

# *Investigation on the Current Situation of Psychological Capital of Hearing-impaired College Students: Taking Leshan Normal University as an example*

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**Abstract:** In order to understand the psychological capital status of hearing-impaired college students, 144 hearing-impaired college students in Leshan normal university were studied with the questionnaire of positive psychological capital. The results show: (1) The psychological capital of hearing-impaired college students is generally at an upper-middle level; (2) Hearing-impaired college students' psychological capital and the development of various dimensions are unevenly developed. They develop well in the dimensions of hope and optimism, but lack in the dimensions of self-efficacy and resilience; (3) There are significant differences in gender in the dimension of self-efficacy, significant differences in self-efficacy and resilience dimensions between the only child or not, significant differences in the dimensions of self-efficacy between student cadres or not, and significant differences in grades in the total psychological capital scale, the level of hearing impairment does not reach a significant level in psychological capital.

## 1. Introduction

According to the "2018 Statistical Bulletin on the Development of China's Disabled Persons", 11,154 disabled people were admitted to ordinary colleges and universities nationwide, 1,873 disabled people entered higher special education colleges [1], and hearing-impaired college students accounted for the proportion of disabled college students the highest group [2]. College period is a critical period when individual physical and psychological development tends to mature [3]. Due to their own physical obstacles, hearing-impaired college students are hindered in social communication and speech development, and the mental health of hearing-impaired college students is poor [4]. Existing research [5] pointed out that the information collection of hearing-impaired college students is affected by hearing impairment, and is prone to depression, anxiety and other problems in the fierce academic competition. It is also the reason for the poor mental health of students. Based on the existing research, it is found that in the research on the mental health of hearing-impaired college students, the researchers discuss the mental health of hearing-impaired college students, the influencing factors that affect their mental health, and the methods and approaches to improve the mental health of deaf college students. In recent years, psychological capital has gradually become a

research hotspot in positive psychology [6]. Positive psychological capital, as an individual's inner positive psychological quality, can promote the improvement of an individual's mental health level [7]. At the same time, positive psychological capital is the as part of the positive psychological resources of individuals in future career development, changes in individual psychological capital can promote the improvement of their employability [8].in addition, some studies have pointed out that the psychological capital of college students has a positive impact on academic achievement [9]. At present, there are many studies on the psychological capital of college students in China, and the research objects are mainly hearing students. There are few studies focusing on the psychological capital of hearing-impaired college students. As a special group of college students, what is their psychological capital status? It is a subject worthy of study. Therefore, this study will take hearing-impaired college students as the research object to understand their psychological capital level, and provide a certain reference for the mental health education of hearing-impaired college students in colleges and universities.

## 2. Research Design

### 2.1 Research Subject

In this study, 144 hearing-impaired college students in four grades from the first year to the fourth year of the School of Special Education, Leshan Normal University were selected as the subjects to conduct a questionnaire survey. During the survey, a total of 144 questionnaires were distributed and 144 were recovered, with a recovery rate of 100%. After screening, there were 139 valid questionnaires, and the effective rate was 97.89%. The basic information of the surveyed subjects is shown in Table 1.

Table 1: Respondents

variable	classification	N	%	variable	classification	N	%
Gender	Male	57	41.01%	Student cadre or not	Yes	72	51.80%
	Female	82	58.99%		NO	67	48.20%
Only child or not	Yes	32	23.02%	Household	Rural	97	69.78%
	No	107	76.98%		Urban	42	30.22%
Grade	Senior one	69	49.64%	Hearing level	Level1	13	9.35%
	Senior two	20	14.39%		Level2	37	26.62%
	Senior three	10	7.19%		Level3	28	20.14%
	Senior four	40	28.78%		Level4	61	43.89%

### 2.2 Research Tool

General information: compiled by the researchers themselves, including gender, place of origin, only child, grade, student cadre, level of hearing impairment, etc. The "Positive Psychological Capital Scale" compiled by Zhang Kuo et al [10]. The scale has a total of 26 items, including the following four dimensions: self-efficacy (7 items),hope (6 items),optimism (6 items)and resilience (7 items).A seven-point scoring system is used, and they are ranked according to "completely inconsistent,

inconsistent, unclear, somewhat consistent, relatively consistent, fully consistent", and recorded as 1 point, 2 points, 3 points, 4 points, 5 points, and 6 points respectively, 7 points, the higher the measured score, the better the level of positive psychological capital. The Cronbach's alpha coefficient of the total scale of this study was 0.916; the Cronbach's alpha coefficients of each dimension were 0.86, 0.80, 0.76, and 0.83, which were all greater than 0.70, indicating that the scale had good reliability. Zhang Kuo [10] and others conducted a confirmatory factor analysis on the questionnaire, and the results showed that  $\chi^2/df=2.01$  ( $1 < \chi^2/df < 3$ ),  $RMSE=0.070$ ,  $CFI=0.91$ ,  $GFI=0.901$ ,  $IFI=0.91$ ,  $NFI=0.90$ , indicating that the questionnaire has good construct validity.

### 2.3 Statistical Method

Statistical software SPSS19.0 was used for statistical analysis and processing of data. Descriptive statistics, independent samples t-test and one-way ANOVA were used. The difference was considered statistically significant at  $p < 0.05$ .

## 3 Research results

### 3.1 The General Situation of Psychological Capital of Hearing-impaired College Students

Table 2: The general situation of psychological capital of hearing-impaired college students (N=139)

	Self-efficacy	Hope	Optimism	Resilience	psychological capital
Mean value	4.44	4.78	4.69	4.47	4.59
Standard Deviation	0.81	0.86	0.89	0.78	0.72
	1	4	3	2	

Table 2 shows that the average scores of the four dimensions of psychological capital of the hearing-impaired college students surveyed range from 4.44 to 4.47 and the average scores of the four dimensions are ranked from low to high: self-efficacy, resilience, optimism, and hope. The average score of the psychological capital scale is 4.59, which is in the interval of 4 and 5 and the overall preference is "a little in line" with the median comparison of psychological capital (this study Using the seven-point scoring method, the scores are 7, 6, 5, 4, 3, 2, and 1 respectively, with a median value of 4), and the psychological capital of hearing-impaired college students is at an upper-middle level.

### 3.2 Difference Analysis of Demographic Variables in Psychological Capital

#### 3.2.1 Independent Sample T-test of Gender on Psychological Capital

Table 3: Gender differences in psychology of hearing-impaired college students (N=139)

Project	Gender				t
	Male (N=57)		Female (N=82)		
	M	SD	M	SD	
Self-efficacy	4.593	0.875	4.340	0.753	1.830*
Hope	4.775	0.841	4.777	0.880	-0.15

Optimism	4.705	0.868	4.671	0.906	0.218
Resilience	4.513	0.816	4.445	0.749	0.501
psychological capital	4.640	0.738	4.546	0.699	0.761

Table 3 shows that the hearing-impaired college students of different genders only have significant differences in the dimension of "self-efficacy" ( $P=0.049<0.050$ ), and the self-efficacy of boys is significantly higher than that of girls. In terms of the total psychological capital scale and the two dimensions of "optimism and resilience", boys were generally higher than girls, but there was no significant difference.

### 3.2.2 Independent Sample T-test on Psychological Capital of Students

Table 4: Differences in the psychological capital of hearing-impaired college students in the place of origin (N=139)

Project	Household				t
	Urban(N=40)		Rural(N=97)		
	M	SD	M	SD	
Self-efficacy	4.472	0.828	4.350	0.784	0.793
Hope	4.813	0.805	4.613	0.942	1.252
Optimism	4.732	0.861	4.521	0.930	1.277
Resilience	4.556	0.807	4.286	0.807	1.869
psychological capital	4.634	0.689	4.432	0.767	1.504

Table 4 shows that the hearing-impaired college students from urban areas are generally higher than the hearing-impaired college students from rural areas in the average score of the total psychological capital scale and the average score of each dimension, but they all reach a significant level.

### 3.2.3 Independent Sample T-test on Psychological Capital of Only Child or Not

Table 5: Differences in the psychological capital of hearing-impaired college students whether they are only children or not (N=139)

Project	Only child or not				t
	Yes(N=32)		No(N=107)		
	M	SD	M	SD	
Self-efficacy	4.763	0.871	4.348	0.772	2.591*
Hope	4.485	0.938	4.754	0.841	0.553
Optimism	4.766	0.810	4.661	0.778	0.665
Resilience	4.755	0.832	4.389	0.741	2.384*
psychological capital	4.781	0.772	4.525	0.656	1.856

Table 5 shows that the only-child hearing-impaired college students were significantly higher than non-only-child hearing-impaired college students in the dimension of "self-efficacy" ( $P=0.011<0.05$ ) and "resilience" ( $P=0.019<0.05$ ), and in "hope and optimism" Dimension and total scale scores were higher than those of non-only-child students, but there was no significant difference.

### 3.2.4 Independent Sample T-test on Psychological Capital of Student Cadres or Not

Table 6: Differences in the psychological capital of hearing-impaired college students whether they are student leaders or not (N=139)

Project	Student cadre or not				t
	Yes(N=72)		No(N=67)		
	M	SD	M	SD	
Self-efficacy	4.573	0.784	4.395	0.824	1.980*
Hope	4.861	0.834	4.684	0.888	1.212
Optimism	4.754	0.856	4.620	0.922	0.837
Resilience	4.557	0.726	4.379	0.820	1.355
psychological capital	4.675	0.654	4.485	0.767	1.577

Table 6 shows that the "self-efficacy" dimension ( $P=0.049<0.05$ ) of the hearing-impaired college students who served as student leaders was significantly higher than that of the hearing-impaired college students who did not serve as student leaders. Hearing-impaired college students who have not served as student leaders have lower average scores on the total psychological capital scale and three dimensions of "hope, optimism, and resilience" than hearing-impaired college students who have served as student leaders, but there is no significant difference.

### 3.2.5 One-way ANOVA on Psychological Capital in Grade

Table 7: Differences in psychological capital of hearing-impaired college students by grade (N=139)

Project	Grade	M	SD	F	LSD
Self-efficacy	Senior 1(A)	4.245	0.761	4.261**	A<B<C<D
	Senior 2(B)	4.371	0.926		
	Senior 3(C)	4.571	0.640		
	Senior 4(D)	4.792	0.780		
Hope	Senior 1(A)	4.711	0.094	1.239	
	Senior 2(B)	4.609	0.219		
	Senior 3(C)	4.984	0.216		
	Senior 4(D)	4.695	0.150		
Optimism	Senior 1(A)	4.638	0.759	0.332	
	Senior 2(B)	4.668	0.089		
	Senior 3(C)	4.584	0.963		
	Senior 4(D)	4.801	0.984		
Resilience	Senior 1(A)	4.172	0.749	5.712**	A<C<B<D
	Senior 2(B)	4.617	0.727		
	Senior 3(C)	4.351	0.621		
	Senior 4(D)	4.767	0.819		
psychological capital	Senior 1(A)	4.438	0.657	2.901**	A<B<C<D
	Senior 2(B)	4.565	0.761		
	Senior 3(C)	4.573	0.613		
	Senior 4(D)	4.846	0.758		

One-way analysis of variance was performed on the overall average score of the mental capital of the hearing-impaired college students and the differences in the average score of each dimension in grades, and the analysis results are shown in Table 7. From the data in Table 7, it can be seen that the F value of the "self-efficacy" dimension test is 4.261 ( $P=0.007<0.01$ ), reaching a significant level, indicating that there are significant differences in the "self-efficacy" dimension of hearing-impaired college students of different grades; the overall "resilience" dimension The F value of the test was 5.712 ( $P=0.001<0.01$ ), reaching a significant level, indicating that there are significant differences in the dimension of "toughness" among hearing-impaired college students of different grades; further comparison by LSD found that: in the dimension of "self-efficacy and resilience", graduate students The class was significantly higher than that of the second-year hearing-impaired college students, and there was no significant difference in the paired test of other groups. The F value of the overall test of psychological capital was 2.901 ( $P=0.037<0.05$ ), which reached a significant level, indicating that there were significant differences in the psychological capital of hearing-impaired college students in different grades.

### 3.2.6 Independent Sample T-test on Psychological Capital in Grades

Table 8: Differences in the psychological capital of hearing-impaired college students on hearing-impaired grades (N=139)

Project	Hearing level	M	SD	F
Self-efficacy	Level1(E)	4.581	0.652	1.053
	Level2(F)	4.370	0.769	
	Level3(G)	4.255	0.809	
	Level4(H)	4.546	0.863	
Hope	Level1(E)	4.961	0.574	0.565
	Level2(F)	4.653	0.777	
	Level3(G)	4.726	0.865	
	Level4(H)	4.834	0.862	
Optimism	Level1(E)	4.923	0.574	1.283
	Level2(F)	4.577	0.854	
	Level3(G)	4.484	0.887	
	Level4(H)	4.793	0.951	
Resilience	Level1(E)	4.484	0.555	1.419
	Level2(F)	4.490	0.707	
	Level3(G)	4.315	0.774	
	Level4(H)	4.452	0.841	
psychological capital	Level1(E)	4.819	0.502	1.140
	Level2(F)	4.515	0.643	
	Level3(G)	4.434	0.724	
	Level4(H)	4.643	0.781	

One-way analysis of variance was performed on the overall average score and the average score of each dimension of the psychological capital of the hearing-impaired college students on the level of hearing impairment. The results are shown in Table 8: the overall average score and the average score of each dimension of the psychological capital of college students with different levels of hearing impairment There were no significant differences.

## **4. Discussion and Analysis**

### **4.1 Overall Situation of Psychological Capital of Hearing-impaired College Students**

The research results show that the overall average score and the average score of each dimension of the mental capital of the hearing-impaired college students are at the upper middle level. It can be seen that the overall psychological capital level of the hearing-impaired college students is relatively good. The psychological capital development of hearing-impaired college students is unbalanced, which is consistent with the actual situation of hearing-impaired college students. This may be because hearing-impaired college students can view their own defects objectively and rationally, and will take measures to solve problems when faced with difficulties, rather than complaining [11]. The positive psychological quality of hearing-impaired college students is predictable [12]. Secondly, hearing-impaired college students are mainly guided by positive and positive during their school days, and their psychological capital is generally at an upper-middle level. Because hearing-impaired college students are still on campus and have not really entered the society, they are full of hope for the uncertainty of their future life, so they score relatively high in the dimension of hope. However, because of the employment pressure after graduation and the lack of subjective experience of the uncertain life, they showed low confidence, so they scored relatively low in the dimension of self-efficacy. Judging from the scores of various dimensions of psychological capital of hearing-impaired college students, on the one hand, there is an urgent need to improve self-confidence and resilience; on the other hand, there is still room for improvement in the psychological capital of hearing-impaired college students. capital level.

### **4.2 The Analysis of Demographic Variables on the Psychological Capital Characteristics of Hearing-impaired College Students**

#### **4.2.1 Gender Differences in Psychological Capital of Hearing-impaired College Students**

The results of the study showed that male hearing-impaired college students had higher average scores on the total psychological capital scale and three dimensions of "self-efficacy, optimism, and resilience" than female students. "Girls scored higher than boys. This result may be because boys and girls face the same educational opportunities under the same educational background [13], and equal challenges make boys and girls have no significant difference in the overall level of psychological capital. However, boys have strong independence and initiative [14], and girls show more safety needs and dependence [15]. At the same time, because of the influence of traditional culture, the society believes that girls should pay more attention to family, which makes girls' career achievement motivation. Slightly weaker [16], the society has higher expectations for boys, so boys have significantly higher self-efficacy than girls. The society's expectations of girls are not as high as that of boys, girls are less stressed, and show a more positive attitude towards the actual problems they face, which shows that their level of hope is higher than that of boys in terms of psychological capital. Therefore, the psychological capital of hearing-impaired college students of different genders is not significantly different on the whole, only the self-efficacy level of males is significantly higher than that of females.

#### **4.2.2 Differences in the Psychological Capital of Hearing-impaired College Students with or without an Only Child**

The research results show that the only-child hearing-impaired college students are higher than non-only-child hearing-impaired college students in the total psychological capital scale, self-efficacy,

optimism and resilience, and the self-efficacy, resilience and non-only-children are significantly higher. Significant differences. Because only-child hearing-impaired college students have no other children to compete with them in the process of growing up, they will receive more resources and support from their families, while non-only-child hearing-impaired college students enjoy the same resources as their brothers in the family during their growth. Or sharing with sisters, the family resources obtained are relatively small, so that the self-efficacy and resilience levels of only-child hearing-impaired college students are significantly higher than those of non-only-child hearing-impaired college students. However, because non-only children have more experiences of sharing and cooperating with their brothers and sisters in life, they also show a positive state in some psychological qualities [17], and the independence of only children gets more exercise in life. They show confidence in certain things. Therefore, there is no significant difference in overall psychological capital between hearing-impaired college students who are only children and those who are not.

#### **4.2.3 Differences between the Psychological Capital of Hearing-impaired College Students and whether They Are Student Leaders or Not**

The results of the study show that the scores of hearing-impaired college students who have had student cadre experience on the total psychological capital scale and various dimensions are higher than those of hearing-impaired college students who have not served as student cadres. Hearing-impaired college students who have served as student cadres explore and find suitable ways to communicate and get along with hearing people in their daily interpersonal communication, which can help improve their self-confidence and come into contact with more students of different majors in the work of student cadres [18], to strengthen the communication with others, to a certain extent, to understand the life and learning styles of hearing-impaired students can help improve the self-regulation of hearing-impaired students, and can promote the accumulation and development of their psychological capital. In the dimension of self-efficacy, there is a significant difference between the hearing-impaired college students who have not served as student leaders and the hearing-impaired college students who have served as student leaders. The hearing-impaired college students who have served as student leaders have more outstanding abilities, and their comprehensive quality ability has been improved in the work process. The level of self-efficacy has also been improved, and the hearing-impaired college students who have not served as student leaders lack experience in dealing with external events, making their self-efficacy levels significantly higher than those of hearing-impaired students who have not served as student leaders. Therefore, the level of self-efficacy of hearing-impaired college students who have served as student leaders is significantly higher than that of hearing-impaired college students who have not served as student leaders.

#### **4.2.4 Different Grades of Psychological Capital of Hearing-impaired College Students**

The study found that there are significant differences in the psychological capital of hearing-impaired college students in grades; there are significant differences in self-efficacy and resilience among hearing-impaired college students in different grades. Further post-mortem tests found that the self-efficacy and resilience of the graduating class were significantly different from those of the second grade. Hearing-impaired college students who have just entered the school have to experience the transition from high school life to college life, and freshmen have to face the problem of adapting to school life [19]. They should actively seek support and peers when they are familiar with campus life. For incoming hearing-impaired college students who leave their parents, sudden independence will affect their psychological status, so lower grade students show a lower level of psychological capital. After getting used to the life of college students, with the accumulation of the professional knowledge



they have learned and their plans for the future in the face of graduation, the relatively large amount of experience accumulated makes them better than the students in the lower grades in facing difficulties and dealing with problems. More confident and exhibit higher self-efficacy. In addition, the data shows that the freshman's hope score is higher. This result may be because the freshman who encounters problems in the new environment can ask the senior students for advice, and at the same time is full of expectations for the fresh learning life, so showed a high level of hope [20]. In general, the psychological capital level of hearing-impaired college students in senior grades is significantly higher than that of students in lower grades.

#### **4.2.5 Differences in the Psychological Capital of Hearing-impaired College Students in Other Demographic Variables**

The results of the study show that there is no significant difference in the psychological capital of hearing-impaired college students in the place of origin. It may be because with the development of urban-rural integration and the development of the Internet [21], hearing-impaired college students from rural areas have the same resources as hearing-impaired college students from urban areas, and there is no special difference in information acquisition, which makes students from different places of origin. The difference in psychological capital of hearing-impaired college students is not significant. The hearing-impaired college students from urban areas have higher scores than those from rural areas in all dimensions, because urban students have been exposed to more things than rural students in their growth experience and are more convenient in the use of social resources. , urban students show more self-confidence, so there is no significant difference in the demographic variable of student origin in the psychological capital of hearing-impaired college students. In terms of overall average scores, students with low levels of hearing impairment scored higher on self-efficacy, hope, optimism, resilience, and overall scale than students with high levels of hearing impairment. This may be because students with low levels of hearing impairment can They can communicate more smoothly with the outside world, show high self-confidence [22], and can communicate better with others when they encounter problems, which also makes them have a high level of resilience. Due to the consistency of the psychological development characteristics of hearing-impaired college students, the individual psychological differences are not obvious, so there is no significant difference in the degree of psychological capital in the degree of hearing impairment.

### **5. Conclusions**

The psychological capital of the hearing-impaired college students is generally at an upper-middle level; the psychological capital of the hearing-impaired college students is unevenly developed in various dimensions. The characteristics of psychological capital in terms of demographic variables: gender has significant differences in self-efficacy, only child or not in self-efficacy and resilience, student cadre or not in self-efficacy, grade in total psychological capital. There are significant differences on the scale; the place of birth and the level of hearing impairment do not reach a significant level in terms of psychological capital.

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