelle (2011) undertook a study on statistics anxiety and science attitudes: age, gender, and ethnicity factors. Douglas g. Wren(2004) measured test anxiety in children: scale development and internal construct validation, Gouri Vijay Patil,(2011) a comparative study of scientific attitude about secondary and higher secondary level students, Kulasekara Perumal Pillai(2012) an analytical study on scientific attitude of higher secondary school students in virudhunagar district, lindsay sullivan(2002) the effect of test anxiety on attention and memoryskills in undergraduate students, Mary E. Westerback ,(2006) conducted a study on"studies on attitude toward teaching science and anxiety about teaching science in preservice elementary teachers". Neerja R Thergaonkar, Ma, Phd, A J Wadkar (2011) relationship between test anxiety and parenting style,

Thomas A. Devaney(2010) anxiety and attitude of graduate students in on-campus vs. Online statistics courses, Rizwan Akram Rana* & Nasir Mahmood (2010) the relationship between test anxiety and academic achievement, Thomas R. Kobella (1989) changing and measuring attitudes in the science classroom.

STATEMENT OF THE PROBLEM:

The present study focused on "A study on scientific attitude and test anxiety among 8th std. Students of Tumkur city."

METHODOLOGY:

In the present investigation, an attempt has been made to examine the relationship between the scientific attitude and test anxiety. The study also intends to compare the scientific attitude level of high, moderate and low in respect to the influence of test anxiety as well as the impact of medium of study. As such, the present study has been designed as a descriptive study and survey method was adopted as the appropriate means for gathering the data essential for the study.

OBJECTIVES OF THE STUDY:

For the present study researcher wants to achieve the following objectives.

1.To find out the relationship between scientific attitude and test anxiety among 8th std. Students of Tumkur City.
2. To find the difference in the test anxiety of 8th std. Students with high level scientific attitude and moderate level scientific attitude.
3.To find the difference in the test anxiety of 8th std. Students with moderate level scientific attitude and low level scientific attitude.
4.To find the difference in the test anxiety of 8th std. Students with high level scientific attitude and low level scientific attitude.
5.To find the difference between kannada medium and English medium Students with respect to their scientific attitude and test anxiety.
6.To find the difference between Boys and Girl Students with respect to their scientific attitude and test anxiety.

HYPOTHESES OF THE STUDY:

The following hypotheses were formulated by researcher for the present study.

H1. There exists no significant relationship between scientific attitude and test anxiety of 8th std. Students of Tumkur City.
H2. There exists no significant difference in the test anxiety of 8th std. Students with high level scientific attitude and moderate level scientific attitude.

H3. There exists no significant difference in the test anxiety of 8th std. Students with moderate level scientific attitude and low level scientific attitude.

H4. There exists no significant difference in the test anxiety of 8th std. Students with high level scientific attitude and low level scientific attitude.

H5. There exists no significant difference between kannada medium and English medium Students with respect to their scientific attitude.

H6. There exists no significant difference between kannada medium and English medium Students with respect to their test anxiety.

H7. There exists no significant difference between Boys and Girl Students with respect to their scientific attitude.

H8. There exists no significant difference between Boys and Girl Students with respect to their test anxiety.

SAMPLE OF THE STUDY:

For the present study, for the purpose of selection of sample 20 schools were selected out of 128 schools in Tumkur city through random sampling technique. The sample comprised 200 8th std. students in three different types of schools namely 2 Government schools, 8 aided schools and 10 unaided schools of Tumkur City.

TOOLS USED FOR THE STUDY:

The tool indicates the quality and adequacy of the research. In order to obtain valid objective and reliable data, standardized tool was selected. Tool helps us to get successful results in the research endeavour. Following tools were used by the researcher.

• Scientific attitude scale by Avinash grewal
• Test anxiety scale by L.N.K.Simha

STATISTICAL TECHNIQUES USED:

The following statistical techniques were used for the analysis of data in research variables

- ➤ Karl-Pearson product moment Correlation
- ➤ Mean, SD, QD
- ➤ t-test

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RESULTS AND INTERPRETATION:

Table 1-: - Table showing N, df and 'r' of scientific attitude and test anxiety of 8th std. students.

Variables	N	df	r	Significance level
Scientific attitude	200	198	0.172	**
Test anxiety				

**:- Significant at 0.05 level (df = 198, 0.138)

From the above table 1 it is noticed that the obtained 'r' value is 0.149, for df 198, which is greater than the critical value of 'r' 0.138 at 0.05 level of significance. Hence the formulated null hypothesis is rejected. The rejection of null hypothesis makes researcher to accept alternate hypothesis. This means that, there exists a significant positive relationship between scientific attitude and test anxiety of 8th std. Students of Tumkur City.

The direction of relationship is +ve. Hence we may conclude that there exist a +ve significant relationship between scientific attitude and test anxiety. It may be concluded that the scientific attitude influence on test anxiety of students.

Table 2: - Table showing N, Mean, SD and 't' value of test anxiety scores of students with High and moderate level scientific attitude.

Sl. No	Variables	N	Mean	SD	df	't'	Significance level
1	High level scientific attitude	48	67.31	7.65	146	1.384	NS
2	Moderate level scientific attitude	98	69.142	7.19			

NS:- not significant

The above table 2 shows that the obtained 't' value is 1.384, which is less than the critical value of 't' for df 146, 1.98 at 0.05 level of significance Hence null hypothesis is accepted. This means that there exists no significant difference in the test anxiety scores of students with high and moderate level scientific attitude.

Table 3: - Table showing N, Mean, SD and 't' value of test anxiety scores of students with moderate and low level scientific attitude.

Sl. No	Variables	N	Mean	SD	df	't'	Significance level
1	Moderate level scientific attitude	98	69.14	7.197	150	1.41	NS
2	low level scientific attitude	54	70.88	9.84			

NS :- Not significant

The above table 4 shows that the obtained 't' value is 1.41, which is less than the critical value of 't' for df 1.98 at 0.05 level of significance. Hence null hypothesis is accepted. This means that there exists no significant difference in the test anxiety scores of students with moderate and low level scientific attitude.

Table 4: - Table showing N, Mean, SD and 't' value of test anxiety scores of students with high and low level scientific attitude

Sl. No	Variables	N	Mean	SD	df	't'	Significance level
1	High level scientific attitude	85	67.31	7.6	100	2.06	**
2	low level scientific attitude	23	70.88	9.8			

** :- significant at 0.05 level (df = 100, 1.98)

The above table 5 shows that the obtained 't' value is 2.06, which is greater than the critical value of 't' for df 100, 1.98 at 0.05 level of significance. Hence null hypothesis is rejected and alternate hypothesis is accepted. This means that there exists significant difference in the test anxiety scores of students with high and low level scientific attitude.

The above table shows that the mean of the test anxiety scores of high scientific attitude is 67.31 which is less than the mean value 70.88 test anxiety scores of low scientific attitude. This shows that the students with high scientific attitude have low test anxiety than that of the students with low scientific attitude.

Table 5: - Table showing N, Mean, SD and 't' value of kannada and English medium students in Scientific Attitude

Sl. No	Variables	N	Mean	SD	df	't'	Significance level
1	English	150	44.46	9.8	198	1.632	NS
2	Kannada	50	46.66	7.5			

NS :-Not significant

The above table 5 shows that the obtained 't' value is 1.632, which less than the critical value of 't' for df 198, 1.97 at 0.05 level of significance. Hence null hypothesis is accepted. This means that there exists no significant difference between English and Kannada medium students in scientific attitude.

Table 6: - Table showing N, Mean, SD and 't' value of kannada and English medium students in Test Anxiety.

Sl. No	Variables	N	Mean	SD	df	't'	Significance level
1	English	150	68.73	8.8	198	2.142	**
2	Kannada	50	71.08	6.2			

**:- significant at 0.05 level(df=198, 1.97)

The above table 6 shows that the obtained 't' value is 2.142, which is greater than the critical value of 't' for df 198, 1.97 at 0.05 level of significance. Hence null hypothesis is rejected and alternative hypothesis is accepted. This means that there exists a significant difference between Kannada and English medium students in test anxiety.
The above table shows that the mean of the test anxiety scores of English medium students is 68.73 which is less than the mean value 71.08 test anxiety scores of Kannada medium students. This shows that the English medium students have low test anxiety when compared to Kannada medium students.

Table 7: - Table showing N, Mean, SD and 't' value of BOYS and GIRLS in Scientific Attitude.

Sl. No	Variables	N	Mean	SD	df	't'	Significance level
1	Boys	71	44.946	8.3	198	0.385	NS
2	Girls	129	45.522	10.9			

NS:- Not significant

The above table 7 shows that the obtained 't' value is 0.385, which is less than the critical value of 't' for df 198, 1.97 at 0.05 level of significance. Hence null hypothesis is accepted. This means that there exists no significant difference between boys and girls in scientific attitude.

Table 8: - Table showing N, Mean, SD and 't' value of BOYS and GIRLS in Test Anxiety

Sl. No	Variables	N	Mean	SD	df	't'	Significance level
1	Boys	71	68.267	8.5	198	1.307	NS
2	Girls	129	69.88	8.1			

NS:- Not significant

The above table 8 shows that the obtained 't' value is 1.307, which is less than the critical value of 't' for df 198, 1.97 at 0.05 level of significance. Hence null hypothesis is accepted. This means that there exists no significant difference between boys and girls in test anxiety.

EDUCATIONAL IMPLICATIONS:

On the basis of a single study it will not be justifiable to suggest some educational implications of the present study. However, on the basis of the findings of the study a few educational implications of the study may be indicated as follows:

Teachers' support for independent critical thinking will be reflected in the students' own nonconformist critical thinking. The two clearly share a strong emphasis on the importance of attending to one's understandings, principles, and personal sense of justice in making moral and personal decisions, rather than simply obeying external social dictates or egoistic impulses.

- Teachers' should allow students' criticism and encourage the expression of independent opinions in the classroom. As such behavior might be difficult and perhaps even threatening for many teachers, it appears that moral educators would do well to invest special efforts in teacher training, focusing on the encouragement of students' criticism. Such training may focus not only on the importance of criticism support, but also on the difficulties

- The teachers' ability to tolerate and even encourage critical and independent thinking in students, accept the expression of critical opinions by students might be an important factor in promoting students' scientific attitude.

- Students with personal inadequacies and who are maladjusted in the college environment should be identified and recognized. Special students require special attention.

- Special care should be given to students who isolate themselves from others. Regulated boosting of their ego may help them overcome the feeling of isolation. College activities should be designed in such a way that every student receives due attention and acclaim for creditable achievements.

- Students who are poor academically and the students with special abilities should be identified and their problems should be diagnosed. By compensating for their shortcomings help them to cope with their inferiority complexes.

- Participating in the counselling programmes will help the teachers to enrich their knowledge and counsel the problem children. The orientation programmes focus on the nature and cause of various problems, disorders of emotions such as extreme shyness, over-anxiousness or depression, disorder of conduct such as lying, stealing and truancy.

CONCLUSION:

This paper has sought to provide the many facets of students' attitudes towards science and their test anxiety. The increasing attention to the topic is driven by recognition that all is not well with school science and far too many pupils are alienated by a discipline that has increasing significance in contemporary life, both at a personal and a societal level. It is somewhat surprising that so little work has been done in the context of science classrooms to identify what are the nature and style of teaching and activities that engage students. The price of ignoring this simple fact and its implications is the potential alienation of our youth and/or a flight from science – a phenomenon that many countries are now experiencing. There can, therefore, hardly be a more urgent agenda for research.

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