



# Investigation and Analysis on the Mental Health Status of College Students Taking a University as an Example

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**Abstract.** By distributing the SCL-90 questionnaire, this paper conducted a survey on the mental health of 1,600 sophomores, juniors, and seniors in a university, and actually collected 1,524 valid questionnaires. All valid questionnaires were statistically processed by SPSS22.0. The results showed that the overall mental health level of college students was better than the national norm level. When comparing the various factors of SCL-90 symptoms, it was found that with the increase of grades, the scores of many factors showed a decreasing trend. Except for the two factors of somatization and psychosis, the factor scores of juniors and seniors were lower than those of sophomores, and the difference was statistically significant ( $P < 0.05$ ). The scores of male students were lower than that of female students, and the differences of somatization, compulsion, interpersonal sensitivity, depression, anxiety and fear were statistically significant ( $P < 0.05$ ). However, there was no statistical significance in the factor score of students from the origin area ( $P > 0.05$ ). According to the current situation of college students' mental health, this paper analyzed the possible causes of college students' mental health, and put forward some suggestions and countermeasures for the existing problems.

**Keywords:** College students · mental health · status · investigation

## 1 Introduction

Contemporary college students are mainly in their 20s, with the majority of students born after 2000. It is known from the researches of relevant scholars that the overall mental health of college students in China is good. However, it was not excluded that some students had various psychological problems, and the SCL-90 factor score was significantly higher than the norm level, indicating psychological abnormalities. College students after 2000 faced more psychological abnormalities such as compulsion, anxiety reaction, inferiority complex, social fear and self-involvement [3]. College students had a high detection rate of anxiety symptoms and depression symptoms, and the current situation of mental health problems was worrying [2]. The order of the proportion of each factor from high to low was: compulsion, interpersonal sensitivity, anxiety, paranoia... [6]. It is not difficult to see that the mental health problems of contemporary college students mainly focus on anxiety, depression and interpersonal sensitivity, which should

be paid great attention to. In order to understand the mental health status of contemporary college students, and improve the quality of talent training and the teaching quality of college students' mental health education courses, a survey on the mental health status of a university was carried out.

## 2 Material and Methods

### 2.1 Research Subjects

Mainly for sophomore, junior and senior students, 1600 SCL-90 questionnaires were randomly distributed, and 76 invalid questionnaires were found in the final count 95.3%. See Table 1 for specific sample composition.

### 2.2 Research Tools

This paper used the 90-item Symptom Checklist (SCL-90) as a research tool. There are 90 items in the scale, and 9 factor structures (somatization, forcing, interpersonal sensitivity, depression, anxiety, hostility, terror, paranoia, and psychosis) are scored on a five-level scale (1 = none, 2 = mild, 3 = moderate, 4 = fairly severe, 5 = severe).

### 2.3 Research Methods

The survey was organized by 20 counselors arranged by the Student Affairs Department, and 1600 respondents were tested in 20 classrooms at the same time. Taking classrooms as a unit, each classroom held 80 people, and a counselor and a psychology professional teacher conducted a group test on the respondents. The psychology teachers in each classroom read the questions twice using the same instruction words, and stipulated that the time range of assessment was the actual feeling of "the last week". According to the content read by teachers, the respondents chose the most appropriate choice to fill in the answer sheet, until all the questions were completed and handed to the teacher on the spot. SPSS22.0 software was used to analyze and process the relevant data in all valid questionnaires.

**Table 1.** Sample composition and proportion

	Male	Female	Urban	Rural	Sophomore	Junior	Senior
Number	782	742	912	612	393	410	721
%	51.3	48.7	59.8	40.2	25.8	26.9	47.3

### 3 Results and Discussion

#### 3.1 Analysis of Scores of SCL-90 Symptom Factors in College Students

After data processing and statistical analysis, the results of this sample survey were obtained. Compared with the norm level of national college students, the scores of somatization, compulsion, interpersonal sensitivity, depression and paranoia were relatively low. Scores were relatively high for anxiety and psychosis, and roughly equal for hostility and fear. See Table 2 for details.

In general, the mental health level of college students was better than that of national college students, which was basically consistent with other scholars' research [8]. The reason may be that the mental health education of college students in this school has been attached great importance since their freshmen year, and the mental health education from family has also played a certain role. The most important thing is that in recent years, the top-level design of national mental health education has been continuously strengthened and improved. The report of the 19th National Congress of the Communist Party of China emphasized "strengthening the construction of social psychological service system, fostering self-esteem, self-confidence, rationality, peace and positive social mentality" [7]. China has also invested a lot of energy in the mental health education of universities, middle and primary schools. Ministry of Education has issued a series of relevant guiding documents, such as: *the primary and middle school mental health education guidelines (revised in 2012)*, *high school students' mental health education guidance outline*. These documents effectively guide the work of mental health education of primary and secondary schools. At present, mental health education in China have basically achieved full coverage of primary and secondary schools. The above fully show that the mental health level of college students in our country is on the rise as a whole, and the reason for this is that we have ensured the input of healthy students from the

**Table 2.** Comparison of SCL-90 symptom factors between college students in a certain university and the national norm

Factor	The result of factor investigation	National norm for college students	P
	(n = 1524)	(n = 2685)	
Somatization	1.36 ± 0.52	1.57 ± 0.55	<0.05
Forcing	1.74 ± 0.60	2.03 ± 0.66	<0.05
Interpersonal sensitivity	1.48 ± 0.56	1.92 ± 0.65	<0.05
Depression	1.78 ± 0.61	1.91 ± 0.54	<0.05
Anxiety	1.72 ± 0.65	1.68 ± 0.23	<0.05
Hostility	1.68 ± 0.55	1.73 ± 0.69	<0.05
Fear	1.50 ± 0.50	1.54 ± 0.56	<0.05
Paranoid	1.46 ± 0.52	1.84 ± 0.63	<0.05
Psychosis	1.78 ± 0.44	1.61 ± 0.58	<0.05

source. However, statistics also showed that the four factors of obsessive-compulsive, depression, anxiety, and psychosis tended to be in high segments. For this important warning, we need to continue to pay attention to the mental health of college students and give full play to the role of the whole society. At the same time, college students themselves must improve their willpower level.

### 3.2 Analysis of Scores of SCL-90 Symptom Factors Among College Students with Different Demographic Characteristics

In order to fully understand the psychological situation of college students with different demographic characteristics, and explore the key factors affecting the psychological health of college students. This paper conducted data analysis of three SCL-90 symptom factors. The results are as follows.

#### 3.2.1 Analysis of Scores of SCL-90 Symptom Factors Among College Students of Different Grades

After analyzing and summarizing, the survey data was obtained as follows: Compared with junior and senior students, sophomore students had a decreasing trend in scores of many factors. It showed that the school had achieved obvious effect on the mental health education of college students, and the psychology of college students was becoming more mature and stable. Except for the three factors of somatization, psychosis and anxiety, the factor scores of juniors and seniors were lower than those of sophomores, and the difference was statistically significant ( $P < 0.05$ ). The anxiety factor scores of seniors in the three grades were high and condescending, as shown in Table 3.

The above reasons may be that academic, emotional, interpersonal, employment and other pressures arise with the growth of grades. These pressures have more or less caused certain psychological problems to college students. The enlightenment to us is: in the future, sophomore students should be regarded as the key management object, and intervention measures should be taken in advance. We can solve it in the following

**Table 3.** Comparison of factors in different grades

Factor	Sophomore	Junior	Senior	P
Somatization	1.47 ± 0.51	1.36 ± 0.49	1.34 ± 0.48	>0.05
Forcing	1.95 ± 0.62	1.92 ± 0.59	1.85 ± 0.59	<0.01
Interpersonal sensitivity	1.78 ± 0.66	1.78 ± 0.58	1.77 ± 0.62	<0.05
Depression	1.68 ± 0.65	1.66 ± 0.59	1.52 ± 0.57	<0.01
Anxiety	1.56 ± 0.56	1.48 ± 0.44	1.66 ± 0.57	<0.01
Hostility	1.57 ± 0.55	1.57 ± 0.53	1.44 ± 0.52	<0.05
Fear	1.53 ± 0.52	1.47 ± 0.53	1.49 ± 0.48	<0.05
Paranoid	1.58 ± 0.60	1.49 ± 0.61	1.41 ± 0.54	<0.05
Psychosis	1.74 ± 0.50	1.69 ± 0.48	1.69 ± 0.59	>0.05

ways. The Student Affairs Department should strengthen the student management work, through carrying out heart-to-heart talks with college students, in-depth classroom and dormitory in all aspects to understand the ideological status of college students, so as to find problems as soon as possible to solve problems. Secondly, relevant departments should strengthen the guidance of senior students in their studies, postgraduate entrance examinations and further studies. The Academic Affairs Department should implement the academic early warning system from the first grade, remind students to pay attention to the backward subjects in time, and do a good job of making up the difference as soon as possible. Each college can organize special lectures on postgraduate entrance examinations, invite experienced experts and teachers to hold postgraduate training courses. The Student Union can organize and hold a postgraduate entrance examination experience exchange and sharing meeting. Counselors can relieve students' academic pressure by organizing various academic support teams, such as "one-to-one" team formation, study groups, and teachers' online Q&A groups. Thirdly, The Student Employment Management Center should play a role of matchmaking in employment, and carry out related work around the student employment, such as actively recommending students to go out for internship, inviting employers to enter the campus to host campus job fair... Practice has proved that the way of "inviting in and going out" can effectively expand employment channels and improve the employment rate of students. All in all, it is necessary to alleviate the psychological problems faced by sophomores and seniors through various means, and effectively improve the mental health level of college students.

### **3.2.2 Analysis of SCL-90 Symptom Factor Scores of College Students from Different Origins**

The statistical results the scores of four factors rural students were better than urban students, which were somatization, fear, paranoia and psychosis. The scores of the other five factors showed that the urban students were better than the rural students, which were compulsion, interpersonal sensitivity, depression, anxiety and hostility. However, all these differences were not statistically significant ( $P > 0.05$ ), as shown in Table 4.

There was no significant difference in the factors of college students from different places of origin ( $P > 0.05$ ). However, the survey data also convey important information to us, that is the urban students' living environment is relatively open, and the resources are abundant, and various infrastructures are relatively developed and complete, which is conducive to broadening the students' horizons. They can release bad emotions well by relaxing in entertainment places, exercising in sports stadiums, appreciating art in cinemas, chatting in cafes and reading in libraries, thus reducing some psychological problems in interpersonal relationships, depression and anxiety. Relatively speaking, due to the influence of their birth environment and traditional customs, rural students have created their innate qualities of simplicity, thrift, hard work, and strong ability to withstand setbacks. Therefore, they showed good results in somatization, fear, paranoia and psychosis. From the above comparison, it is not difficult to see how satisfying it would be if their factors could be complementary. The inspiration for us is: in the future, all relevant mental health education work should consider how the advantages of students from different origins can be complement each other. For instance, we should consider the allocation of dormitory members, the formation of study groups, the collocation of

**Table 4.** Comparison of factors among students from different origin place

Factor	Urban	Rural	P
Somatization	1.35 ± 0.53	1.34 ± 0.55	>0.05
Forcing	1.73 ± 0.59	1.75 ± 0.57	>0.05
Interpersonal sensitivity	1.46 ± 0.63	1.48 ± 0.70	>0.05
Depression	1.52 ± 0.62	1.55 ± 0.64	>0.05
Anxiety	1.70 ± 0.52	1.71 ± 0.51	>0.05
Hostility	1.66 ± 0.48	1.67 ± 0.48	>0.05
Fear	1.50 ± 0.50	1.49 ± 0.47	>0.05
Paranoid	1.46 ± 0.56	1.45 ± 0.53	>0.05
Psychosis	1.77 ± 0.45	1.76 ± 0.48	>0.05

**Table 5.** Comparison of factors of different genders

Factor	Male	Female	P
	(n = 782)	(n = 742)	
Somatization	1.38 ± 0.50	1.40 ± 0.53	<0.05
Forcing	1.68 ± 0.57	1.78 ± 0.61	<0.05
Interpersonal sensitivity	1.46 ± 0.58	1.52 ± 0.58	<0.05
Depression	1.44 ± 0.59	1.56 ± 0.62	<0.01
Anxiety	1.43 ± 0.67	1.51 ± 0.67	<0.05
Hostility	1.45 ± 0.47	1.48 ± 0.46	>0.05
Fear	1.37 ± 0.45	1.43 ± 0.51	<0.01
Paranoid	1.40 ± 0.53	1.43 ± 0.50	>0.05
Psychosis	1.29 ± 0.49	1.30 ± 0.46	>0.05

members of various social organizations, the arrangement of scientific research team members, etc.

### 3.2.3 Analysis of SCL-90 Symptom Factor Scores of College Students of Different Genders

The statistical results showed that the factor scores of female students were generally higher than that of male students, among which the differences in six factors of somatization, compulsion, interpersonal sensitivity, depression, anxiety and fear were statistically significant ( $P < 0.05$ ), as shown in Table 5. The other three factors, hostility, paranoia and psychosis had no statistical significance ( $P > 0.05$ ).

This result was in line with other scholars' studies [5]. Female college students were more likely to suffer from psychological problems than male students and were prone to negative emotions. The reasons can be explained as follows: Male students tended to be independent and self-strengthening, and did not express their emotions at will, while female students were delicate, dependent on the outside world and others for self-recognition, and sensitive to others' comments [1]. Secondly, due to excessive protection from family and school, female students had less social experience and weaker ability to adapt to the environment. As a result, they were more likely to be troubled by negative emotions when entering college [4]. Therefore, in the future, female students interpersonal communication ability and adaptability should be taken as the focus of mental health education to guide and train.

## 4 Conclusion

College students' mental health education is a complex systematic project, which needs the common attention of the whole society. But we believe that as long as we work together to take effective intervention measures, all kinds of psychological problems can be detected and intervened early. Through practical and feasible measures, effective psychological guidance and strong educational support, the mental health level of college students will definitely be improved, so as to promote the healthy growth of college students.

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## References

1. Ji Hongyan, LIU Chunlei(2008). Mental health status of college freshmen .J. Chinese journal of public health.24,1290–1291.
2. Mu Jingjing, Su Puyu et al(2019). A study on the relationship between psychological Adjustment ability and anxiety and depression among College students.J. Journal of bengbu medical college.44, 787–791.
3. Ren Jiali(2019). Analysis of Psychological Characteristics and Countermeasures of Post-00s College Students .J. Journal of shanxi finance and taxation college.21, 71–74.
4. Sun Xingsheng(2015).Investigation and analysis of mental health status of college students in xuzhou city .J. Jiangsu preventive medicine.26,125–126.
5. Wang Guohua (2015) . Investigation and Analysis of College Students' Mental Health -- Taking Longnan Normal College as an Example .J. Journal of Lanzhou Institute of Education.34,165-167.
6. Wang Yujiao, Tan Yi et al(2018). An investigation and analysis of the mental health status of freshmen in Local universities in Guizhou Province -- Taking Liupanshui Normal University as an example .J. Journal of liupanshui normal university.30,94–100.

7. Xi Jinping(2017). Runoff to build a well-off society in an all-round way to seize the new era of the great victory of socialism with Chinese characteristics, the Chinese communist party national convention report # 19 [OL]. Retrieved October 28 ,2017, from [http://china.cnr.cn/news/20171028/t20171028\\_524003229.shtml](http://china.cnr.cn/news/20171028/t20171028_524003229.shtml).
8. Zhang Dongjun, Wang Lina et al(2014). Chinese journal of health education.30,144–146.

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