

A Review Study: The Association Between Academic Buoyancy and Test Anxiety

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Abstract

Test anxiety is considered one of the most critical problems students face worldwide, and its prevalence is rising. Students' potential for poor academic performance may be exacerbated by test anxiety, which is widespread. Academic buoyancy, an emerging concept in positive psychology, is thought to be a protective factor for test anxiety. This study aims to summarize the results on the relationship between academic buoyancy and test anxiety by reviewing published studies including a sample of students from primary school to university. The results revealed that there is a significant correlation between academic buoyancy and test anxiety, and academic buoyancy is a crucial protective factor for test anxiety.

Keywords: Academic Buoyancy, Test Anxiety, Academic Anxiety, Positive Psychology.

Introduction

Test anxiety is regarded as one of the most significant challenges students must contend with (Khosravi, 2008). It's been discovered that students in almost every culture suffer from test anxiety Demyttenaere et al (2004), and there is a prevailing belief that the incidence of test anxiety is generally increasing (DordiNejad et al., 2011). Studies in Israel have shown that the percentage of students whose academic performance is impacted by test anxiety ranges from 15% to 20% (Qutaiba Agbaria & Bdier, 2020). According to the findings of Putwain & Daly (2014), 16.4% of English secondary school pupils experience test anxiety. In the United States, it has been estimated that between 25 and 40 percent of the population suffers from test anxiety (Cassady, 2010). In India, it was estimated that high test anxiety was approximately 18 % (Lohiya et al., 2021). In China, where high school students have had high levels of test anxiety for the past 15 years, hovering around 30% (Huang & Zhou, 2019), and this figure has reached 50% for seniors. This suggests that this problem has not been effectively alleviated in recent years.

In'nami (2006) identifies several cognitive manifestations of test anxiety, including comparing one's own performance to that of peers, considerations for test failure's consequences, and

low-performance confidence. Some Meta-analyses indicated that test anxiety was significantly and negatively related to a wide range of educational performance outcomes (Hembree, 1988; von der Embse et al., 2018). It can decrease a student's grade point average and raise the dropout rate among student groups (Gerwing et al., 2015). Test anxiety is clearly associated with numerous academic and personal wellbeing outcomes. Some studies have shown that, assessment system, study and learning skills, psychology/cognition, personal characteristics, and supporting and relationship were all found to be positively and negatively associated with test anxiety (Wadi et al., 2022). However, exploring the influencing factors of test anxiety has still been an important research direction.

Academic buoyancy, which refers to describes a student's ability to successfully deal with the difficulties and obstacles they face on a regular basis in the classroom (Martin, 2009; Martin & Marsh, 2006, 2008b), is a relatively new concept from the positive psychology theory. Personal development and well-being rely heavily on the capacity to deal with a variety of everyday challenges. Thus, it clearly associated with numerous academic and personal wellbeing outcomes. Academic buoyancy provides a credible and effective method for studying students' adaptable, constructive, and positive responses to the setbacks they encounter in the ordinary course of daily school life. Positive Psychology Theory (Seligman & Csikszentmihalyi, 2000) focuses on one's ability to build a block that defends them from a negative effect, and academic buoyancy is an effective resistance to the daily pressures of schooling. Thus, this study assumes that academic buoyancy has a significant influence on test anxiety. The following research questions were posed: (1) Is there a correlation between academic buoyancy and with test anxiety? (2) Is academic buoyancy a protective factor for test anxiety?

Literature Review

The purpose of this study is to investigate the relationship between academic buoyancy and test anxiety. This study reviews the results of the relationship between academic buoyancy and test anxiety includes a sample consisting of students at different stages of education, from primary school to university. Table 1 extracts and summarizes the main characteristics and results of the selected research.

Table 1

Authors/years	Sample	Instruments	Findings	
Putwain et al., (2012)	Secondary school students from the North of England; N=298	Academic Buoyancy Scale (ABS; Martin & Marsh, 2008).	Test anxiety was measured using the 20-item Revised Test Anxiety Questionnaire (RTA: Benson et al., 1992; Hagtvet & Benson, 1997)	Academic buoyancy was inversely related to test anxiety.
Martin et al., (2013)	Australian high school students; N=2971	Academic Buoyancy Scale (ABS; Martin & Marsh, 2008).	Motivation and Engagement Scale (MES; Martin, 2010).	Academic buoyancy is a construct that is relevant to reducing test anxiety.
Putwain et al., (2016)	Eight secondary schools in the north-west of England; N=325	Academic Buoyancy Scale (ABS; Martin & Marsh, 2008).	Revised Test Anxiety Scale (RTA: Benson et al., 1992; Hagtvet & Benson, 1997)	There was a negative association between academic buoyancy with test anxiety.
Collie et al., (2017)	Australian high school students; N=390	Academic Buoyancy Scale (ABS; Martin & Marsh, 2008).	Subscales from Anxiety and learning strategies (Martin, 2007).	Academic buoyancy and academic anxiety were significantly correlated.
Yun et al., (2018)	College-level L2 learners from South Korea; N=787	Adapted Academic Buoyancy Scale (ABS; Martin & Marsh, 2008).	Adapted Foreign Language Classroom Anxiety Scale (Horwitz et al., 1986).	Academic Buoyancy was found having significant negative correlation with anxiety.
Hirvonen et al., (2020)	Sixth grade primary school students in Finnish; N =845	Academic Buoyancy Scale (ABS; Martin & Marsh, 2008).	Achievement Emotions Questionnaire (AEQ; Pekrun et al., 2002, 2011).	Academic buoyancy was negatively associated with anxiety.

Lei et al., (2021)	High school Students from China; N = 560	Academic Buoyancy Scale (ABS; Martin & Marsh, 2008).	Test Anxiety Scale (TAS; Sarason & Sarason, 1990).	Academic buoyancy was protective factor for test anxiety in high school students.
Iri et al., (2021)	Students was selected from regular and guided discovery schools in Iran; N=606	Academic Buoyancy Scale (ABS; Martin & Marsh, 2008).	School Anxiety Scale (Phillips, 1978).	There was a negative association between school-related anxiety with academic buoyancy.
Putwain et al., (2022)	Primary school students; N=1242	Academic Buoyancy Scale (ABS; Martin & Marsh, 2008).	Achievement Emotions Questionnaire-Elementary School classroom emotions scales (AEQ-ES: Lichtenfeld et al., 2012)	A statistically significant interaction between academic buoyancy and anxiety.
Putwain et al., (2023)	Students with a mean age of 16.5 years old from UK; N=1198	Academic Buoyancy Scale (ABS; Martin & Marsh, 2008).	Multidimensional Test Anxiety Scale (MTAS; Putwain et al., 2021).	Academic buoyancy offered protection from test anxiety.
Thomas & Ozer, (2024)	University students from the United States and Turkey; N = 422	Academic Buoyancy Scale (ABS; Martin & Marsh, 2008).	Cognitive Test Anxiety Scale-2nd Edition (CTAS-2; Thomas et al., 2018).	There was a negative association between academic buoyancy with test anxiety.

Past literature reported overwhelming evidence about academic buoyancy was protective factor for test anxiety. The researchers who first proposed the study of the relationship between academic buoyancy and academic anxiety were Martin and Marsh (2008a), they found that anxiety as one of the motivational determinants had a negative impact on academic buoyancy. In his subsequent investigations, In his subsequent cross-lagged study (Martin et al., 2013), he conclude that the relationship between academic anxiety and academic buoyancy appears to be reciprocal. This is further supported by many researchers,

they confirm the protective effect of academic buoyancy on academic anxiety (for example, Collie et al., 2017; Hirvonen et al., 2020; Iri et al., 2021; Yun et al., 2018).

Putwain et al. (2012) further focus the scope of anxiety on test anxiety, explored the relationship between academic buoyancy and test anxiety, reported that academic buoyancy has a positively effect on test anxiety, and subsequent studies conducted by him consistently substantiated this viewpoint (Putwain, et al., 2023; Putwain et al., 2016, 2022; Putwain, et al., 2023). Likewise, Thomas & Ozer (2024) found that there was a negative association between academic buoyancy with test anxiety. Lei et al., (2021) also suggested that personal positive psychological characteristics (e.g., academic buoyancy) is a protective factor for test anxiety among students. Taken together, these studies support the notion that there is a correlation between academic buoyancy and with test anxiety, and academic buoyancy is a protective factor for test anxiety.

Conclusion

This study aims to summarize the relationship between academic buoyancy and test anxiety by conducting a literature review. The results underscore the significant correlation between academic buoyancy and test anxiety, meanwhile, academic buoyancy is a crucial protective factor for test anxiety.

Research implications and future directions

By studying the relationship between academic buoyancy and test anxiety can provide insights into the psychological mechanisms that underlie students' responses to academic stress. This can help educators and mental health professionals tailor their support and guidance to meet the specific needs of students who struggle with test anxiety. Moreover, research on academic buoyancy and test anxiety can contribute to the broader literature on resilience, coping mechanisms, and mental health in educational settings. By exploring how students navigate academic challenges and setbacks, researchers can uncover valuable information that can be used to promote positive mental health outcomes and academic success among students.

Suggested directions for future research are understanding how academic buoyancy can help in reducing test anxiety is crucial for improving student well-being and academic performance. By identifying the factors that contribute to academic buoyancy, educators and psychologists can develop interventions and strategies to enhance students' resilience and reduce their anxiety levels during tests. Thus, improve student well-being and enhance overall academic performance in educational settings.

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