

Can Autistic Traits Severity Predict Autism Parenting Stress?

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Abstract

Objectives: To investigate the mediating role of autistic traits severity in parenting stress among parents of children with autism spectrum disorder.

Methods: A descriptive correlational design was used in this study which includes a simple random sample of parents of children with autism who age 2–12-years referred to the Alsubtain Academy autism center during 2022 in Karbala province, Iraq.

Results: Most parents are stressed experience 52% of total sample and most children have severe autistic traits. Furthermore, autistic traits severity positively predicted parental autism stress.

Conclusion: Parents of children with severe traits of ASD tend to have high level of parenting stress, other variables such as age of child on diagnosis, child age, parental gender and family type have no significant effect on parenting stress.

Keywords: Autism spectrum disorder, autism parenting, autistic traits severity, parents, stress

Introduction

Autism spectrum disorder (ASD), an early-onset neurodevelopmental illness, is distinguished by difficulties in social interaction and communication as well as constrained and stereotyped activities and interests. This disorder has an effect on how a person feels, thinks, interacts with others, and perceives their surroundings, making it much more difficult for them to carry out everyday tasks. It is a serious kind of developmental disability that appears at the very beginning of development.^{1,2}

Although autism is regarded as a lifelong condition, symptoms must appear during the early stages of development, and each person with autism has functional impairment to varying degrees as a result of these difficulties. Therefore, figuring out the best way to reduce such challenges is essential for enhancing the long-term results of people with ASD.^{3,4}

Individuals with autism tend to orient themselves more towards non-social than social stimuli from an early age, and this tendency may lead to cascade faults in their social and language development.⁵

Children with ASD may prefer routine and structure that may seem confined and repetitious to others, play alone and retreat from social settings, have trouble comprehending the viewpoints or emotions of others, have special interests or attachments, and play alone. The expression of these traits occurs on a spectrum, which means there is a great deal of variation in how it affects individuals as well as the severity of symptoms. These atypical patterns of behavior can cause children with ASD to feel frustrated easily, leading to challenging behaviors such as temper tantrums.⁶

A dynamic living cell is the family schema. As guardians, parents are crucial in mentoring and directing their children's educational development from infancy to maturity. Anxiety that is strongly related to the important duty of being a parent is known as parental stress. But for parents of child with ASD, this responsibility often begins as soon as their kid is given a diagnosis.⁷

Parents' capacity to care for their child and their well-being might be negatively impacted by raising a child with ASD. Mothers and dads of children with ASD may be especially sensitive to feeling very high levels of stress within this connection, and parental stress is a key risk factor for the parent-child relationship as well as the parental capacity to care

for the child. So, for parents and families, learning that their child has ASD may be a moment of great uncertainty, suffering, and a melancholy journey.⁸

The presence of an autistic child in the family imposes on each member of it to assume new roles, and this in itself may be a reason for the emergence of psychological stress, and the development of appropriate coping strategies with it, not only in the short term, but also in the long term. So, for parents and families, learning that their child has ASD may be a moment of great uncertainty, suffering, and a melancholy journey.^{9,10}

American Psychiatric Association, 2022 classified autistic traits severity into three levels level one requiring support, level two requiring substantial support and level three requiring very substantial support. It is expressed along a spectrum of mild to severe symptoms.

Increased parental stress is strongly related to the severity of autism spectrum disorder (ASD) symptomatology, children's social and psychological functioning, adaptive skills, as well as severity of autistic symptoms are a direct source of parental burden and stress.^{2,11}

The complexity of ASD symptoms can hinder and frustrate the development of sibling and parent-child relationships.¹²

In non-western countries there are only a handful of studies have investigated the relationship between child autistic symptom severity and parenting stress.^{13–15}

Although the symptoms of autism may be similar across different cultures, the meaning attributed to the symptoms may differ among parents from different cultural groups.¹⁶

Given the considerable differences in values and social conventions between the western and non-western countries it appears reasonable to expect that children's autistic behaviors that appear inconsistent with social norms may trigger more stress for.^{17,18}

Children with autism spectrum disorder (ASD) are characterized by their social interactions and communication challenges and restricted, repetitive behaviors.³ Because of these unique characteristics, caregiving of children with ASD may be stressful for parents, and further, negatively influence the entire family.^{19–24}

Parents of children with ASD are more stressed than parents of children with usual development, with 77% of cases showing clinically significant levels of parental stress.^{22,25,26}

Moreover, it largely exceeds the parental stress of children with other neurodevelopmental disorders (e.g., ADHD, specific learning disorders, intellectual disabilities, etc.).^{27–31}

Regarding ASD, problematic behaviors may include physical aggression, self-injury, property destruction, stereotyped behaviors, tantrums, etc. As a result, children with ASD are often highly disruptive to the classroom, home environments and the community.^{32,33} All of these behaviors have been directly related to parental stress.^{31,34,35} Zaidman-Zait et al. (2017),³⁶ stated that mothers experienced lower levels of stress when they utilized more active coping strategies and relied less on disengaged coping strategies, either at the time of diagnosis or overtime.

The characteristics of ASD cause major disturbances in family dynamics and generate needs in all areas and contexts of development.^{37–40}

The Current Study

This descriptive correlational design is used to investigate the mediating role of autistic traits severity in parenting stress among parents in Alsubtain Academy autism center, Kerbala, Iraq.

Participants

All parents participated in the study voluntarily. Participants were 226 simple random sampling of parents (65.9% mothers; mean age = 38.83 years, SD = 7.17 and 34.1% fathers; mean age = 33.71 years, SD = 6.59) for children with ASD (80.1% males and 19.9 females; mean age = 6.44 years, SD = 1.73) have been chosen at the Alsubtain Academy autism center, Kerbala.

Concerning the children's mean age is 6.44 ± 1.73 ; most aged 6–9-years ($n = 144$; 63.7%). According to gender, the majority are males ($n = 181$; 80.1%) compared to females ($n = 45$; 19.9%).

Regarding the mean of children in the family is 2.96 ± 1.30 ; more than a half have 2–3 children ($n = 121$; 53.5%) and the household's occupation, more than two-third are semi-professionals ($n = 84$; 37.2%) concerning the family type, most reported that they have been living as a couple only ($n = 163$; 72.1%).

Measures

The demographic form enquired about the participants' background including age, gender for parents and child, household's occupation, child years of diagnosis with ASD, number of children in the family, family type and socioeconomic status and the following tools: The Autism Spectrum Quotient – Children's Version: consists of fifty questions The alternatives of these items were ranked from 0 = "definitely agree," 1 = "slightly agree," 2 = "slightly disagree," 3 = "or 4 = "definitely disagree", and focuses concerning five categories of autism spectrum disorders: social skills, communication skills, creativity, attention to detail, and attention switching and change tolerance. This parent-report survey measures AS quantifies. Total scores range

1. From 0–150, Auyeung et al., (2007)⁴¹ found that the cut-off for ASD qualities was a score of 76.
2. The Autism Parenting Stress Index is a self-reporting questionnaire comprising thirteen inquiries that measures parenting stress in children with ASD. The questions are meant to identify the domains that parents need parenting skill assist. The questions were created using information of the typical developmental trajectory for self-regulatory milestones such as sleep, digestion, self-soothing, attention, and the onset of emotional and behavioral self-regulation. The unusually high levels of stress that parents in certain places experienced had an impact on how the stress ratings were created. These questionnaire substitutes were rated from 1 = 'Not stressful', 2 = 'Sometimes creates stress', 3 = 'Often creates stress', 4 = 'Very stressful on a daily basis', to 5 = 'So stressful that sometimes we feel we cannot cope'.

Results

Frequency, %, mean, standard deviation, hierarchical regression (Table 1), one-way analysis of variance (ANOVA), and independent-sample *t*-test (Table 2) were initial descriptive analyses examined the variables in this study by statistical package for social science (SPSS) for windows, version 26.

The study results demonstrate that the autism spectrum was rated as severe by more than a half of children ($n = 123$; 54.4%) compared to those who rated it as mild ($n = 103$; 45.6%).

Table 1. Hierarchical regression model for the study variables and parents' autism parenting stress

Model	Coefficients ^a						
	Unstandardized coefficients		Standardized coefficients	<i>t</i>	Sig.	95% Confidence interval for B	
	B	Std. Error	Beta			Lower bound	Upper bound
(Constant)	63.797	12.828		4.973	.000	38.514	89.079
Child's age	-.203	.350	-.039	-.578	.564	-.893	.488
1 Child age on diagnosis?	.574	.647	.061	.888	.376	-.701	1.849
How many children do you have?	-.310	.456	-.045	-.679	.498	-1.208	.589
Autism spectrum quotient	.350	.107	.219	3.277	.001	.139	.560

^aDependent variable: autism parenting stress.

Table 2. Gender-wise differences in the autism spectrum quotient

		Independent samples test								
		Levene's test for equality of variances		t-test for equality of means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. Error Difference	95% confidence interval of the difference	
								Lower	Upper	
Autism spectrum quotient	Equal variances assumed	1.312	.253	-1.985	224	.048	-6.98465	3.51933	-13.91988	-.04943
	Equal variances not assumed			-1.865	62.965	.067	-6.98465	3.74558	-14.46969	.50038

df: Degree of freedom; F: F-statistics; Sig.: Significance; Std. Error Difference: Standard Error Difference; t: T-statistics.

Table 3. Differences in the autism spectrum quotient among family type groups

		ANOVA				
		Sum of squares	df	Mean square	F	Sig.
Autism spectrum quotient	Between groups	1020.558	2	510.279	1.130	.325
	Within groups	100726.220	223	451.687		
	Total	101746.779	225			

df: Degree of freedom; F: F-statistics; Sig.: Significance.

The study results display that autism parental stress severe by a half of parents ($n = 119$; 52.7%) and followed by mild ($n = 107$; 47.3%) (Table 3).

Discussion

This study contributes to the expanding body of research on the stress that parents of children with ASD experience. Parents of children with ASD may be more susceptible to experience very high levels of stress within these relationships, and parental stress is an important contributor to risk for the parent-child relationship as well as the parental capacity to care for the kid.⁴²

The study results reveal that all regression models display that the autistic traits severity positively predicts parental autism stress ($P = .001$) as study result reveals that autism parenting stress also severe by more than half of parents and autistic traits were severe by more than a half of children (54.4%) because raising a child with special needs presents additional difficulties.

The results in this study might further support the Efstratopoulou et al., (2022)¹⁰ that found significant associations between the ASD symptoms and the parenting stress total index ($P < 0.001$); Madarevic et al., 2022⁴³ that revealed significant differences in parenting stress ($U = 56.5$, $P < .01$, $\eta^2 = 0.42$), and autism characteristics ($U = 22.5$, $P < .01$, $\eta^2 = 0.63$) between the ASD group and the non ASD group; Porter et al., 2022² that conduct there was a nonlinear relationship between the child's autistic symptom severity and parenting stress in different countries; Pastor-Cerezuela et al., (2016)⁴⁴ found out parental stress in the ASD group was clinically significant and higher than in the comparison group. The child's autism severity was a significant predictor of parental stress related to the child's distractibility and hyperactivity; Siu et al., (2019)¹⁴

reveals that autism spectrum symptoms were positively associated with parenting stress, the relationship was mediated by child problem behaviors. Some studies disagree with present result and found that autistic traits severity cannot predict parental stress.^{2,45}

According to parental gender the study results display that there are no statistically significant differences in the autism parenting stress and Autistic traits severity at $P = 0.253$, this agree with the result of (Davis & Carter, 2008;²⁵ Hastings, 2003;⁴⁶ Nikmat et al., 2008⁴⁷) found no differences in parental stress between mothers and fathers. Also no statistically significant differences in the autism parenting stress, autistic traits severity and family type.

On the contrary, some studies reveal mothers of children with ASD experience significantly greater levels of stress than fathers^{20,48-53} and other study found that fathers evidence higher level of stress than mothers.⁵⁴

Strengths and Limitations

The study provides further knowledge about parenting stress and autistic traits severity in Iraq.

Limitations: Study instruments were questionnaire and auto self-administration for stress that be more accurate if stress assessed clinically. Also Autistic Traits Severity Question fill out by parents, future research should include observation studies of child interactions and behaviors.

Conclusion

Parents of children with severe traits of ASD tend to have high level of parenting stress, other variables such as age of child on diagnosis, child age, parental gender and family type have no significant effect on parenting stress.

For future studies researchers could do more studies on the role of the sympathetic, parasympathetic, and HPA systems under stressful events may be gained by analyzing parent stress response using physiological parameters such as electro-dermal activity (EDA), cortisol, and pupillometry during eye tracking and to evaluate the significance of separating state and trait elements of a stress reaction, it may also be useful to analyze stress responses in diverse circumstances outside from simply the encounter with the child. Finally, engage parents in educational/interventional coping program and strategies to decrease parenting stress.

Declaration of Competing Interest

The authors state that they have no conflicts of interest to disclose.

Ethical Considerations Compliance with Ethical Guidelines

This study was completed following obtaining consent from the University of Karbala.

Informed Consent

Informed consent was obtained from all individual participants included in the study.

Data Availability

Data will be made available on request.

Acknowledgments

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List of Abbreviations

Items	Meaning
ADHD	Attention Deficit Hyperactivity Disorder
ANOVA	One-Way Analysis of Variance
APA	American Psychiatric Association
APSI	Autism Parenting Stress Index
ASD	Autism Spectrum Disorder
Df	Degree of Freedom
e.g.	For Example
et al	Others
F	Frequency
Sig.	Significance
SPSS	Statistical package for social science

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