

A Research on Psychological Suzhi and Influencing Factors of Elementary School Students from Ethnic Minority Boarding Schools in Rural Tibet, China

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Abstract: To explore the actual situation of psychological Suzhi and the relationship between psychological Suzhi and school belonging of students in Tibet rural boarding elementary school in China. In this study, 211 students were surveyed with the Pupil's Psychological Suzhi Scale Simplified Version and the questionnaire of school belonging of Pupil. The results found that (1) Psychological Suzhi scores and dimension scores of ethnic rural boarding elementary school were lower than the national average. In terms of dimension scores, personality quality scored the highest, followed by cognitive quality and adaptive quality. (2) There were differences in psychological Suzhi scores by gender, and no significant differences in the scores of each dimension of psychological Suzhi by gender. There was a significant difference in psychological Suzhi scores and the scores of each dimension in terms of grade. (3) Psychological Suzhi, adaptive qualities and personality qualities were remarkable positively correlated with school belonging, and cognitive qualities were not correlated with school belonging.

Keywords: Psychological Suzhi; school belonging; rural boarding primary school students

1. Introduction

In the 1980s, China began to explore the theory and practice of quality education, which led to a profound change in education^[1]. The fundamental goal of quality education is to promote students' all-round development and cultivate their overall quality. Human quality includes physical quality, psychological Suzhi and scientific and cultural quality, among which psychological Suzhi, as an important part of quality, is the starting point and destination of quality education, which influences and restricts the formation and development of other qualities^[2]

Psychological Suzhi is an indigenous Chinese concept, proposed by Zhang and his research team, which has been recognized by Western academia and scholar^{[3][4][5]}. Psychological Suzhi refers to mental qualities that are closely related to human adaptive, developmental, and creative behavior. It is a comprehensive, multilevel system that involves steady, essential, implicit mental quality and explicit adaptive behavior^{[2][6]}. Psychological Suzhi is composed of three dimensions: cognitive quality, personality quality and adaptive quality^{[2][6]}. Cognitive factor is the most basic component of the psychological Suzhi structure, mainly refers to the individual's psychological factor when reflecting objective things, involving perception and other specific operations. Personality factor is the core of the psychological Suzhi structure, which reflects the individual's psychological content of personality, although not directly involved in the specific operation of cognition, but has a dynamic and regulatory function for the cognitive process. Adaptive factors mainly reflect the derived function of psychological quality, which reflects the individual's ability to continuously adapt to environmental changes and harmonize oneself with the environment in the process of interaction with the environment, and is a comprehensive reflection of the integration of cognitive factors and personality factors in the external behavior of the individual.^{[2][6]}

Based on the previous study, Pan Yangu, Zhang Dajun and Wu Lili (2017)^[7] revised the psychological Suzhi questionnaire for elementary school students based on the existing multiple

versions, forming a 27-item psychological Suzhi scale (simplified version) for primary school students, which is suitable for assessing the developmental level and characteristics of the psychological Suzhi of elementary school students. In 2017, Zhang^[8] based on this scale, considering the three major economic zones (eastern, western, and central), family residence (provincial capital city, prefecture and city, county, township, and rural area), grade level, and gender ratio in China, and took a total sample size of 10,535 people to start the national survey of elementary school students' psychological Suzhi and the development of a national norm. It was found that there were significant differences in the development levels of the total and dimensional scores of elementary school students' psychological Suzhi on the economic belt, with the east being significantly higher than the west and central. In terms of differences in family residence, the development levels of elementary school students' psychological Suzhi and each dimension were, in descending order, in provincial capitals and prefectures (prefecture-level cities or autonomous regions), counties, towns, and rural areas. In terms of gender differences, the development levels of psychological Suzhi and each sub-dimension were significantly higher for girls than for boys. In terms of grade level, the development of psychological Suzhi and cognitive and personality qualities in the upper elementary school years showed an upward trend, and the development was faster in the fourth grade than in other periods, and leveled off after the fifth grade, indicating that the fourth grade is a critical period for the development of psychological Suzhi.

Previous surveys have not highlighted the influence of objective factors such as ethnicity and boarding on the psychological Suzhi of elementary school students. In Tibet, boarding schools have been the main form of education based on its natural feature such as sparseness of land and difficulty in travel^[1]. Numerous studies have shown that boarding schools have played a positive role in enabling ethnic rural children to go to school, and have greatly contributed to the development of minority education.^[9] But other studies have found that students in boarding schools have more mental health and behavioral problems, which affects children's development. Boarding prevents students from expressing their emotions, develops self-imposed, ambivalent psychology^[10], develops interpersonal and emotional problems^[11], and also tends to show higher levels of anxiety and depression^[12], develops more psychological problems^{[9][13]}. Boarding students receive relatively less information stimulation, have poor reading skills, and are more likely to repeat grades^[12]. Psychological Suzhi is the core layer of an individual's psychological structure, and is influenced by a variety of factors. As the school is the closest microsystem to the student's development apart from the home environment, boarding schools certainly have an impact on students' psychological Suzhi.

School belonging^[14] refers to students being identified with their school and being devoted to their school in their organizations, emotion and mentality, and willing to take on their responsibility and taking part in activities of school as a member^[15]. School belonging is composed of four dimensions: academic engagement, human environment, peer relationship and school involvement^[16]. School belonging has an important impact on students' psychological behavior^{[17][18]}, predicts positive performance^{[19][20][21]}, is significantly positively related to positive emotions^[22], self-concept^{[18][22]}, and is significantly negatively related to negative emotions^{[21][23]}.

In summary, both boarding and school belonging are important factors that influence psychological Suzhi. This study examined the psychological Suzhi and developmental characteristics of Tibet rural boarding elementary school students and explored the interaction between school belonging and psychological Suzhi.

2. Research methods

2.1. Participants

The participants were 211 elementary school students from a boarding elementary school in rural Murdoch County of Tibet in China (mainly including the Lhoba, Monba and Tibetan ethnic). There were 32 students in grade 1, 34 in grade 2, 39 in grade 3, 39 in grade 4, 32 in grade 5, and 35 in grade 6. 91 boys and 120 girls. The age range of the students was 7 to 13 years old, with a mean age of 10.56 years (SD=2.11).

2.2. Measure

Psychological Suzhi

The Pupil's Psychological Suzhi Scale Simplified Version (PPSS-SV)^[7] was used to measure

Psychological Suzhi. This version has 27 questions, including three dimensions: cognitive quality (e.g., In the process of learning, I can make connections between old and new knowledge.), personality quality (e.g., I always find joy in life), and adaptive quality (e.g., I am very satisfied with the school life). Responses are made on a 5-point Likert scale (1 = totally disagree, 2 = disagree, 3 = not sure, 4 = agree, 5 = totally agree). We used the average scores of all questions as participant's final scores. Higher scores indicate a higher level of psychological Suzhi of the participants. The questionnaire has a good reliability and validity of this questionnaire. In the present study, Cronbach's alpha coefficient was 0.82

School Belonging

The Questionnaire of school belonging of Pupil^[16] was used to measure School belonging. The questionnaire has 20 questions (the 11th question is reverse score), including four dimensions: Academic engagement (e.g., I am very focused in class), human environment (e.g., I feel safe in the school), peer relationship (e.g., My classmates like me very much) and school involvement (e.g., I'd love to do the school cleaning activities). Responses are made on a 5-point Likert scale (1 = totally disagree, 2 = disagree, 3 = not sure, 4 = agree, 5 = totally agree). Higher scores indicate a higher level of school belonging of the participants. The questionnaire has been proved to have good reliability and validity. In this study, the Cronbach's alpha coefficient was 0.88.

2.3. Data analyses

In this study, SPSS 22.0 were used for data analyses. First, descriptive statistics was conducted to examine the characteristic of psychological Suzhi of rural boarding and primary school student Pupils in Tibet. Second, difference examination was used to test statistical significance of the difference of all dimensions of psychological Suzhi and psychological Suzhi total score in demographic variables. Third, correlational analyses were conducted to examine whether school belonging and dimensional score was associated with psychological Suzhi and dimensional score.

3. Results

3.1. Common method deviation test

Since all the data in the research were from student's self-reports, in order to avoid common methodological deviations, the Harman single factor method was used for statistical control^[24], the results showed that there were 32 factors with a characteristic value greater than 1, and the first factor explained a variation of 26.38%, which was much less than the 40% critical value. Therefore, the influence of common method deviation on the results of this study can be excluded.

3.2. Descriptive statistics

As shown in Table 1, the statistical indicators of the mean and standard deviation of the students' psychological and dimensional scores are as follow: the cognitive quality score is 2.52 ± 0.85 , the personality quality score is 3.03 ± 0.52 ; the adaptive quality score is 2.71 ± 0.49 ; the total psychological quality score is 2.75 ± 0.51 . The theoretical critical value of the total psychological quality score and each factor was 3. Only the mean score of personality quality in this study exceeded 3, while all other scores were below the critical value, indicating that the cognitive quality, adaptive quality and psychological quality in this study were lower than the national standard.^[8]

Table 1: Descriptive statistics of pupils psychological Suzhi and dimensions score. (n=211)

Variable	Minimum	maximum	Mean	SD	kurtosis	skewness
cognitive quality	1.08	4.85	2.52	0.85	3.62	.76
Personality quality	1.25	4.38	3.03	0.52	0.66	-.09
Adaptive quality	1.56	3.68	2.71	0.49	-.63	-.14
psychological shuzhi	1.61	4.35	2.75	0.50	3.54	.68

As shown in Table 2, independent sample T test was used for comparative analysis the gender characteristics of pupils' psychological Suzhi and three dimensional score. The results showed female students in all dimensions of psychological Suzhi and psychological Suzhi total score were higher than that of male students, but the difference of dimensions of psychological Suzhi between gender was not significant. Only the difference of psychological Suzhi total score ($t = 2.32$, $P < 0.05$) between gender just reached a significant level.

Table 2: The difference of primary school students' psychological quality in the gender.

Variable	Gender		t	p
	male	female		
cognitive quality	2.42±0.64	2.65±1.05	1.61	0.10
Personality quality	2.97±0.52	3.10±0.64	1.45	0.13
Adaptive quality	2.65±0.64	2.77±0.48	1.36	0.14
Psychological shuzhi	2.68±0.46	2.84±0.54	1.95*	0.04

*p<0.05,**p<0.01,***p<0.001

One-way ANOVA was used to analyze the grade characteristics of pupils' psychological Suzhi and three dimensional score. In Table 3, The results showed that the cognitive quality was different among grades (F=0.54, P > 0.05) was not significant, and the difference of personality quality among grades (F=2.32, P < 0.05) was significant, the difference of adaptation quality among grades was very significant (F=6.82, P < 0.01), the difference of psychological suzhi among grades (F=2.96, P < 0.01) was significant. In terms of cognitive qualities, the fourth grade performed the best and the first grade scored the lowest. In terms of personality qualities, grade 3 performed the best and grade 1 scored the lowest, and in terms of adaptive qualities, grade 3 performed the best and grade 2 scored the lowest. For the total psychological quality score, the third grade performed best and the first grade scored the lowest. This indicates that as the grade level increases, the development of high psychological quality and each dimension in elementary school tends to be rising, and the curve of development shows an inverted U shape, with the highest development in the third grade and then gradually slowing down.

Table 3: The difference of primary school students' psychological quality in the grade

Variable	Grade 1	Grade 2	Grade 3	Grade4	Grade5	Grade 6	F
cognitive quality	2.37±0.67	2.39±1.60	2.62±0.54	2.70±0.68	2.46±0.59	2.55±0.58	0.54
Personality quality	3.03±0.61	2.88±0.72	3.30±0.33	3.03±0.37	2.96±0.48	2.92±0.45	2.32*
Adaptive quality	2.60±0.49	2.42±0.52	3.01±0.27	2.70±0.36	2.97±0.56	2.50±0.39	6.82**
psychological Suzhi	2.60±0.49	2.56±0.82	2.96±0.29	2.82±0.42	2.81±0.35	2.65±0.37	2.96*

*p<0.05,**p<0.01,***p<0.001

3.3. Correlation analysis

Table 4: Correlations between psychological Suzhi and school belonging

Variable	M+SD	1	2	3	4	5	6	7	8	9
human environment	3.88±1.22	1								
peer relationship	3.64±0.93	.71**	1							
school involvement	3.52±1.03	.66**	.69**	1						
academic engagement	3.28±0.81	.36**	.32**	.29**	1					
School belonging	3.58±0.81	.92**	.86**	.84**	.49**	1				
cognitive quality	2.52±0.85	.13	.10	.09	.08	.13	1			
Personality quality	3.03±0.52	.37**	.33**	.37**	.18*	.40**	.57**	1		
Adaptive quality	2.71±0.49	.27**	.24**	.29**	.17*	.31**	.36**	.44**	1	
Psychologica lSuzhi	2.75±0.50	.29**	.25**	.27**	.17*	.31**	.88**	.81**	.68**	1

Notes: 1=human environment, 2=peer relationship, 3=school involvement, 4=academic engagement, 5=School belonging, 6=cognitive quality, 7=Personality quality, 8=Adaptive quality, 9=psychological Suzhi

*P<0.05,**P<0.01

As shown in Table 4, school belonging was related to psychological Suzhi($r=.31, p<0.01$) and personality($r=.40, p<0.01$) and adaptive($r=.31, p<0.01$), but not related to cognitive quality ($r=.13, p>0.05$). This indicates that school belonging can predict the total score of psychological Suzhi and the dimension score of adaptive quality and personality quality, but can not predict the dimension score of cognitive quality.

4. Discussion

This study investigate the characteristics of the psychological Suzhi of students in ethnic rural boarding primary schools and the relationship between psychological Suzhi and school belonging with questionnaire. According to the survey ,only personality exceeded the average value while cognitive , adaptation and psychological Suzhi were under the the national normal model.

This study found that the trend of psychological Suzhi dimensions among ethnic rural boarding elementary school students was uneven, with personality quality scores significantly higher than cognitive and adaptive qualities. This is inconsistent with previous studies. Previous studies found that in the psychological Suzhi dimensions, cognitive quality scored the highest, followed by adaptive quality, and finally personality quality^[25]. The subjects in this study are children from rural areas of ethnic minorities, and their parents' parenting style is natural and more authentic, so most of the children are broad-minded and naive by nature, and therefore have the highest scores for personality qualities. The school is a boarding school and the teachers live in the school and are with the students like family members, so perhaps the students are better adjusted. Cognitive qualities mainly involve items such as planning of learning and meta-cognition, which are less emphasized in students' early home education and are mainly formed in the school system, and therefore may be relatively weak. Finally, this scale was developed by Southwest University based on the learning and life characteristics of elementary school students in Chongqing, which is still relatively different from the learning environment of the subjects in this study, and therefore the scores may be relatively low.

In terms of gender differences, the results of this study showed that girls had higher total psychological Suzhi scores and all dimensions than boys, but only the difference in total psychological Suzhi scores between genders reached significance. This is different from previous studies^{[25][8]}. Previous studies have found that girls have significantly higher levels of psychological Suzhi and development of each dimension than boys because girls develop psychologically earlier than boys. In this study, all the students were from rural areas of ethnic minorities, and they could not accurately reflect the whole situation because of the influence of cultural environment or small sample size.

This study found that the curve of psychological quality and the development of each dimension in elementary school showed an inverted U shape, with the development being highest in the third grade and then gradually slowing down. Zhang(2017)^[8]found that psychological Suzhi developed faster in fourth grade than other periods, and the development tended to level off after fifth grade, indicating that fourth grade is a critical period for psychological quality development. This may be due to the fact that the subjects selected in Zhang's team's study were only in the fourth, fifth and sixth grades, and all of them could not complete presenting the whole picture of psychological quality development in the whole elementary school. This study found that the highest point of psychological development was in the third grade, perhaps because the learning task was relatively easy and less stressful before the third grade, so all dimensions of psychological development were faster, while the growth rate of all dimensions of psychological quality was slower after the fourth grade, when the learning pressure increased.

Previous studies have also shown that school belonging is a high level of engagement in children's learning and life, which can improve children's social adjustment and psychological Suzhi^{[7][8][18]}. The study also found that school belonging was positively related to psychological Suzhi. This study found that school belonging positively predicted total psychological Suzhi scores and adaptive quality and personality quality scores, but not cognitive quality scores. Therefore, it is necessary to strengthen all aspects of the school. A good school environment, good teacher-student relationships, and a good school environment can implicitly cultivate the psychological Suzhi of elementary school students, especially for the development of personality and adaptive qualities, but it is still necessary to establish effective learning methods and learning strategies according to the requirements of different students according to their current situation and learning characteristics, so as to enhance cognitive quality.

5. Conclusion

(1) That psychological Suzhi and dimensional score in boarding primary schools in ethnic rural areas are both lower than the national average level. In terms of sub-dimensions, personality quality scored the highest among them, followed by cognitive quality and adaptability in that order. (2) There were differences in psychological Suzhi scores by gender, and no significant differences in the scores of each dimension of psychological Suzhi by gender. There was a significant difference in

psychological Suzhi scores and the scores of each dimension in terms of grade. (3) psychological Suzhi, adaptive and personality showed remarkable positive correlation with school belonging, while the cognitive showed no correlation with school belonging.

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