

## **Analysis of the Difference in Mental Health between Independent-Enrolled Students and Unified-Enrolled Students in Higher Vocational College**

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**Abstract.** The mental health status of 4919 students in a higher vocational college was investigated and analyzed. The result shows that the mental health of vocational college students is significantly different from that of other norms including the national norm, the national college student group norm, and the national youth norm SCL-90. Students enrolled through independent enrollment and unified enrollment are different in mental health status, which manifests mainly in somatization, interpersonal communication, depression and horror. On that account, It is recommended to establish a mental health norm for higher vocational college students; The importance of mental health education should be emphasized and the psychological quality assessment need to be applied in the single-recruitment examination in order to provide a real and effective basis for the development of mental health work in higher vocational colleges.

### **1. Introduction**

Independent enrollment of higher vocational colleges refers to the form of enrollment that is organized by the higher vocational colleges before the college entrance examination in order to enhance the quality of students in the higher vocational education. Colleges independently make tests, give examinations and grades, delineate the minimum score, determine the admission list, and directly report to the Provincial Education Examination Institute.

Bing Liang mentioned that the advantages of the independent enrollment model were obvious [1]. Independent enrollment emphasizes the comprehensive quality of candidates, which facilitates the selection of talented ones. The variety of forms of examination and contents can more comprehensively evaluate students, give full play to students' advantages and strengths and is beneficial for allocating resources reasonably so as to give students more educational opportunities.

In a comparative analysis of and countermeasures of the current situation of independent-enrolled and unified-enrolled students in higher vocational colleges, Lian Yun Wang and Nan Meng found that there were big differences in academic performance and ideological behavior between independent-enrolled and unified-enrolled students. The independently enrolled students have either high or low grades and they have common features such as active thinking, poor self-discipline, strong cohesion, and strong rebellious mood [2].

De Guang Xie analyzed the data of mental health and found that from the SCL-90 scores of both independent-enrolled and unified-enrolled students, the SCL-90 problem detection rate of former was slightly higher than that of the latter, and former students scored higher on the hostility factor than the latter and they tended to become bored, lose temper and show hostility in thought, feelings and behaviour [3]. This phenomenon has to do with their growing-up environment. Lack of acceptance and recognition from parents and teachers arouse their rebellious mood, which accounts for their hostile behaviors and thoughts.

Therefore, it is important and necessary to establish a frame of reference for independent-

enrolled students in order to understand the mental health of independent-enrolled students especially in comparison to the condition of unified-enrolled students. Although independent-enrolled students show certain deficiencies in their psychological characteristics, they have also some good qualities (such as strong mobility, good communication, and strong courage). This enlightens us that as long as we give education and guidance scientifically according to their psychological characteristics, higher vocational students, both independent-enrolled and unified-enrolled students included, can have improvement.

Among existing research, there are relatively few empirical studies on independently and unifiedly enrolled students in higher vocational colleges. For higher vocational colleges, it is difficult to promote the mental health of students without an understanding of their psychological status. In order to gain a deeper understanding of the mental status of independent-enrolled and unified-enrolled students, on the scientific basis of mental health education provided by higher vocational colleges, this article will investigate and analyze the mental health of students in a higher vocational college in Chengdu.

## 2. Participants and Methods

### 2.1 Participants

Participants in this study are freshman students of a higher vocational college in Chengdu. 5,102 questionnaires were forwarded and there are 4919 valid ones in total, Independent Enrollment 3911(79.5%), Unified enrollment 1008 (20.5%); Male 2526 (51.4%), Female 2393 (48.6%).

### 2.2 Research Tools

The self-report symptom inventory (SCL-90) has 90 evaluation items and each item consists of five grades and includes psychiatric symptoms such as feelings, emotions, thinking, consciousness, behavior, life habits, interpersonal relationships, diet, etc.. SCL-90 can accurately indicate subject's conscious symptoms and reflect the severity and changing state of subject's problems.

### 2.3 Statistical Methods

The test results were examined. As invalid questionnaires were removed, we adopted the statistical software SPSS17.0 to perform statistical analysis on the test data. The statistical methods were descriptive statistics and t test.

## 3. Results

### 3.1 The Overall Mental Health of Vocational Students

**Table 1.** Comparison of SCL-90 scores between vocational students and three norms

Variables	Higher Vocational Students(n=4941)	National Norm(n=1338)	National University Student Norm (n=4141)	National Youth Group Norm (n=781)	t1	t2	t3
Total Score	130.73±39.70	129.96±38.76			1.36		
Somatization	1.30±0.42	1.37±0.48	1.45±0.49	1.34±0.45	11.02***	24.27***	6.06***
Compulsion	1.75±0.58	1.62±0.58	1.99±0.64	1.69±0.61	16.10***	28.93***	7.58***
Interpersonal	1.55±0.55	1.65±0.61	1.98±0.74	1.76±0.67	12.76***	54.71***	26.76***
Depression	1.48±0.56	1.50±0.59	1.83±0.65	1.57±0.66	3.03**	44.27***	11.78***
Anxiety	1.42±0.51	1.39±0.43	1.64±0.59	1.42±0.43	3.71***	30.97***	0.45
Hostility	1.37±0.48	1.46±0.55	1.77±0.68	1.50±0.57	12.68***	57.74***	18.50***
Horror	1.38±0.52	1.23±0.41	1.46±0.53	1.33±0.47	20.52***	10.22***	7.16***
Paranoia	1.37±0.47	1.43±0.57	1.85±0.69	1.52±0.60	8.04***	70.80***	21.49***
Psychotic	138±0.45	1.29±0.42	1.63±0.54	1.36±0.47	13.55***	39.40***	2.65**

Note: \* means 0.05 level, \*\* means 0.01 level, \*\*\* means 0.001 level. It is the same in following statistics. Among them, t1 represents the test of the difference between the vocational students and the national norm; t2 represents the test of the difference between the vocational students and the national norm of college students, and t3 represents the test of the difference between the vocational students and the national youth norm.

As can be seen in the above table 1, there is no significant difference between the total score of the students of higher vocational colleges and that the national norm, as well as the anxiety factor of higher vocational colleges and that of the national youth norm. Other factors are significantly different.

### 3.2 Comparison of Mental Status between Independent-enrolled and Unified-enrolled students

**Table 2.** Comparison of SCL-90 scores between independent-enrolled and unified-enrolled students

Variables	Independent-enrolled students	Unified-enrolled students	t
Total Score	131.34±39.95	128.35±38.65	2.14*
Somatization	1.76±0.58	1.72±0.55	1.92
Compulsion	1.31±0.43	1.27±0.41	2.11*
Interpersonal	1.55±0.56	1.51±0.53	2.12*
Depression	1.49±0.57	1.44±0.54	2.42*
Anxiety	1.42±0.51	1.39±0.50	1.94
Hostility	1.38±0.48	1.35±0.48	1.75
Horror	1.39±0.53	1.35±0.51	2.07*
Paranoia	1.37±0.47	1.37±0.47	0.23
Psychotic	1.38±0.45	1.36±0.45	1.29

As can be seen in Table 2, there are significant differences in total mental health scores, somatization, interpersonal, depression, and horror between independent-enrolled and unified-enrolled students.

### 3.3 Comparison of Mental Status of Men and Women

**Table 3.** Comparison of SCL-90 scores between males and females

Variables	Male	Female	t
Total Score	123.69±36.45	138.16±41.61	12.99***
Somatization	1.65±0.55	1.86±0.58	12.56***
Compulsion	1.23±0.38	1.38±0.46	12.91***
Interpersonal	1.48±0.53	1.62±0.57	8.74***
Depression	1.38±0.51	1.58±0.60	12.41***
Anxiety	1.32±0.45	1.52±0.54	13.63***
Hostility	1.32±0.47	1.43±0.49	7.90***
Horror	1.25±0.42	1.53±0.59	19.41***
Paranoia	1.35±0.47	1.40±0.47	3.33***
Psychotic	1.33±0.43	1.43±0.47	8.34***

As can be seen in Table 3, there are significant differences between male and female students in all factors, and males' scores are significantly lower than females'. The gender difference in mental status is obvious.

## 4. Discussion

### 4.1 Overall Analysis of Mental Health

This study found that, except for the national norm total score and the anxiety factor in national youth norm, vocational college students have significant differences in many factors from the national norm, the national youth group norm [4] and the national college student norm [5].

In terms of somatization, interpersonal, depression, and paranoia, scores of higher vocational

colleges are significantly lower than that of the national norm, the national youth norm, and the national college student norm. Significant differences are also in other factors, with some significantly lower and some are significantly higher. This indicates that the previous norms can no longer accurately reflect the level of mental health of vocational students.

#### **4.2 Analysis of the Difference in Mental Health between Independent-enrolled and Unified-enrolled Students**

From the results of the SCL-90 test, the mental health level of independent-enrolled students is lower than that of unified-enrolled students, especially in somatization, interpersonal, depression, horror, and total scores. This shows that the mental health level of independent-enrolled students is lower than that of unified-enrolled students and the former are more likely to have physical discomfort, interpersonal problems, depression and fear of specific situations.

In studying psychological problems and mental health education of independently enrolled students in higher vocational colleges, Liang He Chen mentioned that the psychological problems of independently enrolled students were mainly manifested in: Frustration in learning which leads to changes in self-status and psychological imbalance; The lack of autonomy and independence as well as the ensuing psychological perplexity; The indifference resulting from the desire of “self-realization”; The sense of loss caused by the gap between desire and reality; The rebellious attitude as a result of personality liberalization before college [6].

These are closely related to the growth environment of independent-enrolled students. They have poor academic performance, not welcomed by parents and teachers, have low self-esteem and are more apt to have negative emotions. They particularly expect to be recognized and be accepted and be loved; but they have no appropriate way to get along with others, which follows interpersonal problems.

#### **4.3 Analysis of the Mental Health Status of Males and Females**

This study found that males scored significantly lower than females on all factors, indicating that females' mental health level are significantly lower than males and difference of mental health between genders are obvious.

This is basically consistent with the conclusions of many researchers [7-12]. Their studies also indicates that the mental health of females is worse than that of males, which is mainly because of the uniqueness of genders.

Females are delicate and sensitive. In the new environment and among new people, they are more likely to have emotions such as anxiety, tension, and worry. They pay more attention to the feelings and evaluations of others, that is, they are more likely to be influenced by the external elements. By contrast, males are more decisive and courageous. They are more rational and more crucial in facing new problems and environments, that is, they are more dependent on their internal judgement.

### **5. Suggestions for Improving the Mental Health Education of Vocational Students**

#### **5.1 Establish a Mental Health Norm in Higher Vocational Colleges**

Most of the norms referred to by SCL-90 are the national norm established in as early as 1986, the accuracy of this norm has been doubted by many scholars. Through this research, it can be found that neither the national adult norm, the national college student norm nor the national youth norm is suitable for measuring the mental health level of vocational students. Also, many studies have reached similar conclusions. The establishment of the SCL-90 norm for vocational students has become particularly significant [13-16].

Students in vocational colleges have their uniqueness. How to assess the mental health of them has become a much delicate problem. Only to establish a norm for vocational students' mental health, especially the norms of independent-enrolled and unified-enrolled students can we provide a reliable and effective basis for later mental health work.

## 5.2 The School Values and Properly Treats the Mental Health of Vocational Students

Both in independent-enrolled or unified-enrolled student, there are problems including poor learning initiative, strong personality, lack of self-confidence, emotional impulse, and lack of clear goals in learning and in future. At the same time, higher vocational colleges have certain deficiencies in the scale and quality of school-running as well as problems with the quantity and quality of teachers and hardware resources, which greatly increases the difficulty of mental health education.

To improve the mental health of vocational students, schools should gradually increase investment and support to create conditions for the operational development of mental health education. College leaders should be the first to change their minds, recognizing the importance of student mental health work as well as allocating teachers and giving them corresponding trainings according to the requirements of the national college student mental health education work .

## 5.3 Strengthen the Application of Psychological Quality Assessment in Independent Enrollment in Higher Vocational Colleges

With the improvement of individual enrollment, more and more vocational colleges realize the importance of students' mental health. Bing Liang believes that it is very necessary to evaluate the mental state of candidates in the entrance examination of vocational colleges [1].

Emphasizing the psychological quality assessment in the individual enrollment of higher vocational colleges is beneficial to the college's identification, diagnosis and training of students in the future, to understand the students' mental health level and to give response in time. Also, it is advantageous for the college to conduct targeted mental health work so as to avoid vicious incidents caused by psychological problems among students.

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