

Current Status and Strategies for the Mental Health of Parents of Children with Autism in Sichuan and Chongqing of China

Yinqiu Tan^{1,a}, Yanli Chen^{2,b,*}, Xia Kong^{1,c}, Zhiyan Dong^{1,d}

¹Meishan Vocational and Technical College Abnormal Apartment, Meizhou Avenue, Meishan, China

²Chongqing Medical and Pharmaceutical College, Huxi, Chongqing, China

^a354106643@qq.com, ^b847760981@qq.com, ^c452604550@qq.com, ^d915341612@qq.com

*Corresponding author

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Abstract: To understand the mental health of parents of children with autism in Sichuan and Chongqing, this study conducted a questionnaire survey using the SCL-90 scale with 131 parents of children with autism and 298 parents of typically developing young children. The research findings are as follows: (1) Parents of children with autism in Sichuan and Chongqing scored higher than parents of typically developing children in various dimensions, with significant differences in scores on factors such as interpersonal sensitivity, depression, anxiety, and psychotic symptoms, as well as the overall scores. (2) There were no significant differences in the SCL-90 dimensions and overall scores based on the gender of parents. (3) Fathers of male children with autism scored significantly higher than mothers of female children with autism in the dimensions of somatization and anxiety. (4) Parents of children with autism in Sichuan Province scored significantly higher than parents in Chongqing Municipality in dimensions such as hostility, paranoia, psychotic symptoms, and others. (5) The severity of autism symptoms had an impact on the mental health of parents, with parents of children with moderate autism scoring significantly higher than parents of children with mild autism in various dimensions and overall scores, except for hostility and terror. (6) Educational level influenced the mental health of parents of children with autism. Parents holding postgraduate degrees or above get significantly higher score than those with undergraduate degrees in dimensions such as somatization, depression, anxiety, paranoia, and others. (7) Family income had a certain impact on the mental health of parents of children with autism, particularly in the dimension of terror, where parents with incomes below 50,000 per year scored significantly higher.

1. Introduction

Autism, also known as Autism Spectrum Disorder (ASD), occurs between 0-36 months and is a pervasive neurodevelopmental disorder. Its core symptoms are characterized by two aspects: first,

difficulties in social communication and interaction with others. Second, restricted interests and repetitive behaviors^[1]. Social impairment is the most central symptom of individuals with autism. Children with autism lack eye contact and have significant difficulties in understanding verbal and non-verbal social cues^[2]. Social impairments significantly hinder the daily life and development of children with autism, leading to a lack of peer relationships or difficulties in maintaining them, lower academic performance, and challenges in parent-child interaction and communication, which impose a heavy economic, physical, and psychological burden on their families, resulting in significant psychological stress and strain on parents, affecting their mental health. Currently, the prevalence of autism in children is increasing. According to relevant studies, the estimated prevalence of autism in children has reached 1 in 83^[3]. Research has shown that parents of children with autism self-report significantly higher levels of anxiety and depression compared to parents of typically developing children^[4]. Moreover, studies have also indicated a significant positive correlation between the severity of autism in children and parental psychological stress^[5].

In summary, although existing research has indicated certain issues regarding the mental health of parents of children with autism and its impact on the rehabilitation outcomes of children with autism, there is limited research specifically focused on parents of children with autism in Sichuan and Chongqing. Furthermore, different regions may have varying effects on the mental health of parents of children with autism due to differences in the accessibility of rehabilitation facilities and social resources. Therefore, this study aims to understand the mental health of parents of children with autism in Sichuan and Chongqing and provide data support for subsequent intervention.

2. Objectives and Methods

2.1 Objectives

A random sampling method was employed to conduct a questionnaire survey among 133 parents of children with autism and 298 parents of typically developing children in Sichuan and Chongqing. The participants provided informed consent, and the survey was conducted anonymously. Two questionnaires from parents of children with autism with response times below 150 seconds were excluded. A total of 131 valid questionnaires from parents of children with autism and 298 valid questionnaires from parents of typically developing children were collected.

2.2 Methods

2.2.1 Research Instrument

The Symptom Checklist-90 (SCL-90) is a commonly used psychological assessment tool widely used in the fields of clinical psychology and psychiatry. It was developed by Professor Leonard Derogatis and colleagues in the United States in 1975. The checklist consists of 90 items, covering nine different psychological domains, including anxiety, depression, hostility, interpersonal sensitivity, somatization, paranoid, and so on. Participants rate each item on a 5-point scale (0 indicating "not at all" to 4 indicating "extremely") to assess the presence and severity of symptoms in each domain. The scale has demonstrated high reliability and validity^[6-7]. In this study, the Cronbach's alpha coefficient was 0.975, and the Guttman split-half coefficient was 0.964.

2.2.2 Statistical Methods

The collected data were analyzed using independent sample t-tests and one-way ANOVA in SPSS 24.0.

3. Results

3.1 Differences in Mental Health between Parents of Children with Autism and Those of Typically Developing Children

Descriptive statistics and independent sample t-tests were conducted to compare the scores of parents of children with autism and parents of typically developing children on the SCL-90 dimensions and the total score in Sichuan and Chongqing. The specific results are presented in Table 1. From Table 1, it can be observed that parents of children with autism had poorer mental health compared to those of typically developing children. Significant differences were found in the dimensions of interpersonal sensitivity, depression, anxiety, hostility, psychoticism, and the total score.

3.2 Differences in Mental Health of Parents of Children with Autism Based on Self Gender, Child Gender, and Residential Location

Independent sample t-tests were conducted to examine the differences in the mental health of parents of children with autism in Sichuan and Chongqing based on self-gender, child gender, and residential location. The results are presented in Table 2. From Table 2, it can be observed that self-gender did not significantly affect the mental health of parents of children with autism. However, fathers of male children with autism scored significantly higher on the dimensions of somatization and anxiety compared to mothers of female children with autism. Additionally, the proportion of male children with autism was significantly higher than that of female children. Moreover, parents of children with autism residing in Sichuan scored significantly higher on the dimensions of hostility, paranoia, psychoticism, and other factors compared to parents residing in Chongqing.

3.3 Differences in Mental Health of Parents of Children with Autism Based on Severity of Child's Symptoms, Parents' Education Level, and Family Income

Table 1: Differences in Mental Health between Parents of Children with Autism and Those of typically Developing Children

Autism or not	N	somatization	Obsessive compulsive	Interpersonal sensitivity	depression	anxiety	hostility	terror	paranoia	psychotic symptoms	others	total
No	298	1.738±0.581	1.698±0.563	1.464±0.501	1.484±0.523	1.372±0.432	1.467±0.501	1.269±0.392	1.375±0.451	1.321±0.412	1.814±0.620	1.500±0.446
Yes	131	1.546±0.553	1.873±0.631	1.654±0.619	1.815±0.693	1.583±0.648	1.732±0.636	1.296±0.475	1.472±0.515	1.473±0.570	1.763±0.679	1.621±0.541
t		3.188	-2.848	-3.367*	-5.454**	-3.974**	-4.624**	-0.605	-1.97	-3.1**	0.761	-2.412*

(Note: *p<0.05, **p<0.01, as above.)

One-way ANOVA was conducted to examine the differences in the mental health of parents of children with autism in Sichuan and Chongqing based on the severity of the children's symptoms, parents' education level, and family income. The results are presented in Table 3. From Table 3, it can be observed that the mental health of parents of children with autism varied depending on the severity of the children's symptoms. Specifically, parents of children with moderate autism scored significantly higher on various factors and the total score, except for hostility and terror, compared to those of children with mild autism, indicating poorer mental health. Parents' education level also had a certain influence on the mental health of parents of children with autism. Overall, parents of children with autism who had a postgraduate education or above scored significantly higher on somatization, depression, anxiety, and other factors compared to parents with lower levels of education. Family income also showed a significant difference, with parents of children with autism

from households with incomes of 50,000 or below scoring significantly higher on the dimension of terror compared to parents from higher-income households, indicating that parents of children with autism experience more phobic anxiety when the family income is very low.

Table 2: Differences in Mental Health of Parents of Children with Autism by Independent Samples t-test

		N	somatization	anxiety	hostility	terror	paranoia	psychotic symptoms	others
The sex of parents	male	23	1.424±0.557	1.574±0.672	1.667±0.632	1.298±0.563	1.370±0.383	1.465±0.653	1.621±0.668
	female	108	1.573±0.551	1.585±0.645	1.745±0.639	1.295±0.456	1.494±0.538	1.474±0.554	1.794±0.681
	t		-1.172	-0.076	-0.537	0.029	-1.052	-0.067	-1.107
The sex of children	male	102	1.590±0.592	1.628±0.680	1.734±0.629	1.315±0.497	1.469±0.496	1.509±0.582	1.791±0.673
	female	29	1.394±0.353	1.424±0.494	1.724±0.673	1.227±0.383	1.483±0.585	1.345±0.511	1.665±0.703
	t		1.697*	1.507*	0.071	0.886	-0.127	1.373	0.883
Home location	Sichuan	56	1.618±0.570	1.691±0.681	1.887±0.680	1.385±0.555	1.598±0.563	1.596±0.645	1.885±0.762
	Chongqing	75	1.493±0.538	1.503±0.614	1.616±0.579	1.229±0.395	1.378±0.457	1.380±0.490	1.672±0.600
	t		1.275	1.659	2.461*	1.887	2.472*	2.182*	1.789*

Table 3: Differences in Mental Health of Parents of Children with Autism by one-way ANOVA

		N	somatization	Obsessive compulsive	Interpersonal sensitivity	depression	anxiety	terror	paranoia	psychotic symptoms	others	total
Severity of Autism Symptoms	a	44	1.421±0.469	1.643±0.490	1.460±0.486	1.622±0.610	1.432±0.508	1.198±0.322	1.352±0.404	1.305±0.403	1.555±0.536	1.468±0.444
	c	56	1.640±0.596	2.027±0.668	1.794±0.673	1.960±0.769	1.700±0.706	1.357±0.513	1.598±0.612	1.613±0.655	1.934±0.762	1.737±0.596
	c	31	1.557±0.565	1.919±0.666	1.677±0.631	1.826±0.606	1.587±0.688	1.323±0.568	1.414±0.417	1.458±0.556	1.751±0.637	1.627±0.524
	F		1.974	4.942**	3.775*	3.027*	2.152	1.461	3.172*	3.768*	4.008*	3.149*
	Post-hoc comparisons		a<b*	a<b**	a<b**	a<b*	a<b*		a<b*	a<b**	a<b**	a<b*
Parents' Educational Level	1	27	1.624±0.615	2.007±0.722	1.704±0.711	1.744±0.632	1.611±0.751	1.450±0.713	1.451±0.521	1.533±0.680	1.730±0.665	1.654±0.612
	2	28	1.673±0.553	1.914±0.592	1.698±0.634	1.942±0.802	1.668±0.646	1.342±0.444	1.649±0.621	1.575±0.639	1.898±0.784	1.720±0.576
	3	23	1.449±0.435	1.791±0.509	1.541±0.374	1.783±0.523	1.504±0.517	1.180±0.320	1.341±0.350	1.404±0.415	1.634±0.419	1.530±0.359
	4	42	1.395±0.496	1.776±0.640	1.606±0.621	1.683±0.620	1.464±0.546	1.235±0.386	1.431±0.480	1.364±0.486	1.622±0.603	1.527±0.510
	5	11	1.818±0.695	1.973±0.717	1.838±0.774	2.238±0.978	1.918±0.911	1.273±0.347	1.576±0.574	1.618±0.666	2.312±0.899	1.834±0.669
	F		2.203	0.742	0.571	1.766	1.321	1.311	1.485	0.943	2.905*	1.175
Post-hoc comparisons		2>4*; 5>4*			5>1*; 5>4*	5>4*	1>3*	2>4*		5>1*; 5>3**; 5>4**		
Family Income per Year	A	42	1.681±0.661	2.033±0.730	1.749±0.712	1.844±0.728	1.693±0.764	1.469±0.662	1.500±0.552	1.552±0.660	1.810±0.674	1.714±0.623
	B	32	1.573±0.545	1.813±0.637	1.694±0.650	1.851±0.695	1.559±0.598	1.272±0.419	1.516±0.529	1.475±0.541	1.737±0.723	1.622±0.553
	C	24	1.417±0.395	1.750±0.536	1.505±0.482	1.700±0.655	1.425±0.478	1.220±0.283	1.465±0.501	1.358±0.505	1.702±0.738	1.521±0.450
	D	17	1.407±0.392	1.853±0.443	1.634±0.366	1.760±0.500	1.577±0.509	1.126±0.174	1.343±0.402	1.459±0.460	1.706±0.424	1.549±0.344
	E	16	1.484±0.580	1.775±0.626	1.569±0.700	1.900±0.870	1.588±0.772	1.179±0.306	1.458±0.549	1.444±0.601	1.848±0.790	1.598±0.598
	F		1.298	1.082	0.702	0.288	0.664	2.472*	0.351	0.453	0.197	0.592
	Post-hoc comparisons							A>B*; A>C*; A>D*				

(Note: a=Mild, b=Moderate, c=Severe; 1=Junior high school and below, 2=High school, 3=Vocational college degree, 4=bachelor's degree, 5=Graduate and above; A=50,000 and below, B=50,000-100,000, C=100,000-150,000, D =150,000-200,000, E=200,000 and above.)

4. Discussion

4.1 The mental health of Parents of Children with Autism in Sichuan and Chongqing Differs Significantly from Parents of Typically Developing Children

This study found that the mental health of parents of children with autism in Sichuan and Chongqing differs significantly from parents of typically developing children, which is consistent with previous research findings. C. Karari et al. found that parents of children with autism have more mental health issues compared to other parents and parents of children with other disabilities [8]. Additionally, Chinese scholars Chen Yu, Zhang Ning, and others conducted a survey on the mental health of parents of children with autism and compared it with parents of typically developing children. They found that more attention and positive interventions should be given to the mental health of parents of children with autism [9]. This is because in the process of raising children with autism, parents bear the main economic, emotional, and social pressures, which inevitably affect their mental health, leading to issues such as depression, anxiety, and sensitivity in interpersonal relationships.

4.2 Differences in the Mental Health of Parents of Children with Autism in Sichuan and Chongqing

The gender of parents of children with autism does not significantly affect their mental health, which contradicts previous research findings [10]. One possible reason for this discrepancy is that the sample size in this study was relatively small, especially with regards to the willingness of fathers to participate in the research. Fathers who participate in surveys are often more involved in the process of raising their children, just like mothers, sharing the responsibility of taking care of the child. On the other hand, the Sichuan and Chongqing regions are relatively unique in terms of cultural background, where there may not be strong gender disparities in family life, and women's perspectives receive sufficient attention within the family, which can serve as a buffer against psychological issues.

The gender of the affected child has a certain impact on the mental health of parents of children with autism, with parents of male children scoring significantly higher on the anxiety factor compared to parents of female children. On the other hand, the proportion of male children is significantly higher than that of female children, which aligns with the characteristic of autism prevalence. Previous research has also shown that the gender of children with autism influences the mental health of parents and interacts with the gender of the parents [11]. In the context of this study, in the Sichuan and Chongqing regions, parents often have higher expectations for boys, which can explain why parents of male children with autism score significantly higher on the anxiety factor compared to parents of female children with autism.

Parents of children with autism residing in Chongqing have relatively better mental health compared to parents residing in Sichuan. This is related to the availability of rehabilitation resources and social support in these two locations. Compared to Sichuan, Chongqing has more well-established rehabilitation institutions. Based on the author's understanding, many parents from Sichuan have relocated to Chongqing with their families for their children's rehabilitation. This has had a significant impact on their lives and work, increasing their family's financial and emotional burden, thus resulting in lower levels of mental health for these parents.

The severity of symptoms in children with autism also affects the mental health of parents, particularly parents of children with moderate autism experiencing relatively poorer mental health. Interviews revealed that parents of children with moderate autism often experience a psychological response of feeling "stuck in the middle." Deep down, they may feel that there is hope for their

child, but their efforts don't meet their expectations, leading to more psychological issues. On the other hand, parents of children with severe autism are aware of the severity of their child's condition and try to adjust their mindset. They approach their child with a mentality of "since things are this way, I won't have high expectations for him/her, as long as they are physically healthy," which reduces their psychological burden.

The mental health of parents of children with autism also varies depending on their level of education, with higher education levels being associated with more pronounced psychological issues, particularly among parents with graduate or higher degrees. This finding differs somewhat from previous research conclusions^[11]. Interviews revealed that parents with graduate or higher degrees, due to their own accomplishments, find it difficult to accept their child's cognitive impairments. They also have higher expectations for their child's future, and when the child shows some progress, highly educated parents may perceive it as insignificant. On the other hand, parents with lower levels of education have relatively lower expectations for their child, making them more accepting of their child's challenges.

Family income also has a certain impact on the mental health of parents of children with autism. Specifically, when the annual income is 50,000 yuan or less, parents may experience significant financial pressure, and excessive financial burden can lead to increased psychological burden, particularly in the form of more pronounced feelings of fear in this study. Previous research has also shown that higher family income is associated with more positive emotions among parents^[11-12].

5. Strategies

Parents of children with autism should prioritize their own mental health. The rehabilitation outcomes of children with autism are influenced by the mental health of parents. Like any other child, children with autism also require a relaxed and harmonious family environment to better engage in rehabilitation and achieve more positive rehabilitation outcomes. Therefore, while parents focus on their child's rehabilitation, they should also pay attention to their own mental health. They can lower their expectations for their child's rehabilitation, participate in activities they enjoy on a regular or irregular basis, and maintain a good level of mental health. By doing so, they can create a better family environment for their child's positive rehabilitation.

Society needs to provide more support to the community of children with autism.

From a societal perspective, it is equally important to give more attention to the special needs of children with autism. Based on my understanding, in many prefecture-level cities, children with autism do not receive adequate placement, and some special schools require parental accompaniment for enrollment. Additionally, mainstream schools lack the support of trained teachers to assist children with autism in their learning and daily lives. This increases the difficulty for these children to integrate into regular schools and undoubtedly adds to the economic and emotional burden on parents, leading to their psychological issues. Therefore, society and the government should encourage more qualified public and private institutions to provide rehabilitation services for children with autism. Special schools should also be staffed with qualified rehabilitation teachers specifically trained for children with autism. Furthermore, the allocation of trained teachers in mainstream schools can help alleviate parental anxiety about the placement of children with autism.

On the other hand, considering the current situation, the mental health of parents of children with autism needs urgent attention. Therefore, through resource integration, specialized psychological counseling services should be provided to parents in need. Previous research has shown that group counseling, mindfulness therapy, acceptance and commitment therapy, and positive psychology interventions can all alleviate the psychological stress of parents of children with autism and

improve their mental health ^[13]. In particular, the "Three Good Things" intervention from a positive psychology perspective has advantages that transcend time and space, and it is more practical for parents of children with autism. Therefore, continuous exploration and implementation of this intervention can enhance the positive effects on the mental health of parents of children with autism.

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