

Investigation on Current Situation of Empathic Ability of Secondary Vocational Students and Educational Countermeasures

Qiao Gou, Yi Zhang, Keyu Guo

School of education and psychological science, Sichuan University of Science & Engineering, Zigong, 643002, China

Abstract

A random sampling method was used to investigate 800 secondary vocational students in Sichuan province. The effective recovery rate was 87%, and the subjects' age was 16.4 ± 0.54 . The results: the average score of empathy of secondary vocational students in this study was 71.64 ± 10.18 , and the empathy score was above the medium level. Some students' empathic ability needed improvement. And, the empathy score was significantly different in different demographic characteristics. According to the characteristics of different students, educators should adopt different educational methods to help them improve empathic ability and healthy growth.

Keywords

Secondary vocational students; Empathic ability; Investigation and analysis; Educational countermeasures.

1. Introduction

The concept of empathy, proposed by Rogers, the founder of humanism, refers to the ability to experience the inner world of others and understand others in their own shoes, which is widely used in psychological counseling and therapy. It is a multi-component phenomenon that involves the process of allowing people to share, understand, and respond to the emotions of others. At present, there is no unified definition of empathy, but it is believed that it includes at least three parts: emotion, cognition and motivation. Researchers generally believe that the essence of empathy consists of emotional empathy and cognitive empathy. In this study, empathy refers to the ability to share and understand the feelings of others and to respond appropriately to other people's situations, including cognitive empathy and affective empathy. Empathy is often studied in relation to prosocial behavior. Zhang Jing et al found that there was a significant positive correlation between trait empathy and state empathy of secondary vocational students and their prosocial behaviors [1]. Ji Tianxiu found that the emotional empathy of secondary vocational students could predict their prosocial behavior. Empathy is an important protective factor for aggressive behavior [2] and can significantly negatively predict aggressive behavior [3]. Tong Yao's study confirmed that it is possible to intervene aggressive behavior through group assistance, and the intervention effect of role-playing method is better [4]. Different from ordinary students, secondary vocational students tend to show more aggressive behaviors in vocational colleges with loose management, insufficient attention from teachers, and uneven overall quality of students. The intensity of aggressive behaviors of secondary vocational students is higher than that of their peers [5], and aggressive behaviors account for 22%-26% of all disciplinary violations [6]. Empathy ability is also significantly positively correlated with the mental health of middle school students [7], and the higher the empathy ability, the better the mental health level of the individual. There is a close relationship between empathic ability and vocational identity of secondary vocational students

[8], which can help secondary vocational students adapt to professional development and future career life.

Empathy ability will affect the prosocial behavior, aggressive behavior, mental health level and future career development of secondary vocational students, so it is very necessary to understand and cultivate their empathy ability.

2. Methods

2.1. Sample

The average age of some students in Zigong Tourism Vocational High School and Zigong Vocational and Technical College is 16.4 ± 0.54 years old. A total of 800 paper and electronic questionnaires were distributed through collective testing, and 697 valid questionnaires were recovered, with an effective recovery rate of 87%. There are 276 boys and 421 girls, 237 from urban areas and 460 from rural areas.

2.2. Instrument

(1) General information questionnaire

Include gender, age, major, grade, place of origin, father's education level, mother's education level, etc.

(2) Basic Empathy Scale

Li et al. (2011) revised [9]. A total of 20 questions. It was divided into two dimensions: cognitive empathy and affective empathy. likert 5-point score was used to calculate the score and total score of each dimension. The higher the score, the better the empathy ability, and the α coefficient in this study was 0.816.

2.3. Data processing

After excluding invalid questionnaires, SPSS 26.0 was used for data analysis, including descriptive statistics, T-test and ANOVA. $p < 0.05$ indicated statistically significant difference.

3. Results

3.1. Empathic ability of secondary vocational students

In this survey, the empathy score of secondary vocational students was 71.64 ± 10.18 , the emotional empathy score was 36.96 ± 7.02 , and the cognitive empathy score was 34.68 ± 5.44 . On the whole, the empathy score and dimension score of secondary vocational students were higher than the theoretical median, and their empathy ability was above the average level.

Table 1. The empathy score (N=697)

	score	theoretical median	Min	Max
cognitive empathy	34.68 ± 5.44	27	9	45
emotional empathy	36.96 ± 7.02	33	13	55
empathy	71.64 ± 10.18	60	24	100

3.2. The difference of gender, singleton or not, and area

According to the table, there are significant differences in the scores of empathy and various dimensions between genders. The scores of empathy of girls are significantly higher than those of boys, which is consistent with the results of previous studies [10]. There was no significant difference in the scores of empathy and each dimension in whether the child was an only child or not, which was consistent with previous results [10]. The lack of significant differences in

the places of origin of students may be related to social factors [11], such as the improvement of parental rearing concepts.

Table 2. The differingleton or not, and area (N=697)

		cognitive empathy	emotional empathy	empathy
gender	male	33.53±5.96	34.20±6.88	67.73±10.28
	female	35.44±4.93	38.77±6.51	74.21±9.27
	t	-4.59***	-8.76***	-8.45***
singleton or not	yes	34.61±5.47	36.89±7.15	71.50±10.41
	no	34.70±5.43	36.98±6.99	71.68±10.13
	t	-0.19	-0.13	-0.19
area	countryside	34.43±5.49	36.68±6.97	71.11±10.17
	city	35.18±5.32	37.49±7.10	72.67±10.15
	t	-1.72	-1.45	-1.92

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

3.3. Other demographic difference

As can be seen from the table, there are no significant differences in the scores of empathy and each dimension in grade and mother's educational background, but significant differences in age, major and father's educational background. The grade difference was not significant or related to data collection, with 22% of sophomore students and only 4% of senior three students. The difference in the number of subjects caused the grade difference to be insignificant.

4. Discussion

The empathy ability of secondary vocational girls is better than that of boys, which is consistent with previous research results and should be related to the brain differences between men and women. Women have better emotional perception ability, can overcome self-centeredness, understand the feelings of others from the perspective of others, and make appropriate responses to the situations of others. We often think of children in one-child families as the center of three families, with more care and love that helps them to think in other people's shoes, thereby promoting the development of their empathy. Because of the higher education level in the city, families pay more attention to the education of students, so young people living in the city will show differences in the origin of students. Table 1 shows that there is no significant difference in empathy and all dimensions between the only child or the place of origin. Combined with the background of The Times, it is speculated that most parents of high school students are born after 1980, with the improvement of education level, the change of parenting concepts, and the greater emphasis on the upbringing and companionship of children, so the differences in empathy in these two variables are not significant. In addition, all the data sources are from the southwest region (with regional characteristics of ethnic integration), and the regional atmosphere is more inclusive, which may also be related to the differences in empathy. Future researchers may consider the analysis of regional differences.

Table 3. Other demographic difference (N=697)

		cognitive empathy	emotional empathy	empathy
grade	1	34.87±5.33	37.13±7.00	72±10.04
	2	34.22±5.95	36.15±7.54	70.37±10.84
	3	33.97±4.29	38.19±5.71	72.16±8.76
	F	1.13	1.65	1.55
age	≤16	34.92±5.45	37.18±6.92	72.1±10.01
	17	34.47±5.13	36.75±7.14	71.22±10.07
	≥18	31.75±8.47	34.13±7.70	65.88±14.53
	F	2.94*	1.63	3.23*
major	computer	34.69±6.15	36.77±7.68	71.46±11.38
	Early childhood care	35.57±4.77	39.53±6.53	75.10±9.81
	urban mass transit	30.67±4.95	34.22±3.73	64.89±7.08
	vehicle repairing	33.09±6.30	35.31±6.46	68.41±10.72
	Civil aviation transport	36.42±4.06	40.11±6.72	76.53±8.99
	smart device	32.44±6.06	33.33±8.60	65.78±9.03
	electronic information technology	34.66±4.74	34.85±7.04	69.51±9.88
	tourism management	35.93±5.73	37.81±6.60	73.74±10.05
	railroad transportation	34.49±5.44	37.65±6.97	72.14±10.44
	Chinese cuisine cooking	35.98±5.17	36.43±7.47	72.40±9.29
	emergency rescue	33.44±4.81	34.84±7.05	68.28±10.71
	Japanese	33.97±4.29	38.19±5.71	72.16±8.76
	digital media	34.55±5.79	36.96±6.34	71.52±8.92
	drawing	35.58±5.04	33.00±8.92	68.58±8.17
	Folk craft technology	32.00±3.95	36.83±7.22	68.83±7.08
F	1.98*	3.16***	3.08***	
family structure	first marriage	34.59±5.39	37.01±6.77	71.6±9.98
	single parent	35.32±5.07	35.92±7.71	71.25±9.97
	reconstituted	34.48±6.01	37.78±7.40	72.26±11.39
	F	0.87	1.84	0.27
father's education	Primary/secondary	34.71±5.40	36.95±7.00	71.66±10.10
	Undergraduate/tertiary	34.95±5.32	37.37±7.38	72.32±10.77
	Master degree or above	22±7.07	30±4.24	52±11.31
	F	5.57**	1.05	3.84*
mother's education	Primary/secondary	34.7±5.39	36.88±6.96	71.58±10.01
	Undergraduate/tertiary	34.89±5.54	38.11±7.63	73±11.55
	Master degree or above	28±11.53	37±12.49	65±23.90
	F	2.31	0.66	1.06

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

Empathy and its dimension scores did not differ significantly across grades or were related to data collection (differences in subjects' share). The age difference is due to the fact that with the growth of age and the deepening of individual socialization, secondary vocational students are influenced by factors such as peer relationship and campus atmosphere (according to Erikson's eight-stage theory, teenagers at this time will start to think about themselves and explore themselves, which is greatly influenced by the environment). Meanwhile, the growth of age and the improvement of education level will also improve the cognitive level. Which leads to increased empathy.

The study also found that there were significant differences in the scores of empathy and dimensions in majors. The level of empathy in service and education majors was better, while the level of empathy in science and engineering majors was worse. The author speculated that

it was related to the content and requirements of professional education, and these factors subtly affected the empathy ability of secondary vocational students. The difference of empathy score in parents' education level reflects the influence of family upbringing style (parenting style) on empathy [12] and the role of academic background in improving personal quality. China's fatherhood makes fathers the main educators of families all the time [13], and their parenting methods are limited by their own quality level. Meanwhile, with the improvement of academic qualifications, the deepening of education level and the improvement of cognition level, men can better think from the perspective of others, overcome self-centeredness, and understand and experience the emotions of others. The physiological structure of women directly determines that she can better recognize and understand other people's emotions. Therefore, the educational difference of women does not cause a significant difference in empathy, on the contrary, the educational difference of men can. According to the ecosystem theory of Brown and Brenner, the two systems that have the greatest impact on children and adolescents are family and peer. The father's education level has a significant impact on the empathy ability of secondary vocational students through the family system, thus showing different results from the impact of the mother's education level on secondary vocational students' empathy ability.

5. Conclusion and Deficiency

In the empathic ability scores of secondary vocational students, the cognitive empathy score is the highest, the affective empathy score is low; There are significant differences in empathy scores among secondary vocational students of different genders, ages and majors. There were significant differences in cognitive empathy and affective empathy scores among vocational students of different genders. There were significant differences in cognitive empathy scores among vocational students of different ages. There were significant differences in cognitive empathy and affective empathy scores among students of different majors. There were no significant differences in cognitive empathy and affective empathy scores among different grades and whether they were only children or not.

The research also has some limitations: ①It is not effective to investigate the empathy ability of secondary vocational students only through cross-sectional research, and longitudinal research can be added to practice in future research; ②The use of self-reported empathy may have a social approval effect. In the future, we can consider using the teacher's questionnaire interview and implicit association test to investigate the empathy ability of the research subjects in multiple forms and methods; ③The study area is relatively concentrated, and the promotion of the research results is limited. Follow-up researchers can consider collecting data across regions to make the research results more reliable and effective; ④From the perspective of the data of the subjects, the results of the effective data of the survey showed that the ratio of male to female was 1: 1.5. The number of students in Grade one is the largest, accounting for 73.3% of the total data, which has an impact on the research results to some extent. Stratified sampling can be selected in data collection in the future. Control for differences in demographic variables such as grade and gender or collect as much data as possible to ensure that the ratio of gender and grade variables can be controlled to 1:1 after screening out invalid data.

6. Counterplan

6.1. School and family

Schools should attach importance to the cultivation of students' empathy ability, and put the cultivation and improvement of secondary vocational students' empathy ability on the agenda and included in the teaching plan. The construction of campus environment and culture will

affect students' empathy ability imperceptibly, so schools should pay attention to the construction of campus environment and campus culture. Schools should also pay attention to the role of families, regularly carry out family education topics and lectures to help families understand the importance of empathy ability, and promote the cultivation of students' empathy ability by establishing good parenting methods and harmonious family atmosphere, so as to achieve home-school interaction and full cooperation, and finally achieve the effect of $1+1>2$.

Parents should pay attention to the influence of words and examples, pay attention to and improve their own behavior and education methods, create a warm and loving family atmosphere, carry out emotional exchanges and interactions with them in life, and give more care and social support to improve their empathy ability.

6.2. Teachers

Teachers attach importance to and adopt targeted and integrated education methods to cultivate the empathy ability of secondary vocational students, especially psychological teachers should play a professional role.

Teachers should pay attention to the current situation of empathy ability of secondary vocational students, pay attention to the particularity of secondary vocational students in different grades, different ages, different genders and different majors, teach students according to their aptitude, and explore educational methods to improve their empathy ability. For example, in the teaching of science and engineering students, we can promote the exchange of ideas and experiences among students through group discussion, role playing and other activities, cultivate their empathy ability, enable them to better understand and care for others, and enhance their empathy ability. Teachers and disciplines should learn from each other, promote mutual communication and integration, and help students of different majors improve their empathy ability. Empathy is formed in the process of interpersonal communication. Serving as a student leader can increase the opportunities for individuals to communicate with others, and promote the exercise and improvement of the ability to select ideas, so as to enhance students' empathy ability [14].

In daily psychology lessons, psychology teachers help students realize the influence of empathy on them in the course content setting, teaching method selection and other aspects, guide students to understand the importance of empathy ability and establish the consciousness of self-cultivation. It is necessary to pay attention to the selection of materials to be closely related to their actual life, which can maximize the resonance. Psychological teachers should also give full play to their professional advantages, organize and plan various psychological activities, carry out lectures and group assistance to improve students' empathy ability, and develop school-based psychological courses for the actual situation of students in our school.

References

- [1] Zhang Jing, Yuan Yue, Wei Bofeng, et al. The influence of parenting style on prosocial behavior of secondary vocational students: the mediating role of two types of empathy [J]. *New Research in Psychology*, 2019,40(01):70-78.
- [2] Ji Tianxue. The effect of campus exclusion on prosocial behavior of secondary vocational students: the chain mediating role of emotional empathy and psychological capital [D]. *Shenyang Normal University*,2024.
- [3] Zhang Kai, Fang Xiaohong, Li Wei. The relationship between loneliness and aggressive behavior in college students: the chain mediation role of empathy and interpersonal trust [J]. *Journal of Huaibei Normal University (Philosophy and Social Sciences Edition)*,2023,44(06):117-123.

- [4] Tong Y. A comparative study on the influence of different empathic group counseling on aggressive behavior of lower grade students in primary schools [D]. Hangzhou Normal University,2022.
- [5] Hu Zhihua, Chen Guoqing. Investigation and countermeasures of aggressive behavior of secondary vocational students: A case study of Fuzhou Secondary Vocational School [J]. Modern Vocational Education,2019,(32):10-11.
- [6] Cheng Lingui. Causes and Countermeasures of aggressive behavior of secondary vocational students [J]. Health Vocational Education,2014,32(14):22-23.
- [7] CAI X P. Research on the relationship between empathy ability, altruistic behavior and mental health [D]. Guangzhou University,2022.
- [8] Mao Zhenzhen.Research on the relationship between empathy and professional identity of nursing students in secondary vocational schools[J].Psychologies Magazine,2019,14(17):39.
- [9] Li Chenfeng, Lu Rui, Liu Jie, et al. Preliminary revision of basic Empathy Scale in Chinese adolescents [J]. Chinese Journal of Clinical Psychology,2011,19(02):163-166+183.
- [10] Sun Jingya. The Relationship between family closeness and Aggression of secondary vocational students [D]. Tianjin Vocational and Technical Normal University,2023.
- [11] Yan Zhiqiang, Su Jinlong, Su Yanjie. The Changing times of empathy: a cross-sectional historical meta-analysis [J]. Psychological Technique and Application,2017,5(10):578-585. (in Chinese)
- [12] Yang M. Family parenting style and adolescent prosocial behavior: Mediated by empathy ability [J]. Hua Zhang,2023(08):126-128.
- [13] Cheng Quan. The Influence of paternity on prosocial behavior of secondary vocational students [D]. Hunan Normal University,2021.
- [14] Fan Minghui, Hu Yu. Current situation and related factors of adolescent empathy ability [J]. Chinese Journal of Mental Health,2017, 31(11):879-884. (in Chinese)