

Research on the Current Situation of Academic Stress of Engineering Normal College Students

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ABSTRACT. *The purpose of this paper is to understand the current situation of academic stress of engineering normal college students. This paper takes 568 Jilin Engineering Normal University in Changchun City, Jilin Province as research subject, adopts the "College Students Academic Stress Questionnaire" developed by Tian and Deng (2007) as the research tool, issues in the form of online and on-site questionnaires, makes statistics through SPSS24.0. This study draws the following conclusions: Engineering normal college students experienced greater academic stress; in aspect of demographic variables, there are significant differences in the academic stress of engineering normal college students between different genders, majors, family locations and only-children-or-not.*

KEYWORDS: *Engineering Normal College Students, Academic Stress, Current Situation, Demographic Variables*

1. Introduction

Academic stress is typical stress among various stresses encountered by college students. Carveth, Gesse, and Moss (1996) regarded academic stress as an experience of conflict. The "Psychology Dictionary" edited by Lin, Yang, and Huang (2003) mentioned the psychological burden and tension caused by academic stress and divided them into two types, namely, external and internal stress. External stress was a specific event such as an important test, and internal stress was a mentality factor such as the gap between one's expectations and reality. Lu (2013) proposed that academic stress was a rational burden and tension caused by stimulus events related to academic activities, mainly from external environmental factors and individual expectations. Wang (2017) used elementary school students as the research subject to explore the issue of social work intervention in school children's

academic stress. It means that the academic stress was a kind of mental or emotional tension and uneasy reaction produced by individuals in the process of interacting with the external environment. The main purpose of this study is to investigate the current situation and the differences in demographic variables of the current situation of academic stress of engineering normal college students

2. Methodology

2.1 Research Subject

Using the method of cluster sampling, the college students of Jilin Engineering Normal University in Changchun City, Jilin Province, China were selected to participate in this study. During the survey, the surveyors first introduced the process and purpose of the survey, emphasizing the principle of confidentiality of the survey, and the results of the survey were only used for study, and would not have any adverse effects on the subjects. The research hoped the subjects could fill in the truth. The demographic variables involved in this research were gender, major, family location, and only child or not. Among them, there are 232 males and 336 females; 294 in science, and 274 in liberal arts; 279 people in urban areas and 289 in rural areas; 285 only-child and 283 non-only child. See Table 1 for the distribution of the demographic variables of the formal research subjects.

Table 1. Distribution of demographic variables of formal subject

Demographic variables	Group	<i>N</i>	Percentage (%)
Gender	Male	232	40.8
	Female	336	59.2
Major	Science	294	51.8
	liberal arts	274	48.2
Family location	urban	279	49.1
	rural	289	50.9
Only child or not	Yea	285	50.2
	No	283	49.8
Total		568	100

2.2 Research Tool

This paper takes “College Students Academic Stress Questionnaire” developed by Tian and Deng (2007) as the research tool for investigating academic stress of en Engineering Normal college students. Tian and Deng (2007) compiled the college students academic stress questionnaire with seven factors, the stress of academic prospects, and the stress of academic competition, the stress of academic results, the stress of academic atmosphere, the stress of schoolwork, the stress of academic conditions, the stress of family expectations. The questionnaire uses a 5-point

scoring method, that is, "1" points for "no such perception", points for "weak perception", "3" points for "perception as normal", "4" points for "strong perception", and "5" points for "very strong perception", the higher the score is, the greater the academic stress is. The overall Cronbach α reliability coefficient of the college students academic stress questionnaire in this study was .953. which indicated that the questionnaire had a good reliability.

2.3 Research Process

The questionnaires were issued in the form of online and on-site questionnaires. The test time was about 20 minutes. In this study, a total of 587 questionnaires were distributed. After excluding invalid questionnaires, 568 valid questionnaires were recovered. The questionnaire's efficiency was 96.76%.

2.4 Data Analysis

The valid questionnaire data were entered into SPSS24.0 for relevant quantitative statistical analysis.

3. Research Results

3.1 The General Situation of Academic Stress of Engineering Normal College Students

The general situation of overall academic stress and its dimensions were described as follows.

Table 2. General situation of academic stress

	<i>N</i>	<i>M</i>	<i>SD</i>	<i>Skewness</i>	<i>Kurtosis</i>
1. Stress of academic prospects	568	3.08	.829	-.255	-.124
2. Stress of academic competition	568	2.77	.701	-.039	.078
3. Stress of academic results	568	2.66	.760	-.099	-.050
4. Stress of academic atmosphere	568	2.86	.685	-.200	.056
5. Stress of schoolwork	568	3.01	.706	-.315	.331
6. Stress of academic conditions	568	2.47	.785	.176	.003
7. Stress of family expectation	568	2.96	.787	-.235	.042
Overall academic stress	568	2.86	.624	-.255	.249

It could be seen from Table 2 that there were 568 valid samples in this study, and the absolute skewness of each dimension is within 3, the absolute kurtosis of each dimension is within 10. The data conforms to the normal distribution and can be used for subsequent study. From the research results, the overall academic stress of college students was greater ($M=2.86$). Specifically, the stress of academic prospects ($M=3.08$), the stress of schoolwork ($M=3.01$), and the stress of family expectation ($M=2.96$) were evenly ranked in the top three.

3.2 Differences Analysis in Demographic Variables of Academic Stress of Engineering Normal College Students

After testing, the differences in demographic variables of academic stress of engineering normal college students were shown in the Table 3.

Table 3. Differences analysis in demographic variables of academic stress ($M\pm SD$)

Variable	Group	Stress of academic prospects	Stress of academic competition	Stress of academic results	Stress of academic atmosphere	Stress of schoolwork	Stress of academic conditions	Stress of family expectation	Overall
Gender	Male	3.09±0.82	2.83±0.69	2.89±0.73	2.68±0.73	2.98±0.70	2.56±0.77	3.01±0.75	2.89±0.62
	Female	3.07±0.83	2.73±0.71	2.85±0.78	2.65±0.70	3.04±0.70	2.40±0.79	2.92±0.81	2.83±0.63
	<i>t</i>	.435	1.827	.648	.464	-1.027	2.510*	1.389	1.082
Major	Science	3.07±0.83	2.69±0.70	2.81±0.75	2.62±0.69	2.97±0.74	2.44±0.80	2.90±0.78	2.81±0.65
	Liberal arts	3.11±0.83	2.85±0.70	2.92±0.77	2.70±0.68	3.06±0.66	2.49±0.78	3.03±0.79	2.91±0.60
	<i>t</i>	-.690	-2.766**	-1.696	-1.470	-1.543	-.659	-1.979*	-1.938
Family Location	City	2.94±0.82	2.72±0.71	2.76±0.77	2.63±0.70	2.96±0.69	2.41±0.79	2.86±0.79	2.78±0.63
	Country	3.22±0.81	3.81±0.69	2.96±0.74	2.69±0.67	3.06±0.72	2.52±0.78	3.05±0.78	2.93±0.61
	<i>t</i>	-4.035***	-1.511	-3.266**	-.989	1.738	-1.545	-2.889**	-2.894**
only-child	Yes	2.99±0.83	2.74±0.74	2.79±0.74	2.66±0.69	2.99±0.69	2.42±0.77	2.89±0.76	2.81±0.62
	No	2.79±0.69	2.79±0.69	2.93±0.78	2.66±0.68	3.03±0.72	2.52±0.80	3.03±0.80	2.91±0.62
	<i>t</i>	-2.486*	1.415	-2.166*	.057	-.734	-1.495	-2.233*	-1.793

* $p<0.05$, ** $p<0.01$, *** $p<.001$

First, in terms of gender variable, an independent-sample t-test was performed to investigate whether the average value of the academic stress of engineering normal college students by different gender was significantly different. Only in the stress of academic conditions, there was significant difference between male and female

engineering normal college students, male engineering normal college students scored significantly was higher than engineering normal female engineering normal college students score ($t=2.510, p<.05$); In other dimensions and overall academic stress, there was no significant difference between male engineering normal college students and female engineering normal college students.

Secondly, in terms of major variable, an independent-sample t-test was performed to investigate whether the average value of the academic stress of engineering normal college students on different major was significantly different. There was a significant difference between science majors and liberal arts majors in the stress of academic competition ($t=-2.766, p<.01$), there was a significant difference between science majors and liberal arts majors in the stress of family expectations ($t=-1.979, p<.05$); In the overall academic stress and other sub-dimensions, there was no significant difference between the science majors and the liberal arts majors.

Thirdly, in terms of family Location variable, an independent-sample t-test was performed to investigate whether the average academic stress of college students in different family locations was significant. There was significant difference between urban college students and rural college students in the stress of academic prospects. The score of urban college students was significantly lower than that of rural college students ($t=-4.035, p<.001$). In the stress of academic results, there were obvious differences between urban college students and rural college students. The score of urban college students was significantly lower than that of rural college students ($t=-3.226, p<.01$). In the stress of family expectation, there were obvious differences between urban college students and rural college students. The score of urban college students was significantly lower than that of rural college students ($t=-2.889, p<.01$). In terms of overall academic stress, there was a clear difference between urban college students and rural college students. The score of urban college students was significantly lower than that of rural college students ($t=-2.894, p<.01$). But in terms of the stress of academic competition, the stress of academic atmosphere, the stress of schoolwork, and the stress of academic conditions, there was no obvious difference between urban college students and rural college students.

Fourth, in terms of only-children or not, an independent-sample t-test was performed to investigate whether the academic stress of college students who were only child or not was a significant difference in the average value. In the stress of academic prospects, there was a significant difference between the only-child and the non-only child, and the score on the only-child was significantly lower than that of the non-only child ($t=-2.486, p<.05$). In the stress of academic results, there was a significant difference between the only-child and the non-only child, the score of the only-child was significantly lower than that of the non-only child ($t=-2.166, p<.05$). In the stress of family expectation, there was a significant difference between the only-child and the non-only child, the score of the only-child was significantly lower

than that of the non-only child ($t=-2.233, p<.05$). There was no significant difference between the overall academic stress and the stress of academic competition, the stress of academic atmosphere, the stress of schoolwork, and the stress of academic conditions.

4. Conclusion

Engineering normal college students experienced greater academic stress; the stress of academic prospects, the burden of schoolwork, and the stress of family expectations were particularly prominent.

In aspect of demographic variables, male engineering normal college students' academic stress was significantly higher than female college students; liberal arts college students' academic competition stress and family expectations stress were significantly higher than science majors; the overall academic stress, academic prospect stress, academic results stress and family expectations stress experienced by rural engineering normal college students were significantly higher than those of urban engineering normal college students; non-only children engineering normal college students' academic prospect stress, academic results stress and family expectations stress were significantly higher than the only-child engineering normal college students.

Acknowledgements

This paper is funded by Jilin Engineering Normal University Doctoral Project (BSGC202018)

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