

A Study of Self- Concept and Examination Anxiety of Class -XII Students in Relation to Various Variables

Dr. Rina N. Vahora

Assistant Professor, M. B. Patel College of Education, Sardar Patel University, Vallabh Vidyanagar

Abstract

The current research is focused on examining the self-concept and examination anxiety of Class 12 students from Gujarati-medium schools in Petlad taluka. The study involved a sample of 150 boys and 145 girls, all secondary school students. The purpose was to investigate differences between the self-concept and test anxiety of these students, as influenced by variables such as gender and academic stream. Data collection was achieved using a self-concept questionnaire and a structured test anxiety questionnaire developed by Dr. D. A. Uchat. The t-value of 2.797 for average scores on the self-concept and anxiety tests indicated significance at the 0.01 level. This suggests a notable difference between the self-concept and test anxiety of boys and girls.

Keywords: Self –Concept, Examination, Anxiety, Relation, Class-XII, Students, Various, Variables

Introduction

Personality development begins in childhood, with a significant influence on an individual's life trajectory. One crucial element of personality is self-concept, which refers to a person's perception of themselves. Self-concept is shaped by various factors, including family, friends, and societal influences. A strong sense of self allows children to feel accepted within society, while a low self-concept often results in poor self-esteem and social rejection.

In today's educational environment, multiple transformations have taken place. The introduction of new teaching systems, updated textbooks, and modified examination methods has dramatically altered the academic experience. The emphasis on internal and external evaluations means that students are required to focus intensely on both theoretical and practical aspects of their studies throughout the year. This, in turn, causes persistent anxiety and mental stress, particularly when preparing for examinations.

A student's self-concept significantly influences how they perceive the examination process and the level of stress they experience. The weight of academic pressure may lead to severe psychological distress, with some students even resorting to extreme measures such as running away from home or suicide due to depression. The present study was conducted to examine the relationship between students' self-concept and their examination anxiety, with the hope of offering insight into potential interventions that could reduce the negative effects of academic stress.

In all these light, the present study was aimed at exploring the test anxiety with academic self-concept and to see the differences in these variables with respect to few selected categorical variables namely gender, course of study, academic self-appraisal. The study was expected logically to be aligning with

the existing literature in test anxiety and academic self-concept and categorical differences. Thus, the need to study the relationship between test anxiety and academic self-concept conceptualize

Objectives of the Study

The primary objectives of this study were formulated as follows:

- To explore the impact of gender on the self-concept of Class 12 students.
- To analyze the influence of academic stream (science or commerce) on the self-concept of Class 12 students.
- To examine the effect of gender on the examination anxiety of Class 12 students.
- To investigate the impact of academic stream on the examination anxiety of Class 12 students.

Hypotheses of the Study

The following hypotheses were developed for this study:

- There is no significant difference in self-concept scores between boys and girls.
- There is no significant difference in self-concept scores between commerce and science stream students.
- There is no significant difference in examination anxiety scores between boys and girls.
- There is no significant difference in examination anxiety scores between commerce and science stream students.

Scope and Sample of the Study

This study was limited to Class 12 students from Gujarati-medium schools located in Petlad taluka, specifically during the academic year 2020. The researcher used stratified random sampling to select 260 students from 10 different schools. This approach ensured that the sample was representative of the broader population, covering various gender and academic stream groups.

Tools of the Study

To measure the self-concept of students, the researcher employed a bipolar concept questionnaire developed by Dr. Uchat. This tool consisted of 11 statements, with 6 positive and 5 negative clauses, designed to evaluate the students' self-perceptions. For each pair of traits presented in the questionnaire, students had to choose the trait they felt represented them most accurately. The responses were then multiplied to calculate the final score.

To assess examination anxiety, a structured questionnaire consisting of 35 statements was designed specifically for this research. Students were required to respond with a simple "yes" or "no" for each statement. This questionnaire was developed after interviewing principals, teachers, and other professionals in the education sector to gather insights about the anxiety students experience during examinations. Based on their feedback and subsequent review by research experts, the final version of the tool was created.

Data Analysis

1. Gender and Self-Concept

A hypothesis was tested to determine whether there was a significant difference in self-concept scores between boys and girls. Table 1 presents the results.

Table-1: Significance of difference between average scores of self-concept questionnaire of both groups with respect to gender.

Gender	Number	Average	Proportion Deviation	T-Value	Significance Level
Boys	130	67.67	8.58	2.706	0.01
Girls	130	61.66	8.49		

The number of boys and girls included in the study was 130 each. The average scores on the self-concept questionnaire were 67.67 for boys and 61.66 for girls, with standard deviations of 8.58 and 8.49, respectively. The t-value of 2.706 indicated that the difference was statistically significant at the 0.01 level. Thus, the null hypothesis was rejected, confirming that there was a significant difference between boys and girls in terms of self-concept.

2. Academic Stream and Self-Concept Another hypothesis tested whether there was a significant difference in self-concept scores between commerce and science stream students. The results are shown in Table 2.

Table 2: Significance of the difference between self-concept scores of commerce and science students

Academic stream	Number	Average	Proportion Deviation	T-Value	Significance Level
Commerce	130	60.73	8.51	2.797	0.01
Science	130	62.60	8.46		

The results show that the self-concept scores of commerce and science stream students were 60.73 and 62.60, respectively. The t-value of 2.797 at the 0.01 level suggests that a significant difference exists between the two groups. Consequently, the null hypothesis was rejected, indicating that the self-concept of science stream students was higher than that of commerce stream students.

3. Gender and Examination Anxiety

A third hypothesis was tested to determine whether there was a significant difference in examination anxiety between boys and girls.

Table 3: Significance of the difference between examination anxiety scores of boys and girls

Gender	Number	Average	Proportion Deviation	T-Value	Significance Level
Boys	130	32.43	13.55	2.709	0.01
Girls	130	32.08	13.76		

The average examination anxiety scores for boys and girls were 32.43 and 32.08, respectively, with a t-value of 2.709. This was also significant at the 0.01 level, confirming a significant difference between boys and girls in terms of examination anxiety.

4. Academic Stream and Examination Anxiety

The final hypothesis tested the difference in examination anxiety between students in commerce and science streams. Table 4 presents the findings.

Table 4: Significance of the difference between examination anxiety scores of commerce and science students

Academic stream	Gender	Number	Average	Proportion Deviation	T-Value	Significance Level
Commerce	Boys	130	32.16	12.47	3.812	0.01
Science	Girls	130	32.34	14.35		

The t-value of 3.812 shows a significant difference in examination anxiety between commerce and science stream students. This suggests that students in the science stream experienced higher levels of exam anxiety compared to those in the commerce stream.

Discussion and Implications

The current study's findings provide valuable insights into how gender and academic stream influence both self-concept and examination anxiety among Class 12 students. One significant observation is that boys tend to exhibit a higher self-concept than girls, which might stem from traditional societal norms. In many cultures, boys are often encouraged to be self-reliant, confident, and assertive, leading them to develop a stronger sense of self-worth. Conversely, girls, despite their accomplishments, might receive less validation or be subjected to gender stereotypes that emphasize conformity and modesty, thereby impacting their self-concept negatively.

The academic stream, specifically the division between commerce and science, also plays a crucial role in shaping students' self-concept. Science is often seen as more academically prestigious, and students in this stream may feel a sense of superiority or accomplishment simply due to the societal regard for science-based careers. The perception that science requires more intellectual rigor compared to commerce could explain why science students reported a higher self-concept. Commerce students, on the other hand, may not receive the same level of external validation, leading to a relatively lower self-assessment in terms of their abilities and potential.

In terms of examination anxiety, the results demonstrate that science students experience more anxiety than commerce students. This is not surprising, considering that science courses tend to be more challenging, with complex subjects and competitive grading structures. The fear of underperforming in such a competitive field, combined with societal expectations to excel, might push science students into a state of chronic stress and anxiety during exams. Commerce students, while still under academic pressure, may not face the same level of societal and self-imposed expectations, leading to relatively lower levels of examination anxiety.

Gender differences in exam anxiety are also worth noting. Girls exhibited higher levels of anxiety compared to boys, which aligns with various psychological studies that show females often internalize stress more than their male counterparts. Girls might be more prone to worry about the potential consequences of poor academic performance, such as letting down family members or failing to meet personal expectations. Moreover, females often engage in more self-reflective thought processes, which, while beneficial in some contexts, can lead to over thinking and heightened anxiety in high-stakes situations like exams.

These findings suggest a need for targeted interventions aimed at managing exam-related stress and improving self-concept, especially among girls and commerce students. Schools could introduce mental health programs and counseling services to address these specific issues, helping students build confidence and develop better coping mechanisms in the face of academic pressure.

Findings of the Study

The study revealed several important findings:

- **Self-Concept and Academic Stream:** Students from the science stream exhibited higher self-concept compared to commerce students.
- **Self-Concept and Gender:** Boys displayed a stronger self-concept than girls.
- **Examination Anxiety and Academic Stream:** Science stream students demonstrated higher exam anxiety than their commerce counterparts.
- **Examination Anxiety and Gender:** Girls reported more exam anxiety compared to boys.

These findings highlight significant relationships between gender, academic stream, self-concept, and examination anxiety, suggesting areas for further intervention to support students in managing academic pressures.

Test anxiety has been demonstrated in the literature as debilitating the test performance of students. Academic self-concept is the perception of students about their abilities in academic settings. Previous researches in the field of school psychology specified the importance of exploring the test anxiety of students with various psychological and demographic variables noteworthy for their academic settings especially with those facilitate their academic performance and equip them to deal with test anxiety. Hence the present study aimed at exploring test anxiety with academic self-concept. In order to verify the differences in the sample, demographic variables viz. gender, course of study and academic self-appraisal were included. From findings of this study, it is seen that the female students have higher tenseness than their male counterparts. Also, students belonging to science & technology discipline showed Test Anxiety and Academic Self-Concept of Students higher test anxiety than those studying business & applied arts, allied medical sciences and humanities & education. Gender and Course of study categories did not reveal any differences in academic self-concept but significant differences were found in academic self-concept with respect to academic self-appraisal. The test anxiety and academic self-concept of students are inversely correlated with test anxiety and academic stress. It is a certain call of school administrations to opt for school consultation with psychologists to deal with the worrying issue of test anxiety and poorly formed academic self-concept by applying suitable interventions. The school psychologists may reflect these findings while designing academic skill development programs for students. Further, it is suggested that the future directions of the present study include (i) in-depth analysis of interaction between test anxiety dimensions and academic self-concept using multivariate statistical operations such as multiple regression and path analysis, (ii) Developing an educational cum intervention program for assuaging test anxiety and enhancing academic self-concept and demonstrating its worth, and (iii) identification of other latent dimensions of test anxiety and testing their relationship with academic self-concept in order to propose an indigenous measurement model.

References

1. Altermatt, E.R. and Kim, M.E. (2004). Can Anxiety Explain Sex Differences in College Entrance Exam Scores?. *Journal of College Admission Spring*, 6-11.
2. Branden, N. (1994). *Six pillars of self-esteem*. New York: Bantam.
3. Culler, R. E., & Hollahan, C. J. (1980). Test anxiety and academic performance: The effects of study related behaviors. *Journal of Educational Psychology*, 72, 16-20.
4. Friedman, I.A., & Bendas-Jacob, O. (1997). Measuring Perceived Test anxiety in Adolescents: A Self-Report Scale. *Educational and Psychological Measurement*, 57(6), 1035-1046.

5. Guay, F., Marsh, H. W., &Boivin, M. (2003). Academic self-concept and academic achievement: Developmental perspectives on their causal ordering. *Journal of Educational Psychology*, 95 (1), 124-136.
6. Hamacheck, D. (1995). Self-concept and School Achievement. *Interaction Dynamics and a Tool for Assessing Self-concept Component*. *Journal of Counselling and Development*, 73, 419-425.
7. Hembree, R (1988). Correlates, causes, effects, and treatment of test anxiety. *Reviews in Educational Research*, 58, 47-77.
8. Liu, W. C., Wang, C. K. J., & Parkins, E. J. (2005). A longitudinal study of students' academic self-concept in a streamed setting: The Singapore context. *British Journal of Educational Psychology*, 75(4), 567-586.
9. Marsh, H. W., & Craven, R. (1997). Academic self-concept: Beyond the dustbowl. In G. Phye (Ed.), *Handbook of classroom assessment: Learning, achievement, and adjustment* (131-198). Orlando, FL: Academic Press.
10. Michaels, J. W., & Miethe, T. D. (1989). Academic effort and college grades. *Social Forces*, 68(1), 309-319.