

Influence of Anxiety, Self-esteem, Optimism on Academic Achievement of Adolescent Students

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The present study attempted to investigate whether there is any influence of anxiety, self-esteem, & optimism on academic achievement of adolescent students. Ex-post facto research design was adopted for this study. Two Schools of Chennai suburban were chosen to collect the data from students studying in 8th, 9th and 11th standards. All students who were present on the day when the researchers went for data collection were included for the present study. Permission was obtained for collecting data for two days that was mutually convenient for the researchers and the students. 148 students participated in the study. The age range of the students was from 12 to 17 years. The tools used for investigation included State trait anxiety inventory (Spielberger, Gorsuch, Lushene, Vagg, Jacob 1983), Life Orientation Test-R (Scheier, Carver, & Bridges, 1994), Self-esteem Scale (Rosenberg, 1965), and Students mark register obtained from teachers in their schools. Descriptive statistics like mean and standard deviation were obtained for anxiety, Self-esteem, optimism, and academic achievement. Identifying the relationship between variables such as anxiety, self-esteem, optimism, and academic achievement were obtained using Pearson's correlation method. Analysis of variance and 't' test was done to find the mean differences in academic achievement based on gender, family income, etc. The 't' test was also carried out to find the gender differences in anxiety, self-esteem, optimism and academic achievement. Linear regression with academic achievement as the outcome variable was done. The salient results of the present study indicated that optimism is one of the main predictor to excel in scholastic achievement. Assuming theoretically that anxiety affects academic achievement, there was no significant relationship between anxiety and academic achievement found in the present study. Further, it was seen that there was no gender differences in academic achievement among adolescent boys and girls.

Introduction

Adolescence is the period of rapid/ intense growth, in all aspects such as physical, mental, social and emotional. Academic achievement or scholastic

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achievement is considered as important predictors of latter adult and career status. Academic achievement refers to the accomplishments of students in the academic pursuit as a result of undergoing in school for a specified duration. The grades a student makes in his scholastic work or the marks he/she obtains in the examination are generally considered as the level of achievement. Academic achievement of adolescents is more influenced by school systems and their orientation to educational goals and the way school activities are rewarded. Many times achievements of youngsters are a function of appreciation and reward rather than the ability. Family is another system which fosters this achievement. Parental encouragement, participation and home environment also influence academic achievement. Parental support, aspirations and their academic background are found to nurture academic environment of adolescents.

Anxiety is a psychological state characterized by cognitive, somatic, emotional and behavioral components. These components combine to create an unpleasant feeling that is typically associated with uneasiness, fear or worry. Anxiety is a generalized mood of state that occurs without an identifiable triggering stimulus. The term anxiety is defined as “the conscious experience of intense dread and foreboding, conceptualized as internally derived and unrelated to external threat” (Fresky, 1954). Spielberger, (1972) is a pioneer who has worked in the area of stress and anxiety, construes two types of anxiety i.e., State anxiety and Trait anxiety. State anxiety is defined as an unpleasant emotional arousal in face of threatening demands or dangers. Trait anxiety on the other hand, reflects the existence of stable individual differences in the tendency to respond with state anxiety in the anticipation of threatening situations. This reflects more of a personality predisposition.

Self-esteem is a term used in Psychology to reflect a person’s overall evaluation or appraisal of his or her own worth. According to Rosenberg (1965) Self-esteem is defined as “the evaluation of the individual makes and customarily maintains with regard to himself, expressed as an attitude of approval or disapproval”. Adolescents who develop negative beliefs about themselves frequently do not achieve a satisfying, worthwhile sense of self and are depressed. (Brage and Meredith 1994) They are characterized by negative thoughts, depression, low energy, feeling insecure and have no self-respect for themselves (Lynda, 1955).

The most accepted description of the constructs optimism and pessimism is of Scheier and Carver’s (1985) who view optimism and pessimism as generalized positive and negative outcome expectancies. Optimism is a generalized tendency to expect positive outcomes or the belief that “good rather than bad things will happen in a person’s life” (Scheier& Carver, 1993). Optimism appears to be directly linked to academic achievement. Wayne (2006) found that there is a relationship between optimism and academic achievement.

Optimism predicts academic achievement in adolescents and pessimism in adolescents hinders the academic achievement. Optimism is also related to psychological benefits such as greater life satisfaction, more positive affect and fewer depressive symptoms (Chang, 1998; Chang & Sanna, 2001; Marshall, Wortman, Kuslas, Hervig, & Vickers, 1992; Scheier, Carver & Bridges, 2001), while pessimism was found to be related to more depressive symptoms, negative affect and psychological stress (Chang, 1998). Dispositional optimism and pessimism, i.e. positive and negative outcome expectancies for the future, have contrasting effects on physical and psychological well-being, adjustment and achievement. Pessimism, not optimism, is often the more important perpetrator for outcomes such as mortality (Schulz, Bookwala, Knapp, Scheier, & Williamson, 1996), anxiety, perceived stress, and self-rated health (Robinson-Whelen, Kim, MacCallum, & Kiecolt-Glaser, 1997). Hence, optimism is also an important factor that influences academic achievement in adolescents.

Need for the study

Adolescent is a vulnerable period marked by rapid physiological, cognitive and psychological changes. A common problem observed among adolescents is anxiety, low self-esteem and pessimistic thinking. In this stage, academic achievement is considered to be one of the important issues. On account of this, students are put into pressure to score high marks. A few of the students manage and cope with such demands, but some of them fail in their attempts which results in emotional outbursts, social problems, psychological distress, etc.

One of the issues which are always being discussed in relation to academic achievement is anxiety, self-esteem and optimism. Studies also revealed that students with moderate level of anxiety and students with high optimism and self-esteem are good in academic achievement. and students with low self-esteem, high anxiety and pessimistic attitude towards academics are poor in academic achievement.

Hence, the present study aims to investigate the influence of anxiety, self-esteem, and optimism upon academic achievement among adolescent students.

Objectives

1. To study the relationship between state anxiety and academic achievement.
2. To study the relationship between trait anxiety and academic achievement.
3. To investigate the relationship between optimism and academic achievement.

4. To investigate the relationship between self-esteem and academic achievement.
5. To examine the gender difference in academic achievement.
6. To analyse the influence of anxiety, self-esteem and optimism on academic achievement.

Based on the objectives and the selected earlier research findings the following hypotheses were formulated:

Hypotheses

Cassady and Johnson (2002) in their study investigated the impact of cognitive test anxiety as well as emotionality and test procrastination which were subsequently evaluated on three course exams. The results revealed that cognitive test anxiety exerts a significant stable and negative impact on academic performance measures and gender difference were not related to performance on the course exams.

Shirley (2002) studied the influence of optimism on student achievement. Results indicated that although achievement in mathematics was most strongly related to prior achievement and grade level, optimism and pessimism were significant factors. In particular, students with a more generally pessimistic outlook on life had a lower level of achievement in mathematics over time. Gender was not a significant factor in achievement.

Bray (2001) examined whether academic achievement had more of an effect on student's self-esteem. Significant results showed that academic achievement and self-esteem have a positive relationship.

Bevel (2010) studied the effects of academic optimism on student achievement. The findings of this study confirmed that there is a positive correlation between academic optimism and student achievement.

Based on the above studies the following hypotheses were framed:

Hypothesis- 1-There would be significant negative relationship between state anxiety and academic achievement.

Hypothesis- 2-There would be significant negative relationship between trait anxiety and academic achievement.

Hypothesis- 3-There would be significant positive relationship between optimism and academic achievement.

Hypothesis- 4-There would be significant positive relationship between self- esteem and academic achievement.

Hypothesis- 5-There would be significant difference between adolescent boys and girls on anxiety, self-esteem, optimism and academic achievement.

Hypothesis-6- Anxiety, self-esteem and optimism would significantly influence the academic achievement of adolescent students.

Variables of the Study

The independent variables chosen for this study were anxiety, self-esteem and optimism. Academic achievement was the dependent variable chosen for this study.

Socio demographic variables such as age, gender, education and socioeconomic status were the socio demographic variables considered for the study.

Method of Investigation

Research Design

In this study ex-post –facto research design was adopted.

Sampling Procedure and Sample Description

Convenient sampling method was used for this study. The sample was drawn from schools in the Chennai suburban. Students who were studying in standard 8th, 9th and 11th were included for this study. The questionnaires were administered to a sample of 170 students. Among them, 22 students were not included due to incomplete responses. The final sample consisted of 148 students.

Data collection procedure

The Principal of the schools were approached and the purpose and importance of the present study was explained by the researchers. After obtaining permission, a convenient date was fixed with the consent of the Principal without affecting the regular classes. The students present on that day in the allotted class were briefed about the objective and purpose of the study. After knowing the purpose, the following instructions were given to the students: “Please fill all the required information in the sheet provided to you. Give your responses according to the instructions given in the questionnaires. Do not skip any statement while answering the statements. Do not spend too much time for each statement. Give the response that comes to your mind at the first instance. The data will be kept confidential and used only for research purpose. Please give your honest and sincere responses. Please clarify

your doubts, if any, without hesitation". After ensuring that they have understood the instructions, the psychological tests consisting of Anxiety, Self-Esteem Questionnaire, Life Orientation Test – ® Questionnaire were administered in one session (40 minutes to 50 minutes). The questionnaires were distributed to a group of 25 students at a time. The investigator ensured that all the relevant information was filled by the respondents. Thus, 148 students' responses were included for final analysis. Out of 148 students, 98 were boys and 50 were girls. Among them, 60 students were from lower socio- economic status, 71 of them from middle class and 17 of them were from high social-economic status. The age of adolescent students ranged from 13 – 17 years. The mean age of the sample was 16.29 years.

The following assessment tools were used for the present study:

1. Personal data sheet
2. State- Trait Anxiety Inventory (Spielberger 1983)
3. Life Orientation Test- R (Scheier, Carver, & Bridges, 1994)
4. Self-esteem Scale (Rosenberg 1965)
5. Student's mark register obtained from the teacher in their schools.

The assessment of the academic achievement of the subjects was carried out with the help of the student's mark register kept in their respective schools. The aggregate percentage of the marks obtained was procured with the help of the marks register. In order to gain a better measure of the academic achievement of subjects instead of calculating the score on a single examination, the total score obtained by the subject in two consecutive examinations (Quarterly and Half yearly) were taken for assessment. The aggregate percentage of the students was considered as their valid measure of their academic achievement.

Statistical analysis

After collecting the data, descriptive statistics like mean and standard deviation were obtained for anxiety, Self-esteem, optimism, and academic achievement. Identifying the relationship between variables such as anxiety, self-esteem, optimism, and academic achievement were obtained using Pearson's correlation method. Analysis of variance and 't' test was done to find the mean differences in academic achievement based on gender, family income, etc. The 't' test was also carried out to find the gender differences in anxiety, self-esteem, optimism and academic achievement. Linear regression with Academic achievement as the outcome variable was done.

Results and Discussion

Table 1: Shows the relationship between State anxiety and Academic achievement.

Variables	N	Mean	SD	'r'
State Anxiety	148	46.54	6.23	.02(NS)
Academic achievement	148	29.09	77.08	

NS – Not Significant

The state anxiety level of the adolescent students was found to be high. The mean score on state anxiety is much higher than clinical cut off point (36). This indicates that most adolescents experience high situational anxiety characterized by jitteriness, worry, etc. The r score of the table 1 indicates that there was no significant negative relationship between state anxiety and academic achievement. Hence, hypothesis 1 which states that "There would be a significant negative relationship between state anxiety and academic achievement" was not accepted.

Table 2: Shows the relationship between Trait anxiety and academic achievement.

Variables	N	Mean	SD	'r'
Trait Anxiety	148	45.74	7.61	.009(NS)
Academic achievement	148	297.09	77.08	

NS – Not Significant

The trait anxiety level of adolescent students was also found to be slightly higher than the clinical cut off point (42). This indicates that adolescence experience slightly high trait anxiety. The 'r' score of the table 2 indicates that there was no significant negative relationship between trait anxiety and academic achievement. Hence, hypothesis 2 which states that "There would be a significant negative relationship between trait anxiety and academic achievement" is not accepted.

Table 3: Shows the relationship between optimism and academic achievement

Variables	N	Mean	SD	'r'
Optimism	148	11.65	3.40	.42**
Academic achievement	148	297.09	77.08	

** Significant at 0.01 level.

The r score of the table 3 indicates that there is a significant positive relationship between optimism and academic achievement. Hence, the hypothesis 3 which states that “there would be a significant positive relationship between optimism and academic achievement” was accepted. Shirley (2002) study which also indicated that, students with a more generally pessimistic outlook on life had a lower level of achievement in mathematics over time, which closely supports the findings of the present study.

Table 4: Shows the relationship between self-esteem and academic achievement.

Variables	N	Mean	SD	'r'
Self-esteem	148	17.03	2.79	.16*
Academic achievement	148	297.09	77.08	

**Significant at 0.05 level

The r score of the table 4 indicates that there is significant positive relationship between self-esteem and academic achievement. The better the self-esteem, the students can perform better in their academic/scholastic studies. Hence, the hypothesis 3 which states that “there will be a significant positive relationship between self-esteem and academic achievement” is accepted. Bray (2001) study indicated that academic achievement and self-esteem have a positive relationship, which supports the finding of the present study.

Table 5: Shows the summary of Regression analysis with Optimism related variables as predictors of Academic achievement

Predictor	R ²	Beta	't'	Sig.
Optimism	.421	.421	5.602	.000

Excluded Variable- Self-esteem

In the regression analysis self-esteem and optimism were entered as predictors of academic achievement. The emerging result revealed that only the optimism as determining the academic achievement. This is indicated by .42% variance ($R^2 = 0.42$) in academic achievement of adolescents. All other variables which did not show any significance were excluded. This implies that adolescent students with high level of optimism were good at their academics. Adolescents with low level of self-esteem were also low in their academics. Hence, the hypothesis 6 which states that “Anxiety, self-esteem and optimism would significantly influence the academic achievement of adolescent students” was partially accepted.

Table 6: Shows the mean, standard deviation, standard error, and 't' value of Boys and Girls on anxiety, self-esteem, optimism and academic achievement on adolescents

Variables	Gender	N	Mean	S.D	S.E	't'
Academic achievement	Boys	98	284.2	73.30	13.06	.004**
	Girls	50	322.3	78.76	13.37	.005**
State-anxiety	Boys	98	46.29	6.62	1.08	.48
	Girls	50	47.04	5.41	1.01	.46
Trait-anxiety	Boys	98	45.55	7.65	.77	.66
	Girls	50	46.12	7.60	1.07	.66
Self-esteem	Boys	98	17.04	2.96	.29	.93
	Girls	50	17.00	2.44	.34	.92
Optimism	Boys	98	11.19	3.23	.32	.022*
	Girls	50	12.54	3.57	.50	.028*

**Significant at 0.01 level.

* Significant at 0.05 level.

From the Table 6 it has been seen that the mean of the academic achievement among boys were 284.2 with standard deviation of 73.30. Similarly the mean for girls were 322.3 with the standard deviation of 78.76. The computed 't' value found to be 0.004 for boys and 0.005 for girls which is significant at 0.01 level. It has also been inferred that the mean of optimism among boy's adolescents was 11.19 with standard deviation of 3.23. Similarly the mean for adolescent girls' was 12.54 with standard deviation of 3.57. The computed 't' value found to be .002 for boys and .02 for girls which is significant at .05 level. There was no significance identified among other variables. From this, it was found that there was a significant difference between adolescent boys and girls on academic achievement and Optimism. Girls are better in academic achievement and optimism than boys. Thus, the hypothesis 5 which states that "there would be significant difference between adolescent boys and girls on anxiety, self-esteem, optimism and academic achievement" was partially accepted.

Overall discussion

Correlation coefficient between anxiety and academic achievement indicates that there is no significant negative relationship between anxiety

and academic achievement. It is known that high level of anxiety is related to low academic performance. However, this was not clearly indicated in the result of the present study. This study does not support the findings of the earlier studies on anxiety and academic achievement. (Cassady and Ronald, 2002).

However, in this study the overall academic performance is low based on the cut off set by the researcher and their anxiety level is also very high based on the cut off norms provided by author. Thus, the mean scores do indicate the fact that anxiety influences academic achievement. This is not empirically proved in the present study due to various reasons. Firstly, the data on academic achievement and anxiety is taken from the same homogenous sample and does not account for variability. Even though the sample size is high, the adolescent population was predominantly from low economic status and may experience academic deprivation and emotional disturbances.

The data were collected during the completion of academic year, when the students have lot of tests and examination which is a source of anxiety. This could be a possible reason for high score on anxiety. Low level of anxiety produces slight tension in the individual when he is about to undertake any task, and make him serious about the task and ceases after a satisfactory level of performance is achieved. Thus, achievement oriented people exhibit low level anxiety. But high level has a debilitating effect on one's performance. High anxiety triggers high level of tension under which even the best player tumbles. He / she become too much emotional and their cognitive faculty starts working at the lower level.

Correlation coefficient between self esteem and academic achievement indicates that there was a significant positive relationship between self esteem and academic achievement. This study supports the findings of the earlier studies on self-esteem and academic achievement. (Primavera and William, 1994). On analyzing regression analysis it is revealed that self-esteem did not predict academic achievement. This is due to the fact that academic achievement was influenced by many other factors such as parental educational background, family environment, study skills, school teaching methodology etc.

Further, the present study also revealed that there was a significant positive relationship between optimism and academic achievement. This study also supports the findings of the earlier studies. Shirley (2002) study which also indicated that, students with a more generally pessimistic outlook on life had a lower level of academic achievement over time.

Limitations of the study

There are a few limitations that have to be taken into consideration in the study:

- The study was ex post-facto in nature. So, the cause and effect relationship could not be established as convincingly as it would be possible through experimental approach.
- The study is confined only to State board schools so the present study cannot be generalized to other Boards of education.
- This study included only students from Sub-urban area of living so it cannot be generalized to other areas such as rural and urban.

Implications of the study

The overall anxiety status also indicates a tendency to be emotionally reactive; there is a possibility that many personal and situational factors may predispose them to high anxiety. This study highlights the need for providing interventions to reduce the anxiety through the use of relaxation techniques etc., and other anxiety management techniques. Otherwise, their emotionality indices will be increasing.

Optimism is significantly related with academic achievement among adolescent. So schools and parents enhance the optimistic attitude behavior in adolescent students like positive thinking, positive self concept etc.

There is tremendous pressures among the adolescents to score high in academics, therefore, adolescent students need personal counselling to manage and overcome the academic pressure. As their academic performance is low they need special study skills training, goal setting, etc., to enhance their academic skill such as reading, writing, memory skills, concentration and examination taking attitude. Parents and teachers role is absolutely necessary in creating confidence to achieve in academics.

Swot analysis helps the student to know their strengths, opportunities then he/ she has to work on that area and develop their skills. To know the weakness and threat students must work on that area to enhance that weakness into strength. Special attention is necessary for students who are below average in their academics.

Suggestion for future research

1. A longitudinal study can be conducted to ascertain the predictors of academic achievement adolescents.
2. Effect of intervention program may be studied on improving self-esteem, having optimistic outlook about academics, coping with anxiety, etc.

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