

Study on the Subjective Well-Being of Healthy Siblings of Adolescent Special Children in COVID-19 Period

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Abstract:

In this paper, special children's healthy adolescent siblings are studied in a mixed way of quantitative and qualitative research, to explore their current situation of life satisfaction and emotion in adolescence, and to understand their emotional situation towards family, college, study and community. Results: Special children's healthy adolescent siblings have high satisfaction with college and family, while their freedom satisfaction and academic satisfaction are lower than other factors. Female special children's healthy adolescent siblings have lower life satisfaction and higher negative emotion. Special children's healthy adolescent siblings in rural areas have lower life satisfaction and negative emotion. Special children's healthy adolescent siblings who live with their parents have higher life satisfaction and positive emotion. The subjective well-being of special children's healthy children siblings is related to the interaction time with special children. Special children's healthy adolescent siblings who interact with their parents for more than two hours a week have high family satisfaction, friendship satisfaction and positive emotion. This study is of great significance in supporting the psychological development of special children's health.

Keywords: *Subjective well-being, Special children, Healthy adolescent siblings, COVID-19 pandemic period.*

I. INTRODUCTION

The COVID-19 pandemic is still spreading around the world. However, sporadic and mass cases still occur frequently in China, and the risk of imported cases persists [1]. Therefore, the epidemic prevention and health work should not be relaxed at all, especially for special children and their healthy adolescent siblings [2-4]. A family with special children will inevitably experience more challenges and difficulties than ordinary families. In China, before the implementation of the comprehensive two-child policy, special children families were allowed allowed to have a second child. Therefore, the proportion of two-child

families with special children is quite large at present [5-7]. It is common for healthy children to be forced to become disadvantaged children during their growth [8, 9].

In the *Healthy China Initiative—Action Plan for Children's and Adolescents' Mental Health (2019-2022)*, it is proposed to "implement preventive intervention measures for children's and adolescents' mental behavior problems and mental disorders, and strengthen psychological counseling for key populations" [4]. Study on the subjective well-being of healthy siblings of adolescent special children in COVID-19 period is beneficial to provide targeted mental health services. This study will focus on healthy siblings of adolescent special children.

II. METHODOLOGY

2.1 Research Objects

The subjects of this study are healthy adolescents who are 12 to 18 years old and have direct blood relationship with special children in Guangxi.

Questionnaire and online interview were used for the investigation. A total of 180 questionnaires were collected, including 140 valid ones (78%) including 78 boys and 62 girls.

2.2 Research Methods

1. Adolescent subjective well-being scale [10]: There were 37 questions in the general life satisfaction scale, including six factors: family satisfaction, friendship satisfaction, academic satisfaction, school satisfaction, environmental satisfaction and freedom satisfaction, and 14 questions in the happiness scale, including positive emotion and negative emotion. Both scales had partial reverse scoring questions. In Table I, the general life satisfaction scale had a homogeneity reliability of 0.95 and KMO value of 0.89, with good reliability and validity. The happiness scale had a homogeneity reliability of 0.82 and KMO value of 0.83, with good reliability and validity.

TABLE I. Related information of adolescent subjective well-being scale

Scale	Dimensions	S/N	Reliability	KMO
Life satisfaction scale	Family satisfaction	2, 11, 17, 23, 28, 32, 35	0.95	0.89
	Friendship satisfaction	1, 10, 16, 22, 31, 34, 36, 37		
	Academic satisfaction	6, 9, 15, 21, 27, 30		
	School satisfaction	3, 12, 18, 24, 29, 33		

	Freedom satisfaction	5, 8, 14, 20, 26		
	Environmental satisfaction	4, 7, 13, 19, 25		
Happiness scale	Positive emotion	1, 3, 4, 7, 8, 9	0.82	0.83
	Native emotion	2, 5, 6, 10, 11, 12, 13, 14		

2. Interview: As shown in Table II, interview form of subjective well-being of healthy adolescent siblings of special children was prepared in aspects of individual, family and schools, and 6 healthy adolescent siblings of special children aged 12-18 were interviewed online.

Table II. Basic information of research subjects

S/N	Interviewees	Gender	Age/ order of birth	Location
1	Lele (assumed name)	Female	14 /elder brother	City
2	Xiaomin (assumed name)	Male	17 /elder sister	City
3	Jiejie (assumed name)	Female	15 /younger brother	City
4	Xiaocong (assumed name)	Female	15 / elder brother	Country
5	Youyou (assumed name)	Male	16 / elder sister	Country
6	Yueyue (assumed name)	Male	13 / elder sister	Country

2.3 Research Process

1. The questionnaire was collected with the help of parents, and the paper questionnaire was filled in by subjects and collected by parents; The online questionnaire was filled in by the subjects through WeChat or QQ.

After eliminating the invalid questionnaires, SPSS 20.0 was used to analyze the valid data.

2.4 Research Ethics

1. Informed consent with the consent of parents, let the subjects know the research properly.

2. Privacy protection. All data are for research only.

3. Avoid harm, respect the research object, and stop the research immediately when they feel uncomfortable

III. RESULTS

3.1 The Status Quo of Subjective Well-Being of Healthy Siblings of Special Children

A descriptive statistical analysis was performed on the general life satisfaction of healthy adolescent siblings of special children (Table III). The results showed that the average scores of school satisfaction and family satisfaction were 3.95 and 3.93 respectively, those of environmental satisfaction and friendship satisfaction were 3.86 and 3.84 respectively, and the average score of freedom satisfaction was 3.51, and that of academic satisfaction was the lowest: 3.12.

TABLE III. General life satisfaction

Items	Number of people	Mean	SD
Family satisfaction	140	3.93	1.00
Friendship satisfaction	140	3.84	0.78
Academic satisfaction	140	3.12	1.01
School satisfaction	140	3.95	0.87
Freedom satisfaction	140	3.51	0.93
Environmental satisfaction	140	3.86	0.82

A descriptive statistical analysis was made on the healthy adolescent siblings of special children through a happiness scale (Table IV). The results showed that the average score of positive emotion was 3.73, and that of negative emotion was 2.39. A descriptive statistical analysis was made on the healthy adolescent siblings of special children through a happiness scale (Table IV). The results showed that the average score of positive emotion was 3.73, and that of negative emotion was 2.39.

TABLE IV. Happiness scale

Items	Number of people	Mean	SD
Positive emotion	140	3.73	1.54
Negative emotion	140	2.39	1.21

3.2 Comparison of Subjective Well-Being of Healthy Siblings of Special Children of Different Genders

The results (Table V) showed that on life satisfaction, the average score of males was 3.80, which was higher than the average score of females 3.59. On the happiness scale, the average score of males was 2.97, which was less than 3.18 of females. Therefore, there is no significant difference in subjective well-being between different genders. Further comparison of the six subscales of life satisfaction showed that in family satisfaction, males were significantly higher than females and the differences were statistically significant, with the values of $t=2.644$, $p=0.009<0.01$, and no significant differences in other factors. After analyzing the two factors of the happiness scale, the results showed that there was no significant difference in positive and negative emotions between different genders.

TABLE V Comparison of subjective well-being of healthy adolescent siblings of special children of different genders

Items	Variables	Mean	SD	t	p
Life satisfaction	Male	3.80	0.66	1.582	0.116
	Female	3.59	0.81		
Feeling of happiness	Male	2.97	1.05	-1.222	0.224
	Female	3.18	1.04		
Family satisfaction	Male	4.13	0.91	2.644**	0.009
	Female	3.68	1.06		
Friendship satisfaction	Male	3.88	0.74	0.812	0.418
	Female	3.78	0.84		
Academic satisfaction	Male	3.23	0.98	1.749	0.141
	Female	2.98	1.03		
School satisfaction	Male	4.02	0.82	1.120	0.265
	Female	3.86	0.93		
Freedom satisfaction	Male	3.51	0.89	-0.009	0.993
	Female	3.51	0.99		
Environmental satisfaction	Male	3.96	0.76	1.655	0.100
	Female	3.73	0.88		
Positive emotion	Male	3.67	1.53	-0.496	0.621
	Female	3.80	1.56		

Negative emotion	Male	2.25	1.14	-1.495	0.137
	Female	2.56	1.27		

Note: **P<0.01

3.3 Comparison of Subjective Well-Being of Healthy Siblings of Children with Special Needs in Different Areas

The results (Table VI) showed that the average life satisfaction score of healthy adolescent siblings of special children was 3.90, which was higher than the average score of rural healthy adolescent siblings of special children of 3.69. In terms of negative emotion, the average score of urban healthy adolescent siblings of special children was 2.00, which was lower than that of rural healthy adolescent siblings of special children of 2.48. Therefore, there is no significant difference in subjective well-being of healthy adolescent siblings of special children in different regions. Further comparison of the six subscales of life satisfaction revealed that the score of urban healthy adolescent siblings of special children was significantly higher than that of rural healthy adolescent siblings of special children in friendship satisfaction, and the differences were statistically significant, with $t=2.902$, $p=0.005<0.01$, and no significant differences in other factors. By analyzing the two factors of the happiness scale, the results showed that there was no significant difference between positive and negative emotions of healthy adolescent siblings of special children in different regions.

TABLE VI. Comparison of subjective well-being of healthy childhood siblings of special children in different regions

Subjective well-being	Variables	Mean	SD	t	P
Life satisfaction	City	3.90	0.67	1.516	0.132
	County	3.69	0.76		
Family satisfaction	City	4.09	1.11	0.845	0.403
	County	3.89	0.97		
Friendship satisfaction	City	4.11	0.55	2.902**	0.005
	County	3.76	0.82		
Academic satisfaction	City	3.25	1.00	0.732	0.466
	County	3.09	1.01		
School satisfaction	City	4.13	0.821	1.187	0.237
	County	3.91	0.88		
Freedom satisfaction	City	3.70	1.03	1.141	0.256
	County	3.47	0.91		

Environmental satisfaction	City	4.07	0.78	1.491	0.138
	County	3.81	0.83		
Positive emotion	City	3.54	1.40	-0.702	0.484
	County	3.77	1.57		
Negative emotion	City	2.00	0.85	-1.899	0.060
	County	2.48	1.26		

Note: **p<0.01

3.4 Comparison of Subjective Well-Being with Healthy Siblings of Special Children Living with Parents

The result (Table VII) showed that the life satisfaction of healthy adolescent siblings of special children living with parents was significantly higher than that of those living without parents, and the difference was statistically significant, with $t=3.283$, $p=0.001<0.01$. In negative emotion, the average score of healthy adolescent siblings of special children living with parents was 2.29, which was lower than that of those living without parents (2.92). Therefore, there is no significant difference in subjective well-being with healthy siblings of special children living with or without parents.

Further comparison of the six factors of life satisfaction shows that there were significant differences in satisfaction with family, friendship, study, school and environment, and that healthy adolescent siblings of special children living with their parents were significantly higher than those living without their parents, and their values were $t=4.390$, $p=0.000<0.01$ for family satisfaction, $t=2.047$, $P=0.043<0.05$ for friendship satisfaction, $t=1.993$, $p=0.048<0.05$ for academic satisfaction, and $t=3.355$, $p=0.001<0.01$ for environmental satisfaction. By analyzing the two factors of the happiness scale, the results showed that there was no significant difference between positive emotion and negative emotion of healthy adolescent siblings of special children living with or without their parents.

TABLE VII. Comparison of subjective well-being with healthy siblings of special children living with or without parents

Subjective well-being	Variables	Mean	SD	t	p
Life satisfaction	Yes	3.79	0.71	3.283**	0.001
	No	3.24	0.77		
Feeling of happiness	Yes	2.96	2.96	-2.544*	0.012
	No	3.57	3.57		
Family satisfaction	Yes	4.08	0.90	4.390***	0.000

	No	3.12	1.15		
Friendship satisfaction	Yes	3.89	0.78	2.047*	0.043
	No	3.52	0.75		
Academic satisfaction	Yes	3.19	1.00	1.993*	0.048
	No	2.73	0.98		
School satisfaction	Yes	4.04	0.84	2.907*	0.004
	No	3.46	0.92		
Freedom satisfaction	Yes	3.56	0.92	1.441	0.152
	No	3.25	1.01		
Environmental satisfaction	Yes	3.95	0.78	3.355**	0.001
	No	3.33	0.89		
	Yes	3.63	1.55	-1.652	0.101
Positive emotion	No	4.22	1.39		
Negative emotion	Yes	2.29	1.10	-1.790	0.086
	No	2.92	1.58		

Note: *P<0.05;**p<0.01;***P<0.001.

3.5 The Influence of Interaction Time with Special Children on Subjective Well-Being of Healthy Siblings of Special Children

In terms of the length of interaction with special children, a univariate analysis of the subjective well-being of healthy adolescent siblings of special children was conducted. The results (Table VIII) showed that friendship satisfaction and school satisfaction were significantly different among the six factors of life satisfaction, with the values of $t = 3.318$, $P = 0.013$ for friendship satisfaction, $t=3.873$, $p=0.005$ for school satisfaction respectively. After-the-fact analysis of life satisfaction subscale showed that in terms of friendship satisfaction and school satisfaction, the satisfaction of healthy children siblings of special children who interact with special children for more than two hours per week was significantly higher than that of those who interact with special children for less than half an hour per week.

TABLE VIII. The influence of interaction time with special children on subjective well-being of healthy siblings of special children

Subjective well-being	Half an hour	One hour	Two hours	More than two hours	t	P	LSD
Life satisfaction	3.42±0.74	3.59±0.88	3.61±0.87	3.89±0.60	2.363	0.056	

Family satisfaction	3.66±1.03	3.75±1.16	4.10±0.94	4.22±0.73	2.009	0.97	
Friendship satisfaction	3.20±0.79	3.74±0.89	3.67±0.89	3.97±0.72	3.318*	0.013	4>1
Academic satisfaction	2.64±0.93	3.15±1.16	3.27±1.03	3.27±0.88	2.057	0.090	
School satisfaction	3.79±0.94	3.45±1.29	3.47±0.90	4.20±0.68	3.873**	0.005	4>1
Freedom satisfaction	3.25±0.97	3.34±1.05	3.47±0.90	3.67±0.81	1.752	0.142	
Environmental satisfaction	3.69±0.83	3.84±0.85	3.70±1.01	3.99±0.76	0.709	0.587	
Positive emotion	4.42±1.49	3.91±1.62	3.74±1.59	3.28±1.46	2.685	0.34	
Negative emotion	2.87±1.52	2.60±1.32	2.40±1.23	2.02±0.83	2.651	0.36	

Note: The time is the duration of the weekly interaction. *P<0.05;**p<0.01. 1: Healthy adolescent siblings of special children who interact with special children for half an hour; 2: Healthy adolescent siblings of special children who interact with special children for an hour; 3: Healthy adolescent siblings of special children who interact with special children for two hours; 4: Healthy adolescent siblings of special children who interact with special children for half more than two hours.

3.6 The Influence of Interaction Time with Parents on Subjective Well-Being of Healthy Siblings of Children with Special Needs

A univariate analysis of the subjective well-being of healthy adolescent siblings of special children was performed on the duration of interaction with parents. The results (Table IX) showed that the duration of interaction with parents had no significant difference on the life satisfaction and happiness scale of healthy adolescent siblings of special children. Among the six factors of life satisfaction, family satisfaction and environment satisfaction had significant differences, with the values of $t = 4.576$, $p = 0.002$ for family satisfaction, $t=3.133$, $p=0.017$ for environmental satisfaction, respectively. After-the-fact analysis of the subscales of life satisfaction showed that the satisfaction of healthy adolescent siblings of special children interacting with their parents for more than two hours per week is significantly higher than that of those interacting with their parents for less than half an hour per week in terms of family satisfaction and environment satisfaction, and there was no significant difference in other factors.

TABLE IX. The influence of interaction time with parents on subjective well-being of healthy siblings of special children

Subjective well-being	Half an hour	One hour	Two hours	More than two hours	t	p	LSD
Life satisfaction	3.41±0.77	3.66±0.69	3.93±0.58	3.84±0.72	1.753	0.142	
Family satisfaction	3.38±1.15	3.95±0.93	4.04±0.72	4.21±0.76	4.576**	0.002	4>3>2
Friendship satisfaction	3.63±0.88	3.69±0.73	3.93±0.60	3.98±0.82	1.232	0.300	
Academic satisfaction	2.91±0.98	2.99±0.97	3.23±1.16	3.20±0.95	0.789	0.535	

School satisfaction	3.79±0.77	3.85±0.94	4.20±0.81	4.09±0.83	0.979	0.421	
Freedom satisfaction	3.21±1.04	3.56±0.85	3.51±0.88	3.61±0.92	0.779	0.540	
Environmental satisfaction	3.54±0.83	3.92±0.69	4.31±0.68	3.98±0.79	3.113*	0.017	3>4>1
Positive emotion	4.29±1.28	3.79±1.45	3.72±1.65	3.38±1.64	1.512	0.202	
Negative emotion	2.51±0.90	2.65±1.42	1.95±0.63	2.12±1.10	1.941	0.107	

Note: The time is the duration of the weekly interaction. *P<0.05;**p<0.01. 1: Healthy adolescent siblings of special children who interact with their parents for half an hour; 2: Healthy adolescent siblings of special children who interact with their parents for an hour; 3: Healthy adolescent siblings of special children who interact with their parents for two hours; 4: Healthy adolescent siblings of special children who interact with their parents for half more than two hours.

IV. CONCLUSION

The purpose of this study is to understand the subjective well-being of healthy siblings of adolescent special children in COVID-19 Period. Based on the original theory and related research, a questionnaire was designed to fully understand the general situation of subjective well-being of healthy siblings of special children and Influence of demographic variables on subjective well-being and its dimensions [11-13].

4.1 General situation of Subjective Well-Being of Healthy Siblings of Special Children

The results show that:

1. Children's healthy compatriots have high satisfaction with school and family, but low satisfaction with freedom and learning.

2. The average score of positive emotion is higher than that of negative emotion.

4.2 Influence of Demographic Variables on Subjective Well-Being and its Dimensions

Conclusion from 3 to 7, we can see the influence of multiple factors on the healthy siblings of special children.

3. The life satisfaction of female special children's healthy compatriots is relatively low, and the negative emotion is relatively high. Family is one of the important factors affecting the subjective well-being of different gender special children's healthy compatriots.

4. The life satisfaction and negative emotion of rural special children's healthy compatriots are relatively low. Friendship is one of the important factors that affect the subjective well-being of rural special children's healthy compatriots in different areas.

5. Children with special needs living with their parents have higher life satisfaction and positive emotions. Family, friendship, study, school and environment are the important factors affecting their subjective well-being.

6. The subjective well-being of the healthy compatriots of special children is related to the length of interaction with special children. Among them, the healthy compatriots of special children who interact with special children for more than two hours have higher life satisfaction and positive emotion.

7. There is no significant relationship between the subjective well-being of healthy siblings of special children and the length of interaction with their parents. But the special children who interact with their parents for more than two hours a week have higher satisfaction with family and friendship, and higher positive emotion.

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