

Study on the Main Causes of Depression in Contemporary College Students

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Abstract. In today's fast-paced and rapid development era, people's pressure is also increasing rapidly, too much pressure also makes depression become the focus of public attention, and effective prevention has become an urgent problem to be solved. College students are the backbone of social progress, but a large number of college students suffer from depression, which makes it very important to find out the main causes of depression. Whether to effectively prevent depression among college students is not only whether the mental health problems of the new generation can be solved, but also whether the society can continue to efficiently produce high-quality talents and promote social development in the future. Therefore, this paper mainly focuses on the main causes of depression among college students. This paper mainly uses linear regression method to infer the sample data and find out the main causes of depression. In order to identify the most important causes, this paper selected the most likely causes of depression from the majority of academic studies, and compared the strength of the linear relationship to infer the more important causes. Results show that annual income performs a significant influence on depression in college students.

Keywords: Depression; college students; influencing factors.

1. Introduction

Data published in the 2022 National Blue Book on Depression were used. According to the China Mental Health Survey, the lifetime prevalence of depression in Chinese adults is 6.8%, and the lifetime prevalence of major depressive disorder is 3.4%. Currently, 95 million people in China suffer from depression, and about 280,000 people commit suicide every year. 40% of them suffer from depression, and 50% of them are students. The data intuitively and favorably reflect the large population of patients with depression, and college students, as a group of students who are about to enter the society, have a higher risk of depression. Analyzing the main causes of depression in college students can effectively provide reference for the prevention of adult depression, and promote the reduction or prevention of depression. However, the rapid growth of the population and the rapid progress of science and technology in the present society will inevitably lead to the psychological burden of many adults, and the inability to effectively or correctly relieve psychological pressure will lead to people in a sub-health state of mind. This state of mind generally leads to the development of depression eventually. College students are in this state for a long time, mostly because of poor professional prospects, economic pressure and interpersonal pressure [1].

The harm caused by depression is the main reason why people need to prevent the disease. Depression is the main cause of suicidal behavior and self-harm [2]. And patients with depression will unconsciously or spontaneously spread their negative emotions in the crowd, increasing the incidence of depression in the surrounding population. Such a vicious circle will lead to the deterioration of social atmosphere, resulting in extremely bad effects [3]. At present, the rate of lifetime patients with depression in China accounts for 10% of the patients with depression, and such data is still rising. Such a result means that the quality of young labor force is declining, and the output of high-quality talents is also declining [4]. Therefore, it is necessary to prevent college students from suffering from depression from the perspective of citizen health or social development and social environment.

In recent years, the rapid growth of the prevalence of depression has attracted the attention of all levels of society, and the governments of various countries have made corresponding propaganda and preventive measures, which have effectively delayed the rapid growth of the prevalence of depression. In this context, there are still many college students suffering from depression, even 75% of university presidents believe that depression is the most threatening disease to college students, and a non-profit organization has given data, as of May 2023, more than 10% of young people with depression have been unable to communicate with family and friends in daily life without being affected [5].

In fact, the occurrence of any mental illness is more or less related to the daily life of patients, and depression is no exception. In daily life, people at risk of depression have fewer beneficial interactions with people around them than people without risk of depression [6]. However, at the same time, some studies have shown that patients with depression are not completely negative as claimed in most propaganda [7]. In very representative communities, it can be found that some patients present an optimistic image and actively share their confrontation experiences and methods. Most of the people who have published such articles have recovered, and can obtain more beneficial interactions from social groups after recovery [8]. It can be seen that social activities are closely related to depression, which is of significance for in-depth exploration.

At the same time, family members are the people who interact with people the most and influence the most during the character-building period between the ages of 12 and 20. Studies have shown that most patients with depression have poor family relations, which leads to personality deformities and poor interpersonal skills [9]. While in college, some people assume the expectations given by their families, which are huge and even given from childhood. This also leads to their inability to effectively relieve their inner stress and emotions, and long-term negative emotions lead to depression.

According to the authoritative psychological theory, there is a close pathogenetic and/or causal relationship between suicidal behavior and depression, but people currently have no strong evidence for this relationship [10]. Studies have shown that many possible causes are not linearly related to the results, and more depressed patients suffer from depression because of sudden major events or early special experiences, and some are caused by genetics [8]. Any one of the three reasons may lead to the formation of depression, but more often, two of the three reasons occur in patients, leading to the formation of depression by causing biochemical, psychological and sociological reactions in patients [8]. In one research case, the subject's early experience led to his self-harm behavior in adulthood, and the results of this early experience were statistically significant differences through the longitudinal study of psychology, so the author can conclude that this early experience (Goth self-identity) will lead to the possibility of depression to a certain extent [9]. The paper published by scientists from many countries showed that the suicidal intention of patients in mental hospital was higher than the prevalence of depression. In the environment and atmosphere of mental hospital, which is very difficult for people to maintain a positive mental state, this result also proved that the promotion of suicidal behavior and the promotion of depression were not significantly related. How to distinguish the causes that may lead to suicide from the causes that may lead to depression is a difficult problem in the research and discussion [10]. This study will further explore the main causes of college students' depression from the perspective of social group and social ability, family relationship and employment prospects.

2. Methods

2.1. Data Source and Description

By using data from the "Unemployment and mental illness survey" published by MICHAEL CORLEY, the author will extract data from all some undergraduate people for relevant data analysis, a total of 82, Three prerequisites for the use of statistical methods were met. The data was published in 2019 and has comprehensive data results on depression and employment (Table 1).

Table 1. Variable introduction

Term	Logogram	Range
Annual income	X_1	0-100
Household Income	X_2	0-100000
unemployed	X_3	0-Employed, 1-Unemployed
have depression	Y	Yes-Have depression, No-Don't have depression

2.2. Method Introduction

This experiment first screened the data, and then tested whether the variables had a causal relationship with the results through the chi-square test of whether the variables such as whether living with family, whether having at least part-time work, and whether having normal Internet access and whether suffering from depression. Experiments with linear regression of income and depression were also conducted to test whether there was a strong linear relationship. First of all, chi-square test can be very effective and powerful to verify whether this variable is a factor that may lead to depression, while linear regression can effectively reveal the relationship between the amount of income and the prevalence of depression, and determine whether the change in income is a factor that may lead to depression. Finally, after confirming the possible factors, a confidence interval was predicted for the sample to find out the possible proportion interval in the population, and the main causes of depression were judged.

3. Results and Discussion

3.1. Descriptive Analysis

The author chooses to use Annual income from social welfare programs, Household Income, and Unemployed as the three factors reported to be the main causes for further analysis. From the data set this paper collected, the distribution of patients' reported conditions and whether they suffer from depression as mentioned above, the author can clearly find that the relationship between depression and variables X_2 and X_3 is not strong, and the graph clearly shows that X_1 is related to depression.

The figure 1 shows the distribution between Annual income from social welfare programs and depression, In the chart, the author can see that in the sample data, subjects with higher Annual income from social welfare programs reported that they suffered from depression more and more intensively, which also means that they earned a lower income on their own.

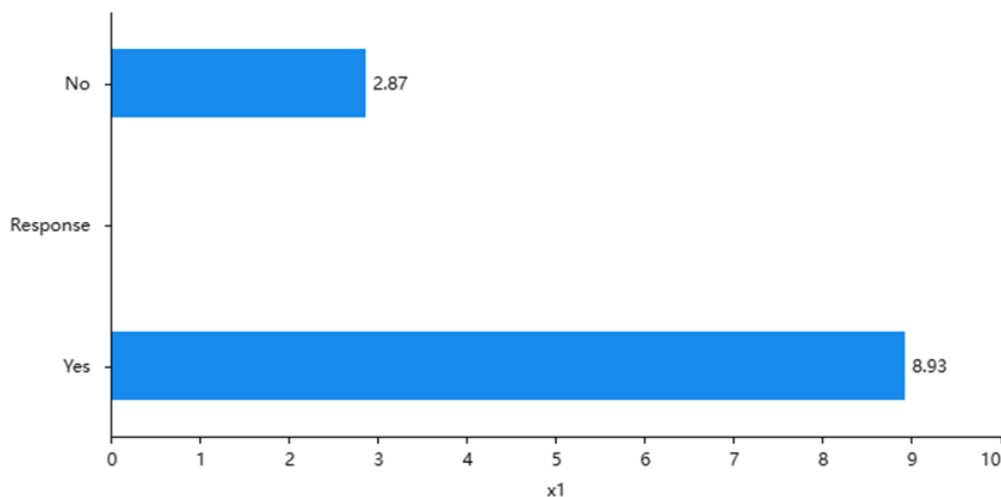


Fig. 1 The histogram of the distribution of weather mental illness and X_1

The figure 2 shows the distribution between Household Income and depression. In the chart, the author can see that in the sample data, subjects with lower Household Income reported more and more intensively that they suffered from depression.

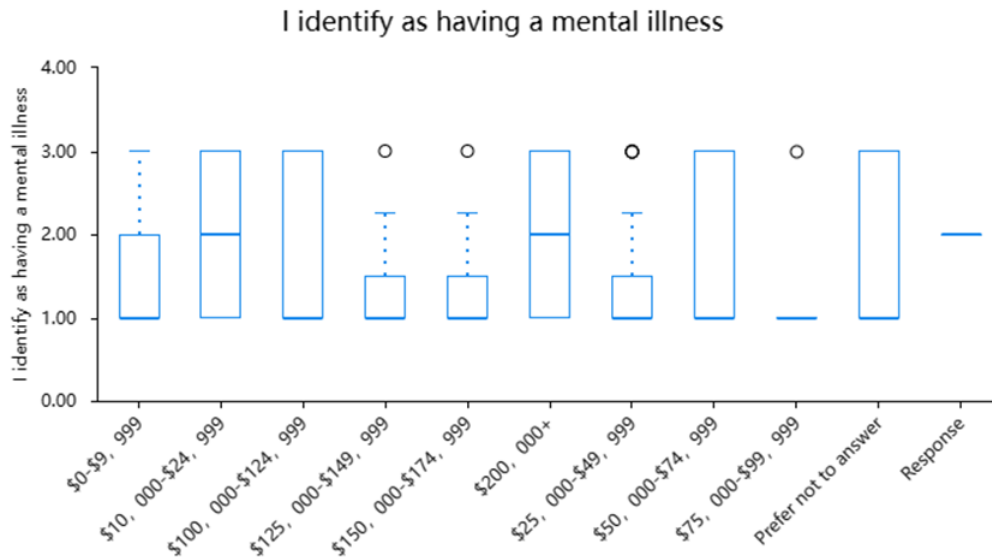


Fig. 2 The box plot of the distribution of weather mental illness and X_2

Figure 3 shows the distribution between having depression and having a job. From the graph, the author can see that among people who do not have depression, having a job is a very small extreme value. But having depression and having a job don't show a significant difference in the chart, so it's not a major factor.

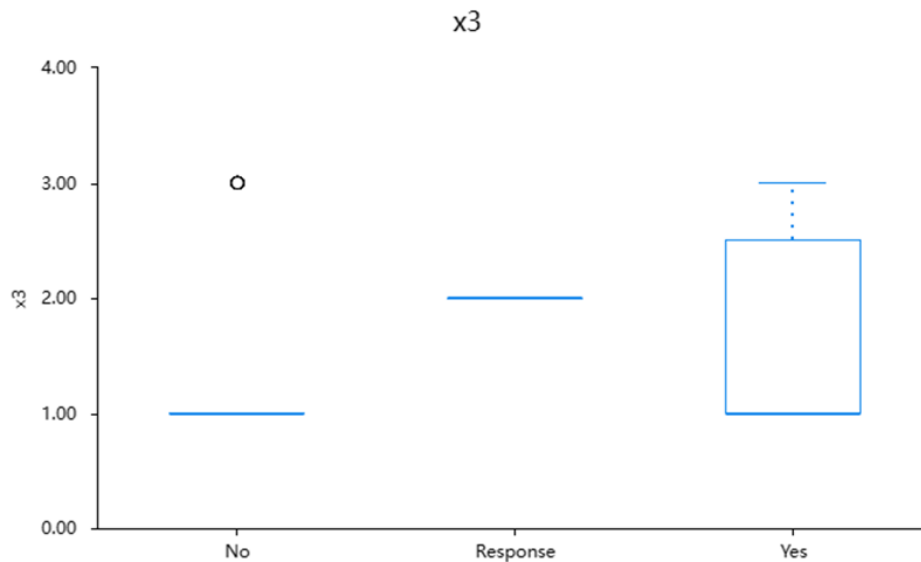


Fig. 3 The box plot of the distribution of weather mental illness and X_3

3.2. Model Results

From figure 4, the author can find that due to the complexity of the causes of depression, the correlation between various factors and the causes of depression and the causes analyzed in our main research is not particularly high, but this does not mean that our analysis is unreasonable and meaningless, just because the causes of depression are too complicated. Of the variables the author looked at, the one that had the highest correlation with having depression was Annual income from social welfare programs. This also confirms that Annual income from social welfare programs is a more important factor.

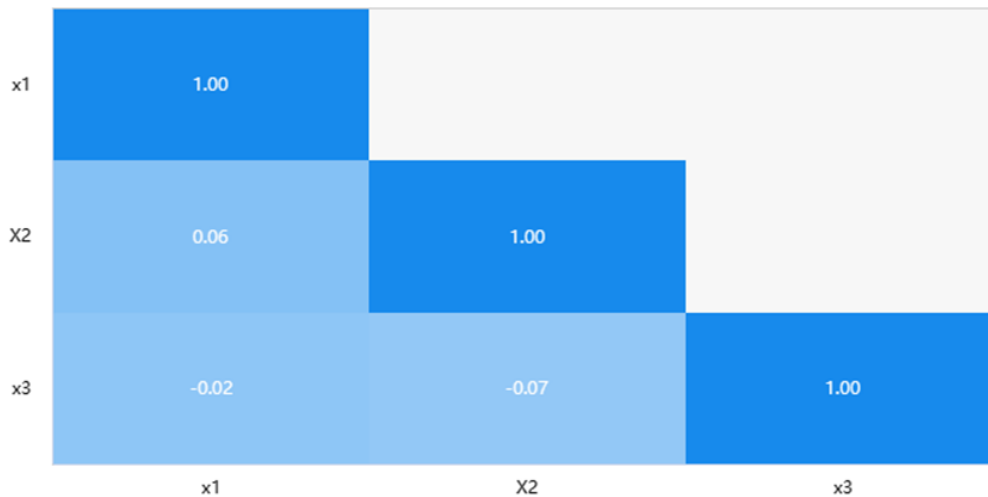


Fig. 4 The matrix of the relationship of the variables

From table 2, the author finds that there is no strong linear relationship between depression and the last two variables household income and unemployed, because depression is not completely dominated by one factor. The annual income is significant at 5% significance level. However, the author can still compare the results of linear regression to find factors with stronger correlation. This paper can find that the correlation of the variable of Annual income is stronger than that of the other two variables in P-value. This proves that that Annual income is the main cause of depression in college students.

Table 2. Model Results

	Normalized coefficient		Standardization coefficient		t	p	collinearity diagnostics	
	B	SE	Beta				VIF	Tolerability
constant	1.523	0.276	-		5.513	0.000**	-	-
X_1	0.009	0.005	0.165		1.633	0.046*	1.004	0.996
X_2	-0.013	0.029	-0.047		-0.459	0.647	1.010	0.990
X_3	0.064	0.112	0.058		0.575	0.567	1.007	0.993

Significance: *0.05, **0.01

4. Conclusion

The above results also show that although the causes of depression are complex, not all factors have the same degree of influence. In a sense, this study provides strong evidence that if college students have no interest in anything for a long time, depression will be caused. However, the causal relationship between the two is not direct, so being in this state for a long time will cause people to be unable to effectively relieve the negative emotions in their hearts. Any emotion needs an outlet, and everything has a goal of providing emotional value. The success of this research is to effectively and convincingly materialize this abstract concept into a recordable and evaluable data, and to infer the relationship. For statistics, it is very important that the conclusions agree with the facts. As a mental illness highly related to life, this study is based on a suitable size of sample data and chooses data more closely related to real life for analysis and inference. This guarantees two points. First, the conclusion is more realistic, has stronger generality, and is less likely to be inapplicable. Second, this ensures rigor, since too much deviation from the actual variables will result in a bias in the obtained data, rather than a reasonable error. Compared with other research reports and papers on the same topic, this paper further elaborates the conclusions. Most studies only give prevalence and distress,

or give a general idea of possible causes, but do not mention the most influential causes. But this paper has refined the problem, Targeting the main core causes.

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