

# ***The Relationship Between Stress Coping Styles and Test Anxiety of Undergraduates***

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**Abstract:** The number of college students in the current society is huge. The examination is a effective basic method for every college students to check their learning abilities. But at the same time, examinations also brings college students more pressures. Previous studies have proved that immature stress coping styles will have an impact on test anxiety. In view of this, This study was designed to examine stress coping styles and test anxiety using college students as subjects.. On the basis of previous studies, questionnaire survey was adopted to investigate the current situation of stress coping styles and test anxiety among college students in a university. The relationship between the two variables was explored through data analysis. The research results are as follows: 1. Test anxiety have a negative association with the mature factors in stress coping style (problem-solving, seeking help). 2. Test anxiety have a favorable link with immature factors in stress coping styles (self-blame, fantasy, withdrawal, rationalization). 3. The level of test anxiety of college students is generally high. College students should face all kinds of stressful events with a good attitude and the right way to cope with pressure, actively find solutions. At the same time, they can ask others for help when they cannot solve their own problems.

**Keywords:** college students, stress coping style, test anxiety

## **1. Introduction**

Test anxiety not only affects students' test scores. In the eyes of most teachers and parents, students' grades depend on whether they work hard and have a correct attitude, which magnifies the pressure on students. This study aims to gain a fundamental knowledge of the current state of college students' mental health in order to make appropriate recommendations for dealing with exam anxiety.

## **2. Literature Review**

### **2.1. Psychological Stress of College Students**

College students are subjected to a series of pressures from parents, teachers and peers, such as study pressure and interpersonal relationship handling pressure. Studies have found that college students' psychological pressure mainly comes from academic, social and family conditions [1]. College students' mental health, self-regulation ability and their ability to adapt to the society are significantly

related. It is necessary to understand the characteristics and influencing factors of psychological pressure of college students, and the society needs to guide them to establish a correct view of pressure and master more effective ways to cope with pressure.

## **2.2. Stress and Stress Coping Style**

### **2.2.1. The Concept of Stress**

Psychological stress is a comprehensive mental state of constant tension formed when individuals respond to stressful events in life practice. Psychological stress is an objective psychological phenomenon in real life, which is closely related to stressful events. As a comprehensive mental state of individuals, psychological stress is manifested as the organic combination of cognition, emotion and behavior [2].

### **2.2.2. The Concept of Stress Coping Style**

Coping can be defined as the cognitive evaluation of an individual in a stressful environment or event and the measures taken to balance his mental state after cognitive evaluation [3]. Stress management style is defined as a person's cognitive and behavioural style in the face of frustration or pressure [4]. Andrews believed that the risk of psychological damage of individuals lacking good coping styles under high stress state could reach 43.3%, twice that of the general population [5]. The physiological, family, cognitive and other aspects of the individual will have an impact on the process of regulating the state.

### **2.2.3. Relevant Studies on Stress Coping Styles**

According to the Xiao, coping styles can be classified as action coping styles and ideational coping styles; problem-oriented coping style and emotion-oriented coping style; coping styles aimed at problem-solving and coping styles aimed at changing self-cognitive evaluations.

Coping styles can be classified according to the above characteristics, or according to the manifestation of coping styles, such as forbearance, masturbation, acceptance, and so on. This category may vary from a general or individual feature, but as a whole represents a category, and as a single unit is a specific behavior style [3].

Some Chinese researchers believe that the coping styles of individuals under different stressful situations are determined by the static capacity affected by different dimensions, for example, introversion or extroversion, Confrontational or avoidant, inhibition or sensitivity. Introverts tend to be field-dependent, while extroverts tend to be field-independent. Confrontational individuals tend to deal with difficulties more actively, while avoidant individuals tend to procrastinate. When individuals choose the method of inhibition, the individuals usually show that they do not care about difficulties, while the sensitive individuals show that they have a greater response even in the face of small difficulties [6]. In the opinion of some scholars, this theory is one-sided. As far as they know, individuals' personal traits are relatively stable, so the coping styles determined by their traits should also be stable, but this is not the case in reality [7].

The other is the situational theory. Compared with the trait theory above, they believe that an individual's stress coping style is determined by the individual's analysis of the environment, but this theory ignores the individual's differences and personality traits and other internal factors. Lazarus and Folkman supplemented this theory, believing that the cognitive process and specific changes are what individuals should pay more attention to when facing high pressure situations [7]. On this basis, Li divided pressure coping methods into two types. One is facing external pressure, that is, trying to solve problems; The other is internal pressure, that is, adjusting the negative emotions caused by

pressure [8]. Later, Xiao planned on compiling the Mature Adaptation Style Questionnaire, the Immature Adaptation Style Questionnaire and the Blended Adaptation Style Questionnaire, which are three types of stress adaptation styles [3].

In China, prior research indicated that the connection which is among stress and depression was affected by coping styles, which could be used to predict depression and anxiety. Negative coping styles would make employment and other pressures produce depression. In college students, female students are more active in coping styles, but in teenagers, male students are more mature. Male students tend to solve problems independently while female students tend to seek help from others [9].

#### **2.2.4.Measurement of Coping Style**

Behavioral observation and self-report are common measures of stress coping styles.

Behavioral observation is a method of systematically observing and recording people's behavior in natural situations with a goal and a plan, and then analyze the record to find the law of psychological activity and development.

The self-report is classified into two types, one is to fill in the prepared standardized scale, the other is interview. At present, the most generalized questionnaire in China is Coping Plan Questionnaire compiled by Chinese scholars Xiao. While in other countries, WOCQ compiled by Lazarus and Folkman and COPE created by Carve are two popular ones.

### **2.3. The Level of Test Anxiety**

#### **2.3.1.Definition of Test Anxiety**

Zheng and Chen believe that test anxiety is a kind of mental state, which is stimulated by taking the test and affected by individual cognitive evaluation ability, personality and other factors. It is characterized by worry and manifested by defense or avoidance [10].

Siber believed that individuals usually have unavoidable anxiety about test failure, and the anxiety is difficult to be calmed, so it is easy for individuals to have abnormal behavior, and eventually lead to the production of test anxiety [11].

After reading relevant literature, it is found that the definition of test anxiety by Zheng is adopted in most Chinese researches, which shows that this definition has been widely recognized in the academic research. And there is no doubt that the majority of scholars believe that test anxiety will have a negative impact on individuals.

#### **2.3.2.Measuring Tools of Test Anxiety**

Children's test anxiety Scale (ATSC) compiled by Sarason et al., Achievement Anxiety Test (AAT) compiled by Albert and Haber, and Test Anxiety Scale (TAS) compiled by Sarason in 1958 are commonly used to measure test anxiety abroad.

On the basis of foreign research, many Chinese scholars have re-compiled self-assessment scales of test anxiety applicable to Chinese conditions, such as the Test Anxiety Diagnostic Scale (TAT) compiled by Zheng Richang.

In addition, some scholars have introduced foreign scales. For example, Professor Ling introduced Spielberge's test anxiety scale, revised and supplemented it with 90 questions based on it. Wang translated and put into use the FRIENEB Test Anxiety Scale (FAT) co-compiled by Israeli psychologists Friedman and Bendas-Jacob.

In a word, Chinese and foreign studies on the measurement of test anxiety mainly focus on the measurement of the scale.

## 2.4. Current Research Situation of the Connection Between Stress Coping Style and Test Anxiety

Chen used the “Simple Coping Style Scale” to research college entrance examination students and found that positive coping styles were in negative correlation with anxiety, whereas negative coping styles were in positive correlation with anxiety [12].

Bao examined the coping styles of normal students from the aspects of pre-examination, post-examination and post-examination evaluation, and the results showed that the coping styles in the examination process were both stable and changing. The more stable factor was fantasy, which was consistent across time and gender after the exam. In addition, seeking social support for coping was also relatively stable across time in both men and women’s individual evaluations [13].

Maintaining an optimistic attitude towards events and actively solving problems is called positive coping style, whereas self-blame, fantasy, degeneration and other coping methods that keep paying attention to the negative aspects are called negative coping style. According to the research results, adopting the positive coping style to solve problems is what most college students tend to do. However, if they encounter test anxiety, the style will change into the negative coping style with the accumulation of test anxiety. The tendency to solve problems will be in turn reduced [14].

Test anxiety and the six coping styles are significantly correlated proposed by Xiao. Among them, solving individual self-problems or seeking help from others and other positive coping ways can effectively relieve test anxiety and timely adjust their state to accept the test. However, self-blame, fantasy, escape and other means that do not want to face the problem will increase the level of test anxiety [15].

## 3. Research Technique and Study Design

### 3.1. Research Technique

Setting up regression model for quantitative calculation of sample data.

### 3.2. Study Design

#### 3.2.1. Source of Sample Data

The participants of the present study were college students. The level of the independent variable and the dependent variable were investigated by questionnaire measurement.

#### 3.2.2. Coping Style Questionnaire

The study uses ‘The Coping Style Questionnaire ‘(CSQ) which was compiled by Xiao et al. with reference to the questionnaire content of coping studies as well as relevant coping theories and Chinese cultural background. There are 62 items in total and 6 subscales corresponding to problem solving, self-blame, asking for help, fantasy, escape and rationalization respectively. The CSQ has great credibility [3].

##### *Test Anxiety Scale*

The study uses ‘Test Anxiety Inventory’ (TAI) which is compiled by American clinical psychologist Spielberger in 1980. TAI has been revised and used by scholars in many countries. This scale consists of 20 items, and requires subjects to report all the anxiety levels before, during and after the exam. TAI has been proved to exhibit high reliability and validity. When scoring higher the scale, that means having higher level of test anxiety. 45 to 50 is classified as mild anxiety, 50 to 60 as moderate anxiety, 60 or more as severe anxiety.

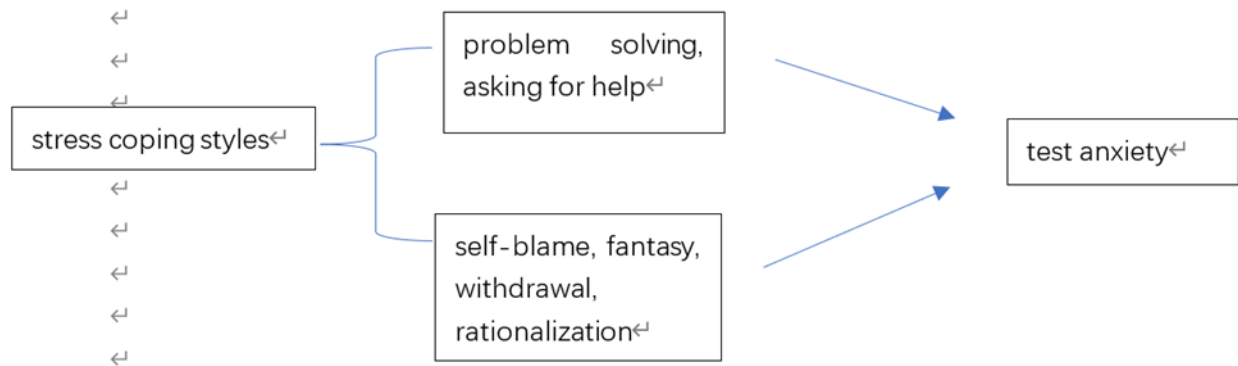


Figure 1: The relationship between stress coping style and test anxiety level.

### 3.3. Research Hypothesis

Mature factors as solving problem, seeking for help and immature factors a self-blame, fantasy, avoidance, rationalization exhibit opposite effects on anxiety.

### 3.4. Expected Research Results

Test anxiety is negatively correlated with maturity factors in stress coping styles (problem solving, seeking help).

Test anxiety have a favorable link with immature factors in stress coping styles (self-blame, fantasy, withdrawal, rationalization).

### 3.5. Data Analysis

Table 1: Descriptive statistical analysis of stress coping styles and test anxiety data of college students.

Variables		Minimum	Maximum	M	SD
Stress coping style	Positive coping styles	0	18	9.65	4.03
	Negative Coping styles	2	38	16.08	10.39
Test Anxiety			80	35.74	12.94

The statistical results from the table 1 show that the mean value and standard deviation of positive way to cope adopted by college students in the sample are 9.65 and 4.03. The mean value and standard deviation of negative way to cope of college students are 16.08 and 10.39. The mean value of test anxiety of college students is 35.74, and the standard deviation is 12.94. The anxiety level of college students is close to the theoretical mean value of 40, indicating that this group has slightly higher test anxiety.

Table 2: Correlation analysis on positive stress coping style and test anxiety of postgraduate students.

Correlation			
		Active coping style	Test anxiety
Positive coping style	Pearson relevance	1	-.445**
	Salience		<0.01
	Number of cases	253	253
Test Anxiety	Pearson relevance	-.445**	1
	Salience	<0.01	
	Number of cases	253	253

\*\*. At level 0.01, the correlation is significant.

Table 3: Correlation analysis on negative stress coping style and test anxiety of postgraduate students.

Correlation			
		Negative coping styles	Test Anxiety
Negative coping styles	Pearson relevance	1	.935**
	Salience		<0.01
	Number of cases	253	253
Test Anxiety	Pearson relevance	.935**	1
	Salience	<0.01	
	Number of cases	253	253

\*\*. At level 0.01, the correlation is significant.

Pearson product difference correlation analysis of test anxiety, other variables and their dimensions, as shown by the correlation coefficient and significance in the table 2 & 3: (1) There is a significantly positively correlation between the negative coping styles of stress coping styles and the total score of test anxiety ( $r=0.935$ ,  $p < 0.01$ ); (2) Test anxiety's total score was significantly negatively correlated with the positive coping styles. ( $r=- 0.445$ ,  $p < 0.01$ ).

Based on the above two kinds of statistical analysis of the relationship between the three variables of college students' negative coping styles, positive coping styles and test anxiety, it is found that test anxiety is significantly positively correlated with the negative coping styles of stress coping styles, while test anxiety is significantly negatively correlated with the positive coping styles of stress coping styles.

That is, for the relationship between test anxiety and stress coping styles, test anxiety and stress coping styles of self-accusation, fantasy, retreat, rationalization showed a significant high positive

correlation, indicating that college students' test anxiety is related to immature stress coping styles. Generally speaking, immature ways to cope with stress may lead to test anxiety.

### 3.6. Summary

This study conducted questionnaire measurement and data analysis on students in one university which is in Jiangsu Province. The relationship between stress coping style and test anxiety were analyzed. The present study concluded as follows: First, college students have a slightly higher level of test anxiety, and their stress coping styles tend to be immature, that is, they tend to blame themselves, fantasy, retreat and rationalization. Secondly, test anxiety has a negative association with the mature factors in stress coping style. Finally, test anxiety has a favorable link with immature factors in stress coping styles.

## 4. Discussion

This study explores the relationship between college students' stress coping styles and test anxiety. The results show that negative stress coping styles can positively predict test anxiety, while positive stress coping styles can negatively predict test anxiety. This finding is consistent with previous research results [13].

Possible explanations for the above research conclusion are as follows: according to Weiner's attribution theory, when individuals attribute stimuli to internal or external dimensions, it will affect their emotional experience of success or failure, and thus affect their subsequent actions. The psychological anxiety factors of college students generally include internal factors and external environmental factors, among which coping style is the internal factor of individuals. The influence of coping style on anxiety is more obvious and direct. The research shows that the immature stress coping style can significantly positively predict the level of test anxiety, which is consistent with the explanation of the attribution theory for test anxiety.

College students are in early adulthood, which is an important period for individuals to enter the society. Although college students tend to be emotionally stable after twenty years of psychological experience, their mind is not fully mature. Therefore, when students in this period are faced with more pressure and greater challenges, individuals without correct, mature and positive coping styles will easily produce anxiety, depression and other negative feelings. Those negative factors often cause psychological discomfort. In view of this, in the psychological intervention of test anxiety for college students, more attention should be paid to and cultivate students' mature stress coping style, which can reduce the degree of anxiety by changing the stress coping style.

It should be noted that there are also several shortcomings in the research:

First, the representativeness of the subjects was insufficient, and the numbers of genders were also uneven.

Second, only college students are selected as subjects in this study, which are not representative of the entire student body.

Third, the study did not make detailed discussion according to the six categories of stress coping styles, but classified them into two categories.

## 5. Conclusions

College students' exam anxiety level is generally high, and the stress coping style is more inclined to the immature type, focusing on self-blame, fantasy, retreat, and rationalization.

In addition to the examination, other aspects of college students' pressure also emerge in an endless stream, such as interpersonal communication, romantic relationships and so on. In the face of these pressures, college students should face these difficulties correctly, rather than blindly blame



themselves, escape or even rationalize these pressures. Escaping does not help solve problems. On the contrary, it will make problems pile up and bring new problems and conflicts. Therefore, what college students should do in the face of pressure is to face all kinds of stressful events with a good attitude and the proper way to cope with pressure, and actively find solutions.

At the same time, asking others for help is also a correct way to deal with it. When individuals are unable to deal with this stressful event, they should actively seek help from others. Students should take a correct view of their own psychological condition. In the face of emotional problems, individuals should not hide or avoid them. They should pay attention and concern to their own mental health problems. Therefore, changing immature ways of coping with pressure can help people solve the problem. This study has made some conclusion through investigation, but the conclusions obtained have some limitations.

First, in future studies, the selection range of subjects can be expanded to more regions, schools and majors, so that the results of the study will be more representative and extendable.

Secondly, the TAI test anxiety scale compiled by Liebert et al was selected as the scale of test anxiety in this study, but this scale is widely used to measure test anxiety for primary and middle school students. The content validity of its questions for graduate students may need further evaluation.

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