

Study on The Mental Health of Rural Left-behind Children in Boarding Schools

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Abstract: To investigate the mental health of rural left-behind children in boarding schools, the Mental Health Diagnostic Test (MHT) adapted to primary and secondary school students in China was used to compare the mental health of rural left-behind students in boarding and non-boarding schools. Results: First, there are some problems with the mental health of rural left-behind children in boarding schools. Second, there was a significant gender difference in the dimension of anxiety about people among boarding students. Second, there is a significant difference in the dimension of anxiety about people and loneliness among boarding students in terms of gender, and there is a significant difference in the grade level of anxiety about people and tendency of loneliness among boarding students. Therefore, it is suggested that schools, families and society should take joint measures to grasp and guide the psychology of rural left-behind children in boarding schools, especially those in the lower grades, in order to make them grow up healthy and strong.

Keywords: Boarding schools, Left-behind children, Mental health, Investigation and research.

1. Introduction

With the continuous acceleration of urbanization, a large number of rural laborers have flocked to cities, breaking the long-term stable and unchanging family structure, leading to the long-term separation of parents and children and the emergence of a large number of left-behind children. According to the statistics of left-behind children in rural areas in 2019, there are about 66.83 million left-behind children in rural China, including urban and rural migrant children and rural left-behind children. In 2018, the General Office of the State Council issued the guiding opinions on comprehensively strengthening the construction of small-scale rural schools and township boarding schools, proposing "further improving the education and care system for rural left-behind children, effectively strengthening the management of the whole process of education for left-behind children, giving priority to meeting their boarding needs. In addition, we should provide the necessary service personnel to take care of children left behind, so that the township boarding schools can really become an important formation to promote the psychological and healthy growth of children[1]". A guideline is proposed for the parenting model of rural boarding schools.

The boarding school in this study is a school where boarding and lodging take place in the school from Monday to Friday, with a uniform schedule and a fixed place for learning activities, and is jointly managed by the school teacher and the life teacher. Children left behind in rural areas are children who are in the care of relatives or other surrogates during the compulsory education period because one or both parents are working[2]. Mental health refers to a good psychological state of the individual, and a good state of harmony within the self and between the self and the environment is maintained.

At the elementary school level, education from home and school has an important influence on the development of students' mental health, and the special group of rural left-behind children should receive more attention. The impact of

boarding life on the psychological health of rural left-behind children is both beneficial and detrimental. To a certain extent, boarding life can promote the development of primary school students' ability to take care of themselves and is also conducive to the cultivation of their sense of community[3]. However, the early entry of primary school students into group life without the company and warmth of family members is not conducive to their psychological health development because they are still young and have incomplete psychological development. In order to investigate the influence of boarding life on the mental health of rural "left-behind children", this study compares the mental health of boarding and non-boarding students, analyzes the causes of the differences, and proposes reasonable countermeasures.

2. Organization of the Text

2.1. Research Subjects and Methods

2.1.1. Research Subjects

The study selected left-behind children in two rural boarding and non-boarding elementary school in Jingzhou City as the research subjects, and 260 questionnaires were distributed, 240 valid questionnaires were recovered, with a valid recovery rate of 92.3%. Among them, there were 124 left-behind children in boarding elementary schools, 64 boys and 60 girls; there were 116 left-behind children in non-boarding elementary schools, 53 boys and 63 girls.

2.1.2. Research Methods

In this study, the Mental Health Diagnostic Test (MHT) was used to conduct a questionnaire survey, with a total of 100 items, including 8 content scales and 1 validity scale (i.e., lie detector scale). 8 content scales: A learning anxiety; B anxiety about people; C loneliness; D self-blame; E allergy; F physical symptoms; G terroristic tendency; H impulsive tendency. Except for the basic information questions 1 to 3, the remaining 100 questions were scored 1 point for "yes" and no points for "no", i.e., 0 points. A score of less than 3 for each dimension is considered normal, while a score of more than 8

indicates that there is some problem and should be noted.

2.2. Survey Analysis

In this study, we divided the rural left-behind children into "boarding students" and "non-boarding students", and analyzed the differences between boarding students and non-boarding students in terms of their overall mental health, the differences between boarding students and non-boarding students in terms of each dimension, and the differences between the mental health status of 124 boarding students in

terms of gender and grade level and each dimension of mental health.

2.2.1. Comparison of the overall and dimensional differences in mental health between boarding and non-boarding students

Before conducting independent sample-t-tests on the dimensions of boarding or not and mental health, this study hypothesized that there was a significant difference between the factors on whether.

Table 1. Tests of differences between boarding and non-boarding students' mental health in general and in each dimension

Dimensions	Boarding or not	N	AVG	S	T
Learning Anxiety	Boarders	124	7.85	2.91	1.50
	Non-Boarders	116	7.24	3.33	
Anxiety about people	Boarders	124	4.52	2.06	2.65**
	Non-Boarders	116	3.72	2.53	
Tendency to loneliness	Boarders	124	2.98	2.04	2.06
	Non-Boarders	116	2.42	2.19	
Self-blaming tendencies	Boarders	124	5.91	2.47	4.43
	Non-Boarders	116	4.41	2.80	
Allergic tendency	Boarders	124	5.87	2.26	2.17
	Non-Boarders	116	5.19	2.61	
Physical symptoms	Boarders	124	5.33	3.46	1.73
	Non-Boarders	116	4.56	3.45	
Terrorist tendencies	Boarders	124	3.84	2.83	0.95
	Non-Boarders	116	3.50	2.68	
Impulsive tendencies	Boarders	124	2.72	2.50	-0.36
	Non-Boarders	116	2.84	2.53	
Total Score	Boarders	124	39.02	14.20	2.62
	Non-Boarders	116	33.88	16.14	

Note: *P<0.05, **P<0.01, ***P<0.001, same below.

The analysis revealed that there was no significant difference between boarding and non-boarding students in terms of total scale scores, while the analysis of the results of the differences in the levels of the dimensions of the mental health scale revealed significant differences between boarding and non-boarding students in terms of anxiety about people. In terms of mean scores, boarding students scored higher than non-boarding students on all dimensions except for "impulsive tendencies". Although the differences between these two dimensions are small, the overall test scores are high and need to be further analyzed.

2.2.2. Descriptive statistics of boarding students' mental health in general and in each dimension

Through the comparative analysis of the measurement scales of boarding and non-boarding students of rural left-behind children, it was tentatively guessed that boarding life has a certain influence on the psychological healthy growth of rural children, and the questionnaire data of 124 rural elementary school boarding students in middle and high school were analyzed again, and the results were as follows:

Table 2. Mean scores and standard deviations of the overall mental health of boarding students and each dimension

Dimensions	X	S
Learning Anxiety	7.85	2.91
Anxiety about people	4.52	2.06
Tendency to loneliness	2.98	2.04
Self-blaming tendencies	5.91	2.47
Allergic tendency	5.87	2.26
Physical symptoms	5.33	3.46
Terrorist tendencies	3.84	2.83
Impulsive tendencies	2.72	2.50
Total Score	39.02	14.20

As can be seen from Table 2, the mean scores of boarders' mental health performance in all dimensions were below 8.00, indicating an optimistic test mean situation for each boarder. By dimension, the highest mean score for learning anxiety (7.85) indicates that more boarding students have some

problematic performance in learning anxiety. In terms of dispersion, the standard deviation of physical symptoms was relatively large, while the standard deviation of loneliness tendency was relatively small, which further indicates that there are relatively large individual differences among the

boarding students in terms of physical symptoms, and the difference between high and low is more obvious. On the other hand, the differences among boarding students in terms of loneliness tendency were relatively smaller, and the differences between high and low were not obvious.

2.2.3. Independent samplet-test of the overall mental health of boarding students and each dimension in terms of gender

Hypothesis: There are significant differences in the overall mental health of boarding students and the dimensions in terms of gender.

Table 3. Gender differences in the overall mental health of boarding students and in each dimension

Dimensions	Gender	N	X	S	T
Learning Anxiety	Male	64	7.55	3.08	-1.19
	Female	60	8.17	2.72	
Anxiety about people	Male	64	4.34	2.40	-0.97**
	Female	60	4.70	1.63	
Tendency to loneliness	Male	64	3.14	2.08	0.88
	Female	60	2.82	2.00	
Self-blaming tendencies	Male	64	5.77	2.47	-0.68
	Female	60	6.07	2.48	
Allergic tendency	Male	64	5.73	2.41	-0.70
	Female	60	6.02	2.09	
Physical symptoms	Male	64	5.30	3.66	-0.11
	Female	60	5.37	3.26	
Terrorist tendencies	Male	64	3.28	2.53	-2.31
	Female	60	4.43	3.02	
Impulsive tendencies	Male	64	2.33	2.40	-1.81
	Female	60	3.13	2.56	

Table 4. Grade level differences in boarders' mental health overall and by dimension

Dimensions	Grade	N	AVG	S	F	Post hoc comparison
Learning Anxiety	Third Grade	21	8.90	1.76	2.10	
	Fourth Grade	26	7.42	2.79		
	Fifth Grade	45	8.16	2.98		
	Sixth Grade	32	7.06	3.34		
Anxiety about people	Third Grade	21	5.24	1.95	3.49*	Sixth Grade<Fourth Grade Fourth Grade<Fifth Grade Fifth Grade<Third Grade
	Fourth Grade	26	4.08	2.30		
	Fifth Grade	45	4.96	1.83		
	Sixth Grade	32	3.78	2.01		
Tendency to loneliness	Third Grade	21	3.71	1.65	2.75*	Sixth Grade<Fourth Grade Fourth Grade<Fifth Grade Fifth Grade<Third Grade
	Fourth Grade	26	3.08	2.33		
	Fifth Grade	45	3.16	2.17		
	Sixth Grade	32	2.19	1.64		
Self-blaming tendencies	Third Grade	21	5.62	2.40	0.44	
	Fourth Grade	26	6.38	2.39		
	Fifth Grade	45	5.80	2.28		
	Sixth Grade	32	5.88	2.87		
Allergic tendency	Third Grade	21	5.62	2.38	1.67	
	Fourth Grade	26	6.35	2.21		
	Fifth Grade	45	6.18	2.12		
	Sixth Grade	32	5.22	2.32		
Physical symptoms	Third Grade	21	5.81	3.80	1.19	
	Fourth Grade	26	5.62	3.94		
	Fifth Grade	45	5.64	3.39		
	Sixth Grade	32	4.34	2.82		
Terrorist tendencies	Third Grade	21	4.29	2.97	1.25	
	Fourth Grade	26	3.00	2.55		
	Fifth Grade	45	4.22	2.93		
	Sixth Grade	32	3.69	2.76		
Impulsive tendencies	Third Grade	21	3.00	2.72	0.77	
	Fourth Grade	26	2.23	2.37		
	Fifth Grade	45	3.04	2.68		
	Sixth Grade	32	2.47	2.21		
Total Score	Third Grade	21	42.19	14.40	1.78	
	Fourth Grade	26	38.15	14.70		
	Fifth Grade	45	41.16	13.38		
	Sixth Grade	32	34.63	14.29		

As can be seen from Table 3, because the p-value for anxiety about people is less than 0.05, there is an extremely

significant difference in anxiety about people in the mental health of boarding students in terms of gender. The tendency

of the surveyed boarding students to have higher anxiety about people is higher among girls than boys. Girls at the elementary school level are more mature than boys in terms of psychological development, so girls tend to be more mature mentally than boys, and their minds are more delicate and sensitive, so they are more likely to have anxiety about people in the process of interpersonal interaction.

2.2.4. Analysis of variance (ANOVA) for boarding students' overall mental health and each dimension in terms of grade level

The study hypothesis: the analysis of variance (ANOVA) of the overall mental health of boarding students and each dimension in terms of grade level is significantly different in terms of grade level.

In order to investigate whether there were differences in the overall mental health and dimensions of boarding students by grade level, a one-way ANOVA was conducted on the

questionnaire data of 124 boarding students, and the results are shown in Table 5. the ANOVA results showed that there were significant differences in the dimension of anxiety about people ($p < 0.05$) and the dimension of tendency to be lonely ($p < 0.05$), and that there were no significant differences between grades in the dimensions of learning anxiety, self-blame, allergic tendencies, phobic tendencies, impulsive tendencies, and total mental health status scores of boarders. Post hoc tests further indicated that the ranking of anxiety about people by grade was: 6th grade < 4th grade < 5th grade < 3rd grade; and the ranking of loneliness tendency by grade was: 6th grade < 4th grade < 5th grade < 3rd grade.

2.2.5. Correlation analysis between the overall mental health of boarding students and each dimension

The research hypothesis: there is a significant correlation between the overall and the dimensions of mental health of boarding students.

Table 5. Correlation analysis between the overall mental health of boarding students and each dimension

Variables	AVG	S	1	2	3	4	5	6	7	8	9
1.Learning Anxiety	7.85	2.91	1.00								
2.Anxiety about people	4.52	2.06	0.59**	1.00							
3.Tendency to loneliness	2.98	2.04	0.29**	0.51**	1.00						
4.Self-blaming tendencies	5.91	2.47	0.50**	0.33**	0.15	1.00					
5.Allergic tendency	5.87	2.26	0.42**	0.61**	0.38**	0.37**	1.00				
6.Physical symptoms	5.33	3.46	0.40**	0.50**	0.37**	0.23**	0.58**	1.00			
7.Terrorist tendencies	3.84	2.83	0.31**	0.42**	0.33**	0.25**	0.41**	0.43**	1.00		
8.Impulsive tendencies	2.72	2.50	0.24**	0.48**	0.47**	0.12	0.50**	0.61**	0.46**	1.00	
9.Total Score	39.02	14.20	0.69**	0.78**	0.60**	0.53**	0.76**	0.78**	0.67**	0.70**	1.00

As can be seen from the analysis in Table 5, correlations among the dimensions of the mental health scale for boarding students revealed that there were extremely significant positive correlations among several dimensions, except for the non-significant correlations between loneliness and self-blame tendencies.

2.2.6. Correlation analysis between the dimensions of mental health of boarding students and demographic variables

Hypothesis: There is a significant correlation between the dimensions of mental health of boarding students and demographic variables.

Table 6. Correlation analysis between the dimensions of mental health of boarding students and demographic variables

Variables	1	2	3	4	5	6	7	8	9	10
1.Gender	1.00									
2.Grade	-0.01	1.00								
3.Learning Anxiety	0.11	-0.14	1.00							
4.Anxiety about people	0.09	-0.20*	0.56**	1.00						
5.Tendency to loneliness	-0.08	-0.22*	0.27**	0.49**	1.00					
6.Self-blaming tendencies	0.05	-0.02	0.48**	0.28**	0.09	1.00				
7.Allergic tendency	0.05	-0.10	0.42**	0.60**	0.38**	0.34**	1.00			
8.Physical symptoms	0.03	-0.13	0.39**	0.54**	0.42**	0.26**	0.59**	1.00		
9.Terrorist tendencies	0.19*	0.01	0.30**	0.40**	0.32**	0.25**	0.40**	0.47**	1.00	
10.Impulsive tendencies	0.17	-0.01	0.24**	0.51**	0.45**	0.11	0.51**	0.67**	0.49**	1.00

According to Table 6, the correlation analysis between the dimensions of mental health of boarders and demographic variables revealed that there was a significant positive correlation between the gender of boarders and the tendency to terrorize boarders, and a significant positive correlation between the grade level of boarders and the tendency to be anxious about people and lonely.

3. Conclusion

1. There is a significant difference in the dimension of "anxiety about people" in terms of whether or not to board, and there is a significant negative correlation between

whether or not to board and "anxiety about people".

2. There is a significant difference in the dimension of anxiety about people in the mental health of boarding students by gender, and the tendency of anxiety about people is higher among female than male boarding students.

3. The post hoc test further showed that the anxiety about people and loneliness tendency of boarding students were ranked as follows: 6th grade < 4th grade < 5th grade < 3rd grade; the loneliness tendency of each grade was ranked as follows: 6th grade < 4th grade < 5th grade < 3rd grade.

4. The correlation analysis between the dimensions of mental health of boarders and demographic variables revealed that there was a significant positive correlation between the

gender of boarders and the tendency to terrorize boarders, and a significant positive correlation between the grade level of boarders and the tendency to be anxious about people and loneliness.

4. Recommendation

School level. First of all, schools should actively do a good job in educating and counseling the mental health of boarding students by equipping professional counselors and setting up special counseling rooms in the school. Or train school teachers with professional psychological counseling knowledge and skills, and offer group or individual psychological counseling courses for students. Second, strengthen physical exercise for school boarders so that students can not only gain a rich academic knowledge at school, but also exercise to form a healthy body[4]. Finally, schools should interfere with campus violence, and should work together to build a harmonious and orderly campus environment and foster united and loving peer relationships in order to prevent boarding students from developing psychological problems such as anxiety about people and a tendency to loneliness.

Family level. The influence of the family on a child's growth is tremendous, and parents play an important role in their child's development. When parents send their children to a boarding school, they still have to fulfill their responsibilities and duties as parents and take the initiative to communicate with the school teachers to obtain timely information about their children's school performance and psychological changes. Boarders spend very little time with their parents during the week, so on rare weekends, holidays or special days, parents need to create opportunities to spend time with their own children and take more time out to be with them.

Social level. Government departments and members of the community should also give some attention to the operation

and development of rural boarding schools, increase funding and support for rural boarding schools, and further improve the learning and living environment for boarding students. We should provide some financial support for the construction of basic living conditions such as food safety and nutrition in school cafeterias, drinking water, dormitory beds, toilets, and washing, so that boarding students can have a home-like and comfortable living environment in schools[5]. At the same time, various social organizations and related departments can organize various activities to give more attention and care to boarding children to ensure their healthy and happy growth.

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