

Research on the Relationship between Student Employment Pressure and State Anxiety through Multiple Regression Analysis

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Abstract

This paper utilized a questionnaire to collect data related to college students' employment pressure and state anxiety and analyzed the data using multiple regression analysis. The reliability and validity of the questionnaire data were initially examined during the analysis process. Subsequently, independent variables were introduced step by step to construct a multiple regression model. The coefficients of the factors in the regression model were tested using *t*-tests to confirm their significance. The results indicated that the data collected from the questionnaire could be effectively utilized in the regression analysis. Factors such as college students' grades, family economic status, student leadership experience, major, competition level, and employment pressure were significantly correlated with mental health. Specifically, employment pressure was significantly positively correlated with state anxiety.

Keywords

Multiple Regression, Employment Pressure, State Anxiety, Employment

1. Introduction

In the context of increasingly fierce competition in education and employment [1,2], students face academic pressure and psychological burdens from their families, society, and their own expectations for future career development [3]. Prolonged exposure to high-pressure situations can result in decreased learning efficiency, strained interpersonal relationships, and mental health issues [4,5]. As a key statistical method, multiple regression analysis allows for the simultaneous consideration of the effects of multiple independent variables on a dependent variable, thereby revealing complex relationships between variables. This paper took employment pressure as the core independent variable, state anxiety as the dependent variable, and individual traits, social environment, and other related factors as control variables to accurately evaluate the independent impact of employment pressure on state anxiety. The goal is to understand the inherent connection between employment pressure and state anxiety and to provide a scientific basis for developing targeted intervention strategies [6]. Baek [7] drew on the general strain theory to explore the mediating role of negative stimuli and emotions in running away from home behavior. They found that negative stimuli in the home environment can significantly impact an individual's state anxiety. Collins [8] investigated the effects of mindfulness interventions on test anxiety

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among nursing students in community colleges. They found that systematic desensitization is a mindfulness-based technique and students majoring in nursing can use it to reduce test anxiety. Grema et al. [9] conducted a study on factors influencing test anxiety and found that a positive mindset can effectively alleviate test anxiety. The above-mentioned studies have all analyzed and discussed students' state anxiety from various perspectives. Some have analyzed the impact of family factors on state anxiety, some have explored the positive effects of psychological intervention measures on state anxiety, and some have studied the influencing factors of test anxiety. This paper focuses on the employment pressure of college students. Using regression analysis, it analyzed the impact of employment pressure on the state anxiety of college students. The results showed that employment pressure had a positive impact on state anxiety. This paper utilized a questionnaire to collect data related to employment pressure and state anxiety of college students and analyzed the data using multiple regression analysis.

2. Case Study

2.1 Data Collection

A questionnaire was employed to gather relevant data and was structured into three parts: demographic characteristics, employment pressure evaluation, and state anxiety assessment (Table 1). The demographic characteristics section [10] included general information about college students, such as gender and grade. The employment pressure evaluation section collected data using the College Student Employment Pressure Scale [11], while the state anxiety assessment section collected data through the State Anxiety Scale [12]. The College Student Employment Pressure Scale is a self-developed scale inspired by relevant literature, comprising 30 questions that cover comprehensive quality, social needs, employment expectancy, support for job, and self-orientation. For each question, the degree of agreement, ranging from low to high, was recorded as 1, 2, 3, 4, and 5. The State Anxiety Scale is another self-developed scale based on relevant literature, consisting of 20 questions (10 positive emotion questions and 10 negative emotion questions). Each question was rated on a 5-point scale. Similarly, for each question, the severity levels from low to high were recorded as 1, 2, 3, 4, and 5.

2.2 Analysis Method

After collecting relevant data through the questionnaire, the data were initially assessed for reliability and validity [13,14]. Then, Pearson correlation test was performed on the variables. Finally, a multiple regression analysis was performed on the control and core independent variables. The coefficients of each factor in the regression model were examined through a *t*-test [15]. If the *p*-value of the *t*-test was less than 0.01, it indicated a significant relationship between the coefficient of a factor and state anxiety.

2.3 Analysis Results

As shown in Table 2, α denotes Cronbach's α coefficient. The table shows that the α values of the demographic characteristics, college students' employment pressure, state anxiety, and other factors were all greater than 0.9, which ensures reliability; the Kaiser-Meyer-Olkin (KMO) values were all greater than 0.7, and the results of the sphericity test similarly also showed that the collected data had sufficient validity. The test results in Table 2 indicate that the data collected from the questionnaire are suitable for use in the subsequent regression analysis.

Table 1. Basic structure of the questionnaire

Survey item	Survey result
Demographic characteristic	—
Gender	
Grade	
Whether the only child or not	
Origin of student	
Family economic situation	
Student leadership experience	
Major	
Competition level	
Evaluation of employment pressure	The degree of conformity for each answer is recorded as 1, 2, 3, 4, or 5, from lowest to highest.
Comprehensive quality	
Lack experience in enhancing personnel management capabilities	
Poor academic performance	
Poor practical ability in professional skills	
Rarely participate in social practice related to major	
No special talents	
Received few or no honors or commendations	
Lack of career planning	
Weak comprehensive ability and lack of competitiveness	
Social needs	
There are many graduates but limited job positions	
Sudden security incidents have increased the severity of the employment situation	
The demand for postgraduate entrance examinations influences employment choices	
The professional requirements for the job position are high	
Discrimination exists in the recruitment process	
The competitiveness of a bachelor's degree is low	
Employment expectancy	
Some enterprises have high recruitment requirements	
Worried that the job found has no prospects	
Worried that the job found will be too difficult to handle	
Worried that the job found will have low income and poor treatment	
Hope to work in a well-known and highly profitable enterprise	
Hope to work in an economically developed area	
Worried about all kinds of assessments during the job search process	
Support for job	
The cost of job hunting is a heavy burden	
The family background is average and there are no special social connections	
Family members have overly high expectations of oneself	
Family members have different opinions on one's employment	
Classmates found jobs first	
Self-orientation	
Don't know the desired job	
Don't know the most suitable job	
Don't know what kind of job is suitable for the major	
Dislike the current major but unable to change it	

Continued on the next page.

Table 1. Continued

Survey item	Survey result
State Anxiety Scale	Each question is scored on a 5-point scale. For each question, the severity levels from lowest to highest are recorded as 1, 2, 3, 4, or 5.
Tend to feel more nervous (anxious)	
Feel scared for no reason (fear)	
Feel irritable and frightened for no reason (terrified)	
Experience unprovoked fits of mania (craziness)	
Feel good about self and don't sense any misfortune (a premonition of misfortune)	
Trembling of hands and feet (shaking of hands and feet)	
Troubled by body pain (headache)	
Feel weak and fatigued (lacking energy)	
Be able to remain calm (inability to sit still)	
Feel the heart beating very fast (palpitations)	
Annoyed by dizziness (dizziness)	
Have a premonition of fainting (a feeling of fainting)	
Feel easy to exhale and inhale (difficulty in breathing)	
Numbness and tingling in the hands and feet (paresthesia of the extremities)	
Experience stomachache and indigestion	
Frequent urge to urinate (ascheturasis)	
The hands and feet are often dry and warm (sweaty)	
Blushing and feeling hot (flushing)	
No sleep disorders	
Have a nightmare (paroniria)	

Table 2. Results of reliability and validity tests

Indicator	No.	α	KMO	Bartlett's test of sphericity		
				χ^2	df	p-value
Gender	X1	0.993	0.710	197.26	7	0.001
Grade	X2	0.948	0.721	175.77	8	0.000
Whether the only child or not	X3	0.955	0.793	183.98	9	0.002
Origin of student	X4	0.972	0.715	190.36	6	0.000
Family economic situation	X5	0.902	0.736	219.63	9	0.002
Student leadership experience	X6	0.950	0.729	178.27	6	0.000
Major	X7	0.965	0.712	207.87	5	0.003
Competition level	X8	0.982	0.781	201.21	8	0.001
College students' employment pressure	X9	0.952	0.726	204.81	3	0.002
State anxiety	Y	0.918	0.701	205.12	5	0.001

The Pearson correlation test results for the different variables are shown in Table 3. It can be seen that variable Y, "state anxiety," had a significant correlation with X2 and X5-X9, while there was no significant correlation between variables X1-X9.

Table 4 illustrates that in Model 1, there was a notable correlation between the grade, family economic situation, student leadership experience, major, and competition level—among the control variables—and the state anxiety of college students. The core independent variable, "college students' employment

pressure,” was incorporated into Model 1, and regression calculations were conducted to derive Model 2. In Model 2, the coefficients of the original control variables changed following the introduction of the core independent variable. The control variables that showed a significant correlation with state anxiety remained unchanged, and the introduced core independent variable demonstrated a significant correlation with state anxiety. Moreover, the R^2 of the model increased after incorporating the core independent variable, indicating that this variable enhanced the contribution to state anxiety and could explain 56.7% of state anxiety.

Table 3. The Pearson correlation test results for the different variables

	X1	X2	X3	X4	X5	X6	X7	X8	X9	Y
X1	1									
X2	0.174	1								
X3	0.196	0.193	1							
X4	0.339	0.233	0.233	1						
X5	0.116	0.384	0.272	0.324	1					
X6	0.111	0.119	0.136	0.132	0.156	1				
X7	0.142	0.137	0.298	0.147	0.252	0.368	1			
X8	0.275	0.316	0.294	0.250	0.310	0.360	0.333	1		
X9	0.233	0.306	0.124	0.246	0.163	0.169	0.151	0.351	1	
Y	0.127*	-0.100*	0.225*	0.366*	-0.245*	-0.202*	-0.315*	-0.361*	-0.257*	1

* $p < 0.01$.

Table 4. Regression results of different models

	Standardized coefficient	SE	<i>t</i>	95% CI	<i>p</i> -value	R^2
Model 1						0.296
Gender	0.003	0.001	0.121	0.078–0.218	0.125	
Grade	-0.014*	0.008	0.011	0.068–0.228	0.001	
Whether the only child or not	0.001	0.001	0.012	0.074–0.226	0.132	
Origin of student	0.002	0.001	0.025	0.047–0.208	0.127	
Family economic situation	-0.254*	0.029	0.111	0.058–0.222	0.002	
Student leadership experience	-0.367*	0.121	0.124	0.055–0.227	0.001	
Major	-0.423*	0.132	0.113	0.064–0.239	0.003	
Competition level	-0.213*	0.104	0.121	0.058–0.246	0.004	
Model 2						0.567
Gender	0.002	0.001	0.012	0.077–0.246	0.157	
Grade	-0.016*	0.008	0.014	0.098–0.232	0.001	
Whether the only child or not	0.001	0.001	0.021	0.085–0.274	0.168	
Origin of student	0.001	0.001	0.011	0.063–0.254	0.185	
Family economic situation	-0.259*	0.111	0.121	0.066–0.225	0.001	
Student leadership experience	-0.387*	0.121	0.124	0.077–0.275	0.001	
Major	-0.486*	0.169	0.132	0.066–0.248	0.001	
Competition level	-0.221*	0.101	0.111	0.065–0.249	0.001	
College students’ employment pressure	0.698*	0.213	0.231	0.067–0.227	0.001	

SE = standard error, CI = confidence interval.

* $p < 0.01$.

3. Discussion

Employment pressure impacts students' career planning and development and profoundly influences their psychological well-being. Therefore, it is important to analyze the connection between students' employment pressure and state anxiety using scientific methodologies to develop effective intervention strategies. Employment pressure refers to the psychological strain resulting from students' concerns about job prospects, salaries, and other factors during the job search phase. Psychologically healthy students typically exhibit a positive outlook, effective emotional regulation, and robust interpersonal skills. However, when employment pressure surpasses students' tolerance levels, psychological issues like anxiety and depression may arise, consequently hindering their academic and career progression. Previous studies have demonstrated a significant correlation between employment pressure and state anxiety. However, most of these studies adopt a single analytical method and fail to fully uncover the complex relationship between the two variables. As an important statistical analysis method, multiple regression analysis can simultaneously consider the influence of multiple independent variables on the dependent variable, thereby revealing the internal connection between variables more accurately. Therefore, this paper selects multiple regression analysis as the research method to explore the relationship between students' employment pressure and state anxiety more deeply.

This paper first designed a questionnaire to collect data on students' demographic characteristics, employment pressure, and state anxiety. The study considered students' employment pressure as the core independent variable and state anxiety as the dependent variable, constructing regression equations to reveal the intrinsic link between them. During the construction process, other factors impacting state anxiety, such as demographic characteristics, were initially treated as control variables to be incorporated into the regression equation. Subsequently, the core independent variable "employment pressure" was introduced through stepwise regression, and the corresponding regression coefficient was computed. Following the inclusion of the core independent variable "employment pressure," the R^2 of the regression model increased, indicating an enhanced fit. This suggests that the independent variable "employment pressure" contributed to "state anxiety." As can be observed from the regression coefficients of the model, there was a significant correlation between state anxiety and the control variables of grade, family economic situation, student leadership experience, major, and competition level. Moreover, the newly introduced "employment pressure" also exhibited a significant correlation with state anxiety, and the regression coefficient revealed a notable positive relationship between them. In Model 2, in which the core independent variable, employment pressure, was introduced, among the control variables, the regression coefficients of the control variables were as follows: grade (-0.016), family economic situation (-0.259), student leadership experience (-0.387), major (-0.486), and competition level (-0.221). Moreover, the p-values of the regression coefficients for all of the above control variables were less than 0.01, indicating that grade, family economic status, student leadership experience, and major were significantly negatively correlated with state anxiety. Specifically, students with higher grades, better family economic status, more extensive leadership experience, and majors closer to popular job positions tend to experience lower levels of anxiety. This is because older students possess a broader knowledge base; a better family economic situation provides greater safety during the job search; and more experience as a student leader or a major that is more aligned with high-demand fields makes finding a job easier. Consequently, their state anxiety tends to be at a better level. The regression coefficient of the core variable, employment pressure, was 0.698, and its p-value was less than 0.01, indicating that there

was a significant positive correlation between employment pressure and state anxiety. The reason is that high employment pressure can trigger anxiety and reduce the level of state anxiety.

Based on the outcomes of the regression analysis, the following recommendations are proposed.

- 1) A notable positive correlation exists between students' employment pressure and state anxiety. Therefore, colleges and universities must enhance employment guidance and psychological counseling services for students.
- 2) Colleges and universities should carefully consider students' individual differences and family backgrounds and develop personalized education plans when delivering state anxiety education and intervention programs.
- 3) Students themselves need to establish correct employment concepts, actively seek professional support and guidance, and pay attention to building a healthy social support network in their daily lives. They should also cultivate a positive attitude and healthy habits towards life, actively pay attention to the job market, and prepare in advance to deal with workplace pressure.

Employment pressure is a common problem in contemporary society and has a significant impact on individuals' state anxiety. Implementing the above suggestions can help individuals better cope with employment pressure, manage state anxiety, and achieve the harmonious unity of personal and social values. Moreover, all sectors of society should also increase their attention and support for employment issues and jointly create a fairer, more inclusive, and healthy employment environment.

4. Conclusion

This paper used a questionnaire to gather data regarding college students' employment pressure and state anxiety and employed multiple regression analysis to examine the data. The reliability and validity of the questionnaire data were tested first. Then, the independent variables were introduced to construct a multiple regression model, and t-tests were conducted to evaluate the significance of the coefficients in the regression model. The key findings are summarized as follows. The reliability and validity of the questionnaire data were confirmed through the test results of the Cronbach's coefficient method, the KMO test, and Bartlett's test of sphericity. In the multiple regression model, there was a significant correlation between the control variables—grade, family economic situation, student leadership experience, major, and competition level—and state anxiety. A significant correlation also existed between the core independent variable “employment pressure” and state anxiety, and the regression coefficient suggested a significant positive relationship between them.

Conflict of Interest

The author declares no competing interests.

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