

Cluster classification and Countermeasures of College Students' psychological poverty under the background of the new era

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Abstract: At present, the subsidy policy of colleges and universities is more economic assistance for poor college students, and to realize the healthy development of individuals, we need to have a healthy attitude towards psychological life. Many existing researches on the mental health status of poor college students are not targeted, and fail to give practical and specific solutions. Therefore, after consulting a large number of literature on poor college students and having a certain understanding of them, this paper decides to use fuzzy clustering to classify poor college students into positive, negative and hidden types, give solutions for different types of poor college students, improve their mental health and complete the psychological assistance to poor college students

1. Introduction

At present, mental health problems have become a major obstacle to the life development of teenagers and even college students, especially the poor students deeply affected by the family environment. There are great hidden dangers in mental health. The existing series of national subsidy policies, social assistance system, University assistance and other measures focus on solving only economic difficulties.

Psychological poverty is clearly explained in psychology, that is, poor college students face the pressure of economic poverty, resulting in negative changes in personality characteristics and mental health. It can be manifested as: low self-esteem, sensitivity and isolation, jealousy and vanity, excessive mental pressure. The problem of "psychological poverty" cannot be fully solved by economic subsidies alone. Therefore, taking local colleges and universities as the observation point, we conduct questionnaire survey and follow-up interview for the existing poor students, classify "psychological poverty", and put forward countermeasures to alleviate their psychological problems to achieve all-round development.

2. The necessity of psychological assistance

Overcome inferiority complex and enrich college life. Relying on state funding to solve the problem of insufficient tuition and living expenses, poor students entering universities have to face changes in their living environment. As a result of the objective environment, the learning advantages of poor students who can achieve middle and upper level achievements in senior high school disappear, and poor students will also be inferior to others in personal talents, clothing and other aspects. Produce self-doubt, and even gradually lose yourself in comparison with others, lose the motivation to work hard, and lose a positive attitude towards life.

Reduce vanity and know yourself correctly. Since ancient times, the poor, noble and humble have self-esteem, which will be distorted into vanity after being affected by a certain environment and psychological state. As one of them, poor students will inevitably have vanity in the face of the embarrassment of life and the differences between others in various life situations such as roommate dinners, cadre selection and competition activities. They are dominated by unnecessary comparison psychology and run counter to their original intention.

Manage emotions and establish correct values. Emotion will dominate people to produce corresponding behavior characteristics to a great extent. People who can correctly deal with bad

emotions can always be handy in dealing with people, so as to make correct judgments in line with their ideal life and become the life winner in the mouth of others. In college life, some poor students have to face all kinds of emotions brought by these choices, which dominate their next behavior tendency. Because I didn't have the habit of talking to my parents since childhood, I didn't know how to solve it when affected by bad emotions, resulting in wrong behavior.

3. Fuzzy clustering analysis

3.1 Basic information analysis

In this survey, 408 poor students were investigated, and the ratio of men to women was close to 1:1; Urban accounts for 25% and agricultural accounts for 75%; Economics and management accounted for 10.2%, literature 25%, science and engineering 61.4%, art and sports 3.4%; Freshmen accounted for 3.4%, sophomores 37.5%, junior 51.1% and senior 8%; All poor students have received state funding, that is, it can be seen from table.1 that the sampling conforms to the overall structure and is universal and scientific.

Table 1. Basic Information.

category	Gender		Economic management	Literature	Science and Engineering	Art and sports	grade				Is it funded	
	male	female					1	2	3	4	yes	no
Number	172	236	42	102	250	14	14	15	20	3	40	0
Percentage (%)	42	58	10.2	25	61.4	3.4	3.4	37.5	51.1	8	10	0

3.2 Fuzzy clustering

In this survey, the classification of "psychological poor students" is classified by questionnaire, and the data are collected by adult feasible ability quality of life scale and social support evaluation scale, so as to determine the number of clusters. This paper is set up. Among them, social subjective support, social objective support, utilization of social support and feasible ability of adults are taken as input variables. The maximum number of iterations is 20, and the clustering information of each case is displayed. The initial cluster center of cluster analysis is shown in table. 2:

Table 2. Initial cluster centers.

clustering	Subjective support	Objective support	Support utilization	Feasible capability
1	21	2	3	18
2	32	18	8	20
3	8	1	2	5

Table.2 shows that among the three categories of initial clustering, the subjective support of the cluster center of the first category is 21, the value of objective support is 2, the value of support utilization is 3, and the value of feasible ability is 18; The subjective support of cluster centers in the first category is 32, the objective support value is 18, the support utilization value is 8, and the feasible ability is 20; The subjective support of cluster centers in the first category is 8, the value of objective support is 1, the value of support utilization is 2, and the feasible ability is 5.

3.3 ANOVA variance analysis

In order to verify whether the students with psychological poverty can be classified by various factors, ANOVA analysis of variance is made for subjective support, objective support, utilization and feasible ability in social support, and table.3 is obtained:

Table 3. ANOVA analysis of variance.

	clustering		error		F	Significance
	Mean square deviation	freedom	Mean square deviation	freedom		
Subjective support	616.904	2	9.261	85	66.614	.000
Objective support	224.688	2	11.217	85	20.030	.000
Support utilization	34.257	2	1.904	85	17.991	.000
Feasible capability	398.569	2	4.570	85	87.213	.000

It can be seen from table 2 that social subjective support, objective support, utilization and feasible ability will have a significant impact on the classification of "psychological poverty".

3.4 Final cluster center

The final clustering results are obtained through SPSS software output, in which the first category is 188, the second category is 126 and the third category is 45, and the distance between the final clustering centers is obtained, i.e. table 2-3 and table.4:

Table 4. Distance between final cluster centers.

clustering	1	2	3
1		7.214	9.975
2	7.214		17.013
3	9.975	17.103	

It can be seen from table.4 that the distance from class I to class II and class III is 7.214 and 9.975 respectively, while the distance from class II to class III is 17.013. Therefore, it is reasonable to divide into three categories.

Table 5. Final cluster center.

clustering	Subjective support	Objective support	Support utilization	Feasible capability
1	22	6	5	15
2	27	10	6	19
3	15	3	3	9

Table 2-5 final cluster center

It can be seen from table.5 that in the final clustering results, the subjective support of the final clustering center of the first category is 22, the objective support value is 6, the support utilization value is 5, and the feasible ability is 15; The subjective support of the final cluster center of the second category is 27, the value of objective support is 10, the value of support utilization is 6, and the feasible ability is 19; The subjective support of the final cluster center of the third category is 15, the value of objective support is 3, the value of support utilization is 3, and the feasible ability is 9.

4. Conclusions

From the variable attribute value of the final cluster center, 188 people are divided into the first category. Such students receive more subjective support in social support and have a high emotional

experience of being respected, supported and understood in society. They will get more help from family, friends, teachers and students and are more willing to communicate with people close to them. A total of 126 students were divided into the second category, which had the highest values of social support and feasible ability. A total of 126 students were divided into the second category, which had the highest values of social support and feasible ability. Most of the negative students come from remote rural areas, with backward economy, lack of cultural and educational resources and lack of family care, which are the main reasons for the formation of their mental diseases. Facing the huge contrast between college life and childhood living environment, it is easier for them to feel great economic distress. If they are not guided properly, they may even endanger their life and health.

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