

Test Anxiety, Work Engagement and Academic Buoyancy Among High School Students

Thanusri R* and Ayesha Arif Zinna

**Department of Psychology, Justice Basheer Ahmed Sayeed College for Women, Chennai, India.*

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ABSTRACT

The current study examined the relationship between test anxiety, work engagement and academic buoyancy in high school students. The study also investigated if there were any gender differences in test anxiety, work engagement and academic buoyancy among high school students. Two hundred and forty high school students (Male: 120, Female: 120) from four schools in Chennai completed the Utrecht Work Engagement Scale-Student Forms (UWES-SF), Academic Buoyancy Scale (ABS) and Westside Test Anxiety Scale. Pearson's product moment correlations were carried out to find if there were any significant relationships between the variables. Independent samples t tests were computed to find out if there were any gender differences in these variables. The analysis revealed that there was significant positive relationship between work engagement and academic buoyancy among high school students. There was significant negative relationship between work engagement and test anxiety among high school students. There was a significant negative relationship between test anxiety and academic buoyancy among high school students. There was a significant difference in academic buoyancy among male and female high school students, female high school students exhibited higher academic buoyancy. There was no significant gender difference in test anxiety and work engagement among male and female high school students.

Keywords: Test Anxiety, Work Engagement, Academic Buoyancy, High school students

INTRODUCTION

Students from all over the world tend to experience test anxiety at some point of their life. In India, a large number of students tend to experience test anxiety, especially during Board examinations, because academic performance is highly valued among families and societies in the country and after the board examinations, high school students have to make crucial decisions regarding their college courses and careers. Most people believe that test anxiety only occurs when the individual is taking a test. But it is very common for the students to experience similar symptoms prior to and hours or even days before taking the test. Students experiencing test anxiety complain of symptoms such as headache, upset stomach, sweating, shortness of breath, pacing or fidgeting and crying. They also have a lot of negative thoughts related to their performance, such as "I am going to fail", "I will not remember anything". According to Birenbaum and Nasser [1], test anxiety is one of the factors that disrupts performance in school and other settings where testing takes place. Shaked [2] estimated that more than 30% of the students experience various levels of test anxiety. According to Hong [3] test anxiety is a complex multidimensional construct that involves cognitive, affective, physiological and behavioral reactions to evaluative situations. Researchers found that high school

students tend to experience a high level of anxiety, especially boys which might affect their academic performance [4,5].

WORK ENGAGEMENT

Student's Work engagement is defined as a positive, fulfilling, state of mind which is characterized by vigor, dedication and absorption in one's studies [6,7]. On the whole, work engagement is about how the students experience their studies as stimulating, energetic and something to which they really want to devote time for meaningful pursuit by putting in their full concentration and effort.

Corresponding author: Thanusri R, Department of Applied Psychology and Behavioural Research, Justice Basheer Ahmed Syed College For Women, Chennai, Tamil Nadu, India. Email: thanusrirajkumar@gmail.com

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Student's work engagement in school and class assignments consist of three dimensions, they are: Vigor, Dedication and Absorption. Vigor is defined by high levels of energy and mental resilience while studying, the willingness to invest effort in one studies and persistence even in the face of difficulties [7]. Dedication is characterized by being strongly involved in one's studies and experiencing essential enthusiasm, inspiration, pride and challenge. This means the students apply themselves to their classes enthusiastically and finding their work meaningful. Absorption is defined by being fully concentrated and happily engrossed in one's studies whereby time passes quickly and one has difficulty in detaching oneself from their studies [8].

ACADEMIC BUOYANCY

Martin and Marsh [9] defined academic buoyancy as the student's capacity to successfully overcome setbacks and challenges that are typical in the course of everyday academic life such as poor performance, performance pressure, receiving negative feedback on a piece of work, competing deadlines etc. [10]. Martin and Marsh [9] describe academic buoyancy as an important factor that assists students to deal with academic risks and difficulties especially the risks and difficulties that occur relatively frequently and on an ongoing and daily basis. Putwain [11] investigated whether academic buoyancy is related to examination performance and found that academic buoyancy predicted higher mean score in the GCSE examinations. Putwain [12] reported that higher resilience was found to predict higher test scores and lower test anxiety.

OBJECTIVES OF THE STUDY

The objectives of the study were:

- To determine the relationship between test anxiety, work engagement and academic buoyancy among high school students.
- To assess the differences in test anxiety, work engagement and academic buoyancy between male and female high school students.

METHODS

Participants and Procedure

The convenient sampling method was used in the present study. The sample consisted of 240 high school students, from four schools in Chennai city. 120 were male and 120 were female high school students studying in grades 10, 11 and 12. The researcher obtained permission from principals of the schools to conduct the study. The purpose of the study was explained to the principals and the students. Before initiating the study, informed consent was taken verbally from the students. The tools were self-administered. Appropriate instructions were given in the beginning of the tools about how to respond to the items in the questionnaires. Confidentiality of responses was assured to

the students. The students answered the questionnaires in their school and returned it to the researchers.

Measurements

1. Westside Test Anxiety Scale:

Test anxiety of the students was assessed using the Westside Test Anxiety Scale which was developed by Driscoll [13]. It consists of 10 items. This scale was designed to measure the anxiety levels that interfere with performance during examinations. The internal consistency of the West Side Test Anxiety Scale is high, with Cronbach's alpha ranging 0.89. The scale has good face validity and content validity.

2. Utrecht Work Engagement Scale-Student Forms (UWES-SF):

The work engagement of the student was assessed using the Utrecht Work Engagement Scale-Student Forms. The short UWES-SF form was developed by Schaufeli and Bakker [14]. It consists of 9 items that measure student's engagement in the school and in class assignments. It has three subscales Vigor, Dedication and Absorption, each subscale has 3 items each. The internal consistency coefficients for the subscales of the short UWES-SF form are .73, .76 and .70 respectively and the coefficient for the total scale is .84.

3. Academic Buoyancy Scale:

Academic buoyancy of the students was measured using the Academic Buoyancy Scale. The Academic Buoyancy Scale was developed by Martin and Marsh [15,16]. The Academic Buoyancy Scale measures the student's ability to deal with everyday academic setbacks and challenges. The Academic Buoyancy Scale comprises four items. The scale consists of good psychometric properties and prior research identified one-dimensionality, invariance as a function of age, gender, ethnicity, reliability, approximately normal distribution, and significant associations with numerous educational outcomes [10,15,16].

Statistical Analysis

- Pearson Correlational co-efficient was used to investigate the relationship between test anxiety, work engagement and academic buoyancy.
- Independent samples t- test was used to investigate any gender differences in test anxiety, work engagement and academic buoyancy.

RESULTS AND DISCUSSION

The correlation coefficient between work engagement and test anxiety was significant, $r(238) = -0.190$, $p < 0.01$ (**Table 1**). This indicates that there was a significant negative relationship between work engagement and test anxiety among high school students. This seems to indicate that as work engagement decreases the test anxiety increases.

Students who are less engaged in their school tend to experience high test anxiety. Students who were not willing to invest effort in their studies tend to experience anxiety symptoms such as fear of failure, feelings of inadequacy, and poor concentration during exams. Similar findings were reported by Raufelder [17] who found that there was a significant relationship between test anxiety and school engagement for both boys and girls, even though the girls reported higher inhibitory anxiety than boys.

The correlation coefficient between academic buoyancy and test anxiety was significant, $r(238) = -0.251$, $p < 0.01$. This indicates that there was a significant negative relationship between test anxiety and academic buoyancy among high school students. Thus, it can be inferred that students who were able to overcome minor setbacks such as poor performance, performance pressure, etc. in their academic life tend to have low test anxiety. Students who were academically buoyant did not experience anxiety symptoms such as rapid heartbeat, maladaptive cognitions, frustration, and poor concentration during exams. Similar findings were reported by Putwain [12] who investigated the extent to which test anxiety may mediate the association between resiliency and test performance. The results showed that higher resilience in students tends to predict lower test anxiety.

The correlation coefficient between work engagement and academic buoyancy was significant, $r(238) = 0.239$, $p < 0.01$. This indicates that there was a significant positive relationship between work engagement and academic buoyancy among high school students. Thus, it can be inferred that as work engagement increases academic buoyancy also increases. Students who were more engaged in their school, were able to overcome the setbacks and challenges such as poor performance and performance pressure that occurs in the normal academic life. This may be due to the fact that when students are involved in their studies, they are more confident in their work, which might help them overcome the minor setbacks that occur in their academic life.

Table 1. Correlational analysis between Test Anxiety, Work Engagement and Academic Buoyancy.

	Test Anxiety	Work Engagement	Academic Buoyancy
Test Anxiety	–		
Work Engagement	-0.190**	–	
Academic Buoyancy	-0.251**	0.239**	–

** $p < 0.01$

Table 2 indicate that there were no significant gender differences in test anxiety among male and female high school students, $t(238) = 1.364$. This indicates that there was no significant difference in test anxiety among male ($M = 3.18$, $SD = 0.69$) and female ($M = 3.06$, $SD = 0.63$) high school students. Contradictory findings were reported by Rani [18] who investigated the difference in test anxiety between male and female students and found that female students were more anxious than male students.

There were no significant gender differences in work engagement among male and female high school students, $t(238) = 1.541$. This indicates that there was no significant difference in work engagement among male ($M = 28.82$, $SD = 10.74$) and female ($M = 30.84$, $SD = 9.48$) high school students. From the above results, we can infer that there was no significant gender difference in the way students involve themselves in their studies which includes being immersed in their studies and being enthusiastic about their studies.

Results indicate that there were significant gender differences in academic buoyancy among male and female high school students, $t(238) = 2.734$, $p < 0.01$. This indicates that female high school students had higher academic buoyancy ($M = 18.90$, $SD = 5.22$) than male high school students ($M = 16.87$, $SD = 6.25$). Thus, it can be inferred that female high school students were able to overcome setbacks and challenges such as poor performance, competing deadlines, and stress-related to their studies that occur in the everyday academic life, than the male high school students. Contradictory findings were reported by Mallick and Kaur [19] who found that boys obtained higher scores in academic resilience than the girls.

Table 2. Mean, standard deviation and 't' value for Test Anxiety, Work Engagement and Academic Buoyancy between male and female high school students.

Variable	Gender	N	Mean	Standard Deviation	't' value
Test Anxiety	Male	120	3.18	0.69	1.364NS
	Female	120	3.06	0.63	
Work Engagement	Male	120	28.82	10.74	1.541NS
	Female	120	30.84	9.48	
Academic Buoyancy	Male	120	16.87	6.25	2.734**
	Female	120	18.90	5.22	

NS- Not Significant, ** $p < 0.01$

CONCLUSIONS

The study investigated the gender difference in test anxiety, work engagement and academic buoyancy between male and female high school students. The study also examined the relationship between test anxiety, work engagement and academic buoyancy among high school students [20-26]. It was found that:

- There was a significant positive relationship between work engagement and academic buoyancy among high school students.
- There was a significant negative relationship between test anxiety and work engagement among high school students.
- There was a significant negative relationship between test anxiety and academic buoyancy among high school students.
- No significant difference was found in test anxiety among male and female high school students.
- No significant difference was found in work engagement among male and female high school students.

There was a significant difference in academic buoyancy among male and female high school students.

IMPLICATIONS OF THE STUDY

From this study it is evident that test anxiety affects the student's engagement to their studies and their ability to overcome minor setbacks and challenges that occur in the everyday academic life. The students can be given some kind of psychoeducation about the effects of test anxiety in their performance as well as their life. Thus, interventions such as relaxation techniques can be given to the students to help them deal with their test anxiety [27-36].

It is also evident that there is a relationship between work engagement and academic buoyancy. The students can be given training to identify and record their strengths. This training can promote positive attitudes towards their studies and can improve their performance. The students can be given intervention to improve their academic buoyancy which could also yield beneficial results for examination performance.

LIMITATIONS OF THE STUDY

- The sample was restricted to 240 high school students only.
- The sample was limited to the geographical location of Chennai.
- The sample was limited to the age range of 14-18.
- The sample was selected only from the grade 10-12.

SUGGESTIONS FOR FURTHER RESEARCH

- The study could have included a wider sample size with a wider age range.
- The students from different states could have been included in the study.

- The students from other grades could have been included in the study.

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