

The Relationship between College Students' Social Adaptation and Loneliness

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Abstract: This study is intended to investigate the relationship between social adaptation and loneliness of college students through the actual investigation of college students, in order to provide evidence for enhancing the mental health level of college students and reducing their loneliness. A total of 649 college students were selected as subjects to investigate their social adaptation and loneliness by questionnaire. The results showed that: (1) Interpersonal adaptability, psychological resilience, psychological energy and Sense of psychological advantage were significantly negatively correlated with loneliness. (2) Gender had significant differences in interpersonal adaptability and loneliness; There are significant differences in the Sense of psychological advantage, psychological energy and social adaptation. There are significant differences in the Sense of psychological advantage, psychological energy, interpersonal adaptability, psychological resilience, social adaptation and loneliness. (3) Social adaptation has a negative predictive effect on loneliness. This study not only explores the relationship between social adaptation and loneliness, but also provides empirical support and theoretical guidance for guiding college students to reduce loneliness more targeted.

1. Introduction

In recent years, the mental health of college students has aroused wide concern. Research shows that there are high psychological distress and pressure among college students, which are mainly caused by academic pressure, interpersonal tension and future uncertainty. Loneliness is an important variable, and many students feel lonely in the process of adapting to a new environment and living independently, thus exacerbating psychological problems. According to Liu et al. (2019), about 25% of college students report severe loneliness, which is closely related to symptoms of depression and anxiety ^[1]. Loneliness refers to an individual's feelings about the quantity and quality of their social interactions ^[2]. "Loneliness arises when one's social network is less satisfying than one's expectations." ^[3] It can be seen that an individual's level of social adaptation affects the level of loneliness, and the relationship between social adaptation and loneliness and how social adaptation affects loneliness need to be further explored.

Social Adaptation: According to Chen Jianwen's research from 2001 to 2004, social adaptation refers to the psychological characteristics and personality characteristics formed by individuals in

the process of long-term social activities, which are manifested in the process of social adaptation. Social adaptation directly affects the individual's feeling and understanding of the social environment pressure, and determines what kind of coping methods the individual can adopt to adapt to the society. The process of adaptation can be divided into four aspects: comparison of atmosphere, psychological initiation of relief, content operation and adaptation evaluation, including four dimensions: psychological resilience, interpersonal adaptation, psychological energy and sense of psychological advantage [4,5]. Social adjustment plays a crucial role in mental health. Studies have shown that good social adjustment helps reduce loneliness and depressive symptoms, as positive social support can provide emotional comfort and practical help [6]. In addition, individuals with strong social adaptability usually have higher self-esteem and self-confidence because they are able to gain recognition and acceptance in society [7]. This recognition not only enhances the individual's sense of self-worth, but also promotes the positive state of individual psychology. Through positive social interaction, individuals can gain more happiness and satisfaction, and thus better cope with the pressures and challenges in life [8]. In general, good social adaptability not only improves the mental health level of individuals, but also enhances the quality of life and happiness of individuals [9].

To sum up, this study intends to investigate the relationship between college students' social adaptation and loneliness through the actual investigation of college students, aiming to provide empirical support and theoretical guidance for improving their mental health level and reducing their loneliness.

2. Research Methods

2.1 Subjects

In this study, 4-year colleges and universities in Zhengzhou, Henan Province, Taiyuan, Shanxi Province, Jinan, Shandong Province, Chengdu, Sichuan Province and Liuzhou, Guangxi Province were distributed online questionnaires. After excluding invalid questionnaires, 649 valid questionnaires were obtained. Among them, Zhengzhou accounted for 55%, Taiyuan accounted for 15%, Jinan accounted for 10%, Chengdu accounted for 10%, Liuzhou accounted for 10%. The selection of five cities in China with relatively small differences in economic conditions and relatively far geographical location is more representative, and the sampling can more represent part of the situation of Chinese college students. There were 199 boys (30.7%) and 450 girls (69.3%); There were 174 freshmen (26.8%), 310 sophomores (47.8%), 104 juniors (16.0%) and 61 seniors (9.4%). The average age of the subjects ranged from 16 to 25 years old (22.46 ± 4.03).

2.2 Tools

2.2.1 Social Adjustment Scale

This scale is a social adaptability scale for middle school students compiled by Professor Chen Jianwen et al. There are 70 items in this questionnaire, which are divided into four dimensions: Sense of psychological advantage, psychological energy, interpersonal adaptability and psychological resilience. The scale adopts 5-point scoring method. The higher the score of the questionnaire, the better the social adaptability (1= completely inconsistent, 5= completely consistent), and there are 22 reverse scoring questions (1, 3, 7, 8, 9, 19, 29, 35, 36, 38, 39, 41, 42, 50, 51, 52, 53, 54, 55, 56, 57, 61). The scale can comprehensively evaluate the social adaptability of middle school students. It is of great significance to promote students' mental health, improve their social adaptability and formulate relevant educational strategies. In this study, the Cronbach ' α

coefficient of this scale was 0.955.

2.2.2 Loneliness scale

The scale assesses loneliness due to the gap between the desire for social interaction and the actual level, which is defined here as one-dimensional. The Loneliness Scale (UCLA) was compiled by Russell et al., consisting of 20 items, each item was rated with 4 levels of frequency (never, rarely, sometimes, always), with 1-4 points respectively. Higher scores indicate higher feelings of loneliness. In this study, the Cronbach 'α coefficient of this scale was 0.882.

3. Results

3.1 Common method deviation test

In this study, Harman's single factor test was used to test the common methodological bias of independent and dependent variables. The results show that there are 13 factors with feature roots greater than 1, among which the variance explanation rate of the largest factor is 28.34%, which is less than the critical standard of 40%, so there is no serious common method bias in this study.

3.2 Mean, standard deviation and correlation of variables

Description analysis and correlation analysis were conducted for each variable. As shown in Table 1, Sense of psychological advantage was significantly positively correlated with the total score of psychological energy, interpersonal adaptability, psychological resilience and social adaptation ($r=0.796$, $p < 0.01$; $r=0.673$, $p < 0.01$; $r=0.695$, $p < 0.01$; $r=0.883$, $p < 0.01$); There was a significant negative correlation between psychological dominance and loneliness ($r=-0.525$, $p < 0.01$).

Table 1: describes the statistical and correlation results

	M	SD	Sense of psychological advantage	Psychological energy	Interpersonal adaptation	Psychological resilience	Social adjustment score	Total loneliness score
Sense of psychological advantage	48.892	7.951	1					
Psychological energy	53.142	11.131	0.796**	1				
Interpersonal adaptation	58.667	8.387	0.673**	0.692**	1			
Psychological resilience	63.738	9.836	0.695**	0.704**	0.756**	1		
Social adjustment score	224.439	33.192	0.883**	0.909**	0.870**	0.890**	1	
Total loneliness score	45.410	8.357	-0.525**	-0.447**	-0.687**	-0.603**	-0.628**	1

Note: * means $P < 0.05$, ** means $P < 0.01$, *** means $P < 0.001$; The same below.

Psychological energy was positively correlated with the total scores of interpersonal adaptability, psychological resilience and social adaptation ($r=0.692$, $p < 0.01$; $r=0.704$, $p < 0.01$; $r=0.909$, $p < 0.01$); There was a significant negative correlation between psychological energy and loneliness

($r=-0.447$, $p < 0.01$).

Interpersonal adaptability was positively correlated with the total scores of psychological resilience and social adaptation ($r=0.756$, $p < 0.01$; $r=0.870$, $p < 0.01$); Interpersonal adaptability was negatively correlated with loneliness ($r=-0.687$, $p < 0.01$).

There was a significant positive correlation between psychological resilience and the total score of social adaptation ($r=0.890$, $p < 0.01$). There was a significant negative correlation between psychological resilience and loneliness ($r=-0.603$, $p < 0.01$).

The total score of social adaptation was negatively correlated with loneliness ($r=-0.628$, $p < 0.01$).

3.3 Differences in demographic variables of social adjustment and loneliness

Independent sample T-test was conducted for each variable in terms of gender. As shown in Table 2, there were significant differences between male and female college students in interpersonal adaptability ($t=-2.536$, $p < 0.05$), among which the interpersonal adaptability level of female college students was significantly higher than that of male college students. The level of loneliness of male and female college students was significantly different ($t=2.129$, $p < 0.05$), and the level of loneliness of male college students was significantly higher than that of female college students. There is no significant difference between male and female college students in Sense of psychological advantage, psychological energy, psychological resilience and social adaptation.

Table 2: Gender differences in social adjustment and loneliness

variable	male(N=199)	female(N=450)	t
Sense of psychological advantage	48.181±8.654	49.207±7.608	-1.517
psychological energy	52.151±12.757	53.580±10.316	-1.392
interpersonal adaptability	57.417±8.386	59.220±8.337	-2.536*
psychological resilience	63.442±10.405	63.869±9.583	-0.509
social adaptation	222.191±36.173	225.876±31.721	-1.66
loneliness	46.457±8.253	44.947±8.370	2.129*

Independent sample T test was conducted on whether each variable was the only student. As shown in Table 3, there are significant differences in the sense of psychological superiority ($t=2.327$, $p < 0.05$). The sense of psychological superiority of the only student was significantly higher than that of the non-only student. There were significant differences in psychological energy between only students ($t=2.090$, $p < 0.05$), and the psychological energy of only students was significantly higher than that of non-only students. There was a significant difference in social adjustment between only students ($t=2.019$, $p < 0.05$). The only students were significantly higher than non-only students in social adjustment. There were no significant differences in interpersonal adaptability, psychological resilience and loneliness.

Table 3: Differences in social adjustment and loneliness between being an only child or not

variable	Yes(N=89)	No(N=560)	t
Sense of psychological advantage	50.708±8.126	48.604±7.892	2.327*
psychological energy	55.427±11.502	52.779±11.038	2.09*
interpersonal adaptability	59.596±10.133	58.520±8.075	0.955
psychological resilience	65.292±10.142	63.491±9.773	1.607
social adaptation	231.023±35.557	223.393±32.712	2.019*
loneliness	45.910±9.777	45.330±8.116	0.531

Independent sample T-test was conducted for each variable in the residential area, and the results can be seen from Table 4: there are significant differences between urban and rural students in the sense of psychological advantage, psychological energy, interpersonal adaptability, psychological resilience and social adaptation ($t=4.299$, $p < 0.001$; $t=3.516$, $p < 0.001$; $t=2.517$, $p < 0.05$; $t=2.979$, $p < 0.001$; $t=3.641$, $p < 0.001$;) The sense of psychological advantage, psychological energy, interpersonal adaptability, psychological resilience and social adaptability of urban students are significantly higher than those of rural students. There was a significant difference in loneliness between urban and rural students ($t=-2.042$, $p < 0.05$), and the loneliness of rural students was significantly higher than that of urban students.

Table 4: Differences in social adjustment and loneliness in residence

variable	Urban(N=217)	Rural(N=432)	t
Sense of psychological advantage	50.760±8.490	47.954±7.502	4.299***
psychological energy	55.390±11.685	52.063±10.694	3.516***
interpersonal adaptability	59.912±9.489	58.042±7.711	2.517*
psychological resilience	65.410±10.487	62.898±9.393	2.979***
social adaptation	231.373±35.870	220.956±31.228	3.641***
loneliness	44.415±9.241	45.910±7.839	-2.042*

3.4 Regression analysis of social adaptation to loneliness

With interpersonal adaptability, psychological resilience, psychological energy and sense of psychological advantage as independent variables and loneliness as dependent variable, multiple regression analysis was conducted to investigate the predictive effects of social adaptation on loneliness. As shown in Table 5 and 6, the regression model of interpersonal adaptability, psychological resilience, psychological energy and sense of psychological advantage on loneliness was significant ($F=166.736$, $P < 0.001$), which was statistically significant and could explain 50.9% of the total variation. Interpersonal adaptability ($t=-12.461$, $p < 0.001$), psychological resilience ($t=-4.664$, $p < 0.001$) and sense of psychological advantage ($t=-3.965$, $p < 0.001$) had significant negative predictive effect on loneliness. $p < 0.001$ had significant positive predictive effect on loneliness.

Table 5: Regression model parameters of social adaptation and loneliness

R	R square	Adjusted R square	F	P
0.713	0.509	0.506	166.736	0

Table 6: Regression model of social adaptation to loneliness

	Nonnormalized coefficient		Standardization coefficient	t	P	Collinearity statistics
	B	standard error	β			
(constant)	90.166	1.769		50.966	0	
interpersonal adaptability	-0.564	0.045	-0.566	-12.461	0	2.702
psychological resilience	-0.185	0.04	-0.218	-4.664	0	2.856
psychological energy	-0.188	0.037	0.251	5.044	0	3.24
Sense of psychological advantage	-0.202	0.051	-0.193	-3.965	0	3.095

4. Discussion

This study finds that there are significant differences between male and female college students in interpersonal adaptability and loneliness. The score of interpersonal adaptability of female college students is significantly higher than that of male college students, and the score of loneliness of male college students is higher than that of female college students, which is the same as the results of many previous studies^[10-14], indicating that female students have stronger ability in interpersonal adaptability. Female college students also reported lower levels of loneliness. Possible reasons include that socialization processes encourage women to develop interpersonal skills, that women have wider social support networks, and that they are better at emotional expression and management. In addition, cultural expectations that prompt women to focus on and maintain social relationships, as well as mental health factors that make women more willing to seek help, combine to cause women to feel less lonely and more resilient.

There are significant differences in sense of psychological advantage, psychological energy and social adaptation, and the scores of only college students are significantly higher than those of non-only college students. It may be that only children have more resources, attention and support as they grow up, making them more confident and well-adjusted psychologically and socially. In addition, only children usually have more opportunities to develop independence and self-management skills^[15].

There are significant differences in psychological strength, psychological energy, interpersonal adaptability, psychological resilience, social adaptation and loneliness. The scores of urban college students are significantly higher than those of rural college students in the first five variables. The scores of college students living in urban areas are significantly lower than those in rural areas. The reason is that college students living in cities have better educational resources and extensive social support network. In addition, the city's improved mental health services reduce their loneliness.

The results of correlation analysis show that three of the four factors of social adaptation, namely interpersonal adaptation, psychological resilience and sense of psychological advantage, have significant negative predictive effects on loneliness, indicating that the higher the factors, the lower the loneliness. Psychological energy has a significant positive predictive effect on loneliness, indicating that the higher the psychological energy, the higher the loneliness. After multiple regression, it was found that the regression model was statistically significant, indicating that these independent variables had a strong explanatory power for loneliness. These results suggest that loneliness can be effectively reduced by improving interpersonal adaptability, psychological resilience and sense of psychological advantage. At the same time, the relationship between increased psychological energy and increased loneliness needs to be further explored in order to develop more effective mental health intervention strategies. The predictive ability of interpersonal adaptability is the highest, indicating that the higher the interpersonal adaptability of an individual, the stronger the adaptive ability to the environment and the dynamic regulation ability, thus the lower the level of loneliness. Therefore, enhancing the social adaptation level of college students can not only help to reduce their loneliness, but also make them better cope with the pressure and challenges in study and life, so as to have a good mental health level.

5. Conclusion

(1) Interpersonal adaptability, psychological resilience, psychological energy and sense of psychological advantage were significantly negatively correlated with loneliness.

(2) Gender had significant differences in interpersonal adaptability and loneliness; There are significant differences in the sense of psychological superiority, psychological energy and social adaptation. There are significant differences in the sense of psychological advantage, psychological

energy, interpersonal adaptability, psychological resilience, social adaptation and loneliness.

(3) Social adaptation has a negative predictive effect on loneliness.

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