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Original Papers

Research on General Self-Efficacy and Test Anxiety of Normal University Students

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Abstract

The general self-efficacy scale and test anxiety scale are utilized for the questionnaire survey among 188 normal university students. The relationship between their general self-efficacy and test anxiety, the difference of general self-efficacy in gender and major, and difference of test anxiety in gender and major are discussed. The results indicate that there is a significant negative correlation between general self-efficacy and test anxiety of normal college students; there is a significant difference in gender and major for general self-efficacy; there is no significant difference in gender but in major for test anxiety.

Keywords

normal university students, general self-efficacy, test anxiety

1. Introduction

Test is an important part of learning that can check students' learning effect and mastery of knowledge. Each of them wants to achieve the best in test and obtain excellent results. But some students have to accept a cruel reality, i.e., the results are not in direct proportion to efforts and there is a huge gap between the result and desire, causing a series of problems such as confidence loss, mental depression, tired of learning and self-abandonment. There are many reasons for this, and test anxiety is an important factor (Javanbakht et al., 2014).

Test anxiety is a complex negative emotion and act phenomenon. A lot of views have been put forward on it. Mandler thinks that it is a kind of emotion in the state of helplessness and disorder. Woipe emphasizes that it is a habitual and conditioned emotional response. However, Salason (1972) holds that test anxiety should be regarded as a stressful state associated with cognitive evaluation. Zheng Richang, a Chinese scholar, argues that test anxiety is a psychological state, which is inspired by a

certain test situation and constrained by some physical and mental factors such as individual cognitive evaluation ability and personality, with the basic feature of concern and defenses or evasion as way of act; it includes experience, physiological changes and act, etc.

Both objective and subjective factors lead to test anxiety. Objective factors, e.g., the test itself, more important test, more difficult questions and more fierce competition will easily cause test anxiety. Subjective factors, e.g., test experience: most of college students have successful test experiences in high school; however, after entering university, accidental failure may aggravate the test anxiety of these group of students; they will attribute success to easy problems and good luck, and the failure comes down to unintelligence and poor ability, resulting in confidence loss and anxiety in test there from (Pekrun, 2001).

Another important subjective factor is the individual self-efficacy. Self-efficacy refers to individual's speculation and judgment to his ability of accomplishing an act (Bandura, 1977). After 1980, the Theory of Self-efficacy has been enriched, developed and supported by a lot of empirical research. A person will generate high self-efficacy and take part in it when convincing that he has the ability to carry out an activity. For example, students will listen to the lesson carefully when they not only know that the attention can bring ideal results, but also feel that they have the ability to understand the teaching contents. After acquiring relevant knowledge and skills, self-efficacy has become the determinant of act.

In general, self-efficacy is a specific concept in a domain; as a person has a higher self-belief in one aspect but may not be the same on others. But researchers also found that there is a general self-efficacy, which refers to an overall self-confidence of individual to cope with challenges of different environments or face new things (Mohammadyari, 2012). It determines the choice and persistence of activities, affects attitude towards difficulties, acquisition of new acts and mood in activities. General self-efficacy has important impacts on academic performance, physical and mental health of college students (Fincham et al., 1989). Therefore, the concept of general self-efficacy is utilized in this study. Some studies found that there is a negative correlation between general self-efficacy and anxiety level. And this study attempts to discuss if this negative correlation exists between general self-efficacy and test anxiety of normal university students and if there is significant difference in gender, major, grade, and origin.

2. Method

2.1 Object

In this study, 200 normal university students have been investigated by random sampling, and 188 valid questionnaires were recovered with validity rate of 94%; there were 73 men, 115 women; 166 arts students and 22 science students; 49 freshmen, 46 sophomores, 44 junior students and 49 senior students; 39 urban students, 38 county students and 111 township students.

2.2 Tools

The general self-efficacy scale was used for determination of normal university students' self-efficacy. The earliest version of GSES was compiled by famous clinical and health psychologist in Free University of Berlin, Schwarzer (1999). There were 20 projects at the beginning, and then refined to 10 projects. GSES is characterized with fewer questions and easy operation, which can be widely utilized in psychological assessment and psychological research of university and middle school students. It is one-dimensional, i.e., GSES has only one dimension with no subscale. Therefore, only the total scale is counted; and intrinsic consistency coefficient of the scale is 0.87.

The test anxiety of normal university students was measured by Sarason test anxiety scale. TAS was compiled by Sarason (1972), a famous clinical psychologist of Psychology Department, Washington University; and it is one of the most widely used scales in the world. TAS contains 37 projects involving individual attitudes towards tests, feelings and physical tension before and after tests, etc. Sarason (1978) found in the conscription test that individual with high test anxiety had poor operation performance. Sarason also demonstrated by experiments that individual with high test anxiety had poor operation performance in complex cognitive tasks. These studies prove that TAS has a favorable predictive validity.

3. Results

3.1 Table 1 Shows the Difference of Normal University Students' General Self-Efficacy in Different Gender

Table 1. Comparison of Gender Differences of Normal University Students' General Self-Efficacy

	Male (n=73) M±SD	Female (n=115) M±SD	t	p
General self-efficacy	27.490±3.735	25.000±4.151	4.170	0.000*

Note. *p<0.05.

In GSES, male college students scored higher than female with significant differences (P<0.05), indicating that male college students' general self-efficacy is higher than female college students.

3.2 Table 2 Shows the Difference of Normal University Students' General Self-Efficacy in Different Majors

Table 2. Comparison of Arts and Science Differences of Normal University Students' General Self-Efficacy

	Science (n=22) M±SD	Arts (n=166) M±SD	t	p

general self-efficacy	27.680±3.847	25.740±4.165	-2.071	0.04*

Note. *p<0.05.

In GSES, science college students scored higher than arts students; the differences were statistically significant (P<0.05), indicating that science college students' general self-efficacy is higher than arts students.

3.3 Table 3 Shows the Difference of Normal University Students' Test Anxiety in Different Gender

Table 3. Comparison of Gender Difference of Normal University Students' Test Anxiety

	Male (n=73) M±SD	Female (n=115) M±SD	t	p
test anxiety	16.220±5.638	16.170±6.107	0.061	0.952

In TAS, male college students' score is not significantly different from that of female students, indicating that male and female college students have the same anxiety in tests.

3.4 Table 4 Shows the Difference of Normal University Students' Test Anxiety in Different Majors

Table 4. Comparison of Arts and Science Difference of Normal University Students' Test Anxiety

	Science (n=22) M±SD	Arts (n=166) M±SD	t	p
test anxiety	18.680±5.541	15.860±5.898	-2.126	0.035*

Note. *p<0.05.

In TAS, science college students scored higher than arts students; the differences were statistically significant (P<0.05), indicating that science college students are more anxious than arts students in tests.

3.5 Table 5 Shows the Correlation Analysis on Normal University Students' General Self-Efficacy and Test Anxiety

Table 5. Correlation between Normal University Students' General Self-Efficacy and Test Anxiety

	n	r	p
self-efficacy & test anxiety	188	-0.213	0.003*

Note. *p<0.05.

The Table manifests that normal university students' general self-efficacy is significantly negatively correlated with test anxiety (P<0.05), indicating a low test anxiety in case of high general self-efficacy, and vice versa.

4. Discussion

4.1 There Are Significant Differences between Normal University Students' General Self-Efficacy in Gender and Major

The results show that normal university students' general self-efficacy has significant gender differences. Male college students have higher general self-efficacy than female students. The cause can be discussed from two aspects. First, male college students often show more enthusiasm in daily activities and work; training has improved their self-efficacy, which scored higher than girls. Secondly, in terms of social and cultural requirements, male is often required to have higher self-confidence and self-affirmation; therefore, in a large social environment, they are given more responsibilities and requirements, and then male college students constantly strive to meet the social requirements for men, which also potentially affects self-efficacy. Thus, male college students are significantly higher than female college students in self-efficacy level (Dordinejad et al., 2011).

From the perspective of Arts and Sciences, science college students' self-efficacy is significantly higher than that of arts college students since the science courses tends to focus on individual practice participation with requirements for practical ability. Therefore, science students have better manipulative ability than arts students; and arts students have few opportunities for practice and cannot feel the success experience led by practical ability. This causes science students' higher self-efficacy than arts students.

4.2 There Is no Significant Difference in Gender for Normal University Students' Test Anxiety but in Major

Male normal university students have the same anxiety as female students in test. Competition is fiercer with the social development and progress in science and technology. Female college students have to participate in the competition with male college students, resulting in inadequately embodied male superiority in the teacher profession. Therefore, male and female college students will have to prepare for test and feel anxious (Ringeisen & Raufelder, 2015).

Science students are more anxious than arts students confronting with tests, which lies in the difference between arts and science. Arts are centered on memory while science on understanding. Science students cannot get correct answer if they fail to understand the question meaning. And arts students only need to answer the knowledge memorized before tests. That is to say, science students rely on certain comprehension in questions, while arts students can score as long as they are hard and diligent in reciting. Therefore, science students are more anxious than arts students.

4.3 There Is a Significant Negative Correlation between General Self-Efficacy and Test Anxiety for Normal University Students

Self-efficacy is a person's perception of his or her act succeeding to a certain standard. Therefore, self-efficacy involves individual's ability to deal with various life events. At the same time, it also involves the emotion generated in dealing with various life events. Subjects with high test anxiety usually have low self-efficacy, or subjects with high self-efficacy do not easily generate test anxiety since subjects with test anxiety are prone to be helpless in tests and believe that all efforts are futile there from. On the contrary, subjects with high self-efficacy are good at dealing with various life events such as tests. They try to overcome in case of difficulty and seek for solutions, it is not easy to generate anxiety or only generate moderate anxiety.

Each normal university student takes a different attitude towards test and thus causes corresponding degree of test anxiety. Severe test anxiety affects college students' physical & mental health, normal life and their successful completion of socialization during universities. According to Bandura's theory, people with different self-efficacy have different emotions, thoughts and actions (Bandura, 1997). Emotionally, low self-efficacy is often associated with depression, anxiety and helplessness. In terms of thoughts, self-efficacy can promote cognitive processes and achievements on various occasions, including decision quality and academic achievements. People with high self-efficacy will choose more challenging tasks, set higher goals and stick to them. Once the act starts, they will make more efforts and keep longer, and can quickly recover from setbacks.

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