

The Moderation Effect of Parental Self-efficacy on the Associations between Parental Stress and Social Skills among Chinese ASD Children

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Abstract: The present study aimed to examine the associations between parental stress and social skills in Chinese children with autism spectrum disorder (ASD), and to investigate the potential moderating role of parental self-efficacy. A total of 324 ASD children's parents completed the Parenting Stress Index/Short Form, Parenting Sense of Competence Scale, and Social Skills Improvement System-Rating Scales. Correlational analyses showed that parental stress was negatively correlated with children's social skills, whereas parental self-efficacy was positively correlated. Moderation analyses revealed that parental self-efficacy significantly moderated the relationship between parental stress and children's social skills. These results emphasize how crucial it is to boost parental self-efficacy in programs meant to encourage social development in children with ASD.

1. Introduction

Autism spectrum disorder (ASD) is a neurodevelopmental disorder that often manifests in early childhood and causes lifelong impairments [1]. There is a substantial care burden on families and societies due to the estimated 78 million children with ASD worldwide [2]. Socialization deficits are a major source of impairment regardless of cognitive or language ability for children with Autism spectrum disorder (ASD), and such deficits do not remit with development [3]. Although some studies explored factors that influenced ASD children with ASD's social skills, most focus on those with ASD themselves. Recently, a growing body of evidence raised the potential influence of significant others, such as parents, on ASD children with ASD's social skills. Among the features of ASD children with ASD, the impact of their parents' stress may be speculated. In addition, it is worth noting that the influence of parental stress on ASD children with ASD's social skills is complicated, and some factors, such as self-efficacy, could influence their relationship. ASD is a neurodevelopmental disorder with a lifelong impact on multiple domains of functioning, characterized by a profound impairment in social communication and social interaction and restricted and repetitive behavior, interest, and activities [4]. The everyday management of children with ASD is a big challenge for parents, especially during early childhood. Children with ASD often exhibit socially inappropriate behavior, and parents of children with ASD were shown to experience more stress than parents of typically developing peers [5]. Self-efficacy is defined as people's judgment of their capabilities to organize and execute courses of action required to attain a

designated type of performance, and parental self-efficacy is a subset of an individual's personal self-efficacy, referring to an individual's self-appraisal of competency in a parenting role [6]. Parental self-efficacy (PSE) is an important and modifiable factor in parental stress-related research for families of children affected by ASD. PSE has been linked to better stress management, less distress, and improved health outcomes and has been found to significantly impact parental stress in parents of children affected by ASD [7]. In addition, evidence from practical research demonstrated that parental emotional warmth was positively correlated with general self-efficacy, and previous studies also showed that family emotional climate could impact ASD children with ASD's behaviors [8]. While previous research has established the independent contributions of parental stress and parental self-efficacy to ASD children with ASD's social skills, few studies have explored their interactive effects. Therefore, this research aims to establish an integrated conceptual framework to explain the relationships among parental stress, parental self-efficacy, and Chinese children with ASD's social skills, and to examine the moderating role of parental self-efficacy in the relationship between parental stress and Chinese children with ASD's social skills.

2. Literature review

2.1 Parental stress and social skills

The most prevalent core symptoms for children with autism are deficiencies in social communication and interaction [9]. These children typically struggle to initiate social contact, express basic needs, and sustain social relationships, which makes their lives very difficult [10] and causes significant stress for their parents. Children with ASD typically depend on their caregivers for help, even if the functional levels and clinical presentations may differ according to the severity of symptoms [9]. According to numerous studies [11] [12], compared to parents of children who are neurotypically developing and those with other developmental disorders, parents of children with ASD report higher levels of parenting stress.

2.2 Parental self-efficacy as a potential moderator

Parents' perceived confidence and belief in their parenting roles is known as parental self-efficacy, or PSE [13]. In studies pertaining to parental stress in families with children with ASD, parental self-efficacy (PSE) is a significant and changeable component [7][14][15][16]. PSE has been shown to have a major influence on parental stress among parents of children with ASD [6] [7] [14][15][16] [17], and has been associated with better stress management, reduced distress, and improved health outcomes [18]. Furthermore, the interactive correlation between parental self-efficacy and social skills has also been investigated. Parents' emotional warmth was found to be positively related to general self-efficacy [19]. In addition, children's emotional and behavioral problems were correlated with class membership in the emotional climate [8]. A negative (i.e., harsh criticism and lack of warmth) parent-child interaction may therefore be more likely in families with a child who exhibits more severe ASD symptoms together with emotional and behavioral issues (e.g., Social problems, Attention deficit problems, Internalizing, Externalizing). Therefore, self-efficacy could be a moderator between parental stress and ASD children with ASD's social skills.

2.3 The present study

This study aims to investigate the moderating effect of parental self-efficacy on the relationship between parental stress and Chinese ASD children's social skills. The following hypotheses were

designed to address the study's aim: Hypothesis 1. Parental stress will be associated with ASD children's social skills. Hypothesis 2. High levels of parental self-efficacy will increase the positive association between parental stress and social skills.

3. Method

3.1 Participants

A total of 324 ASD children's parents participated in this study. Among the participants, there were 150 females and 174 males. Each participant filled out the survey anonymously and gave their informed consent.

3.2 Measures

1) Parental stress

Parenting Stress Index/Short Form (PSI-SF) in Chinese [20] was used in this research. Three subscales-parental distress (PD), parent-child dysfunctional interaction (PCDI), and difficult child (DC)-are included in its total of 36 questions. On a 5-point rating system, participants were asked to express their emotions.

2) Parental self-efficacy

Parenting Sense of Competence Scale [21] was used to gauge the perception of parental efficacy or competence. The 12 items in the Chinese version we utilized measured competence and satisfaction on a 4-point scale [22]. The overall score was applied. According to the factorial structure of the PSOC in China, the version we utilized was modified from the original PSOC and removed five items from the original 17-item scale [22].

3) Social skills

Social Skills Improvement System-Rating Scales (SSIS-RS) [23] was used to measure children's social skills in this study. The SSIS-RS (Parent form) includes two scale domains: Social Skills and Problem Behaviors. The Social Skills domain contains seven subscales: Communication, Cooperation, Assertion, Responsibility, Empathy, Engagement, and Self-control. The Problem Behaviors domain involves five subscales: Externalizing, Bullying, Hyperactivity/Inattention, Internalizing, and Autism Spectrum. A four-point Likert rating scale (0= Never, 1= Sometimes, 2= Often, and 3= Almost Always) is used to rate the two scale domains, indicating how frequently parents believe their kids display each social skill and/or problem behavior item. A three-point Likert rating scale (0=Not important, 1=Important, and 2= Critical) is also used to grade social skills. This scale shows how important parents believe the social skill elements are for their kids. Parents completed the questionnaire on behalf of their children, reporting on their children's social skills.

3.3 Data analysis

The 29th version of the Statistical Package for the Social Sciences (SPSS) was used to initially calculate the mean, standard deviations, and correlations among parental stress, parental self-efficacy and social skills. Multiple hierarchical regression analyses were conducted to test moderation analyses in this study.

4. Results

Table 1 presents the correlation coefficient values and descriptive statistics. Results of

correlational analyses indicate that parental stress is negatively correlated with social skills, whereas parental self-efficacy is positively correlated with them. Furthermore, the results concerning the moderating effect of parental self-efficacy on the relationship between parental stress and ASD children with ASD's social skills while controlling for age and gender are shown in Table 2. The results showed that parental stress had a significant effect on social skills ($\beta = -.48, p < .001$), suggesting that increases in parental stress may be linked to lower levels of social skills. In addition, parental self-efficacy significantly predicts social skills ($\beta = .73, p < .001$), suggesting that increases in parental self-efficacy may be linked to higher levels of social skills. Also, parental self-efficacy negatively moderated the relationship between parental stress and social skills ($\beta = -.66, p < .001$).

Table 1 Descriptive statistics and correlational coefficients among parental stress, parental self-efficacy, and social skills.

	<i>M</i>	<i>SD</i>	1	2	3
1. Parental stress	3.14	1.25	-	-.324**	-.476**
2. Parental self-efficacy	41.73	9.51		-	.810**
3. Social skills	22.48	7.72			-

Note: ** $p < .01$, * $p < .05$

Table 2 Results of multiple hierarchical regression analyses.

	β	<i>P</i>	R^2	ΔR^2
Block1			.23	.23
age	0.01			
gender	0.03			
parental stress	-.48	< .001		
Block2			.70	.47
age	0.01			
gender	0.03			
parental stress	-.24	< .001		
parental self-efficacy	.73	< .001		
Block3			.73	.03
age	0.01			
gender	0.03			
parental stress	.42	< .001		
parental self-efficacy	1.13	< .05		
parental stress x parental self-efficacy	-.66	< .001		

5. Discussion

The primary aims of the current study were to explore the relationships among parental stress, parental self-efficacy, and children's social skills in children with ASD, and to examine the moderating effect of parental self-efficacy on the relationships between parental stress and children's social skills. Social skills and parental stress are adversely connected, whereas social skills and parental self-efficacy are positively correlated. Parental self-efficacy was found to be a negative moderator on the correlations between parental stress and children's social skills. One notable aspect of the findings was the negative impact of parental stress on children's social skills, corroborated by a previous study that found that children's social skills are negatively associated with parental stress [10]. Another interesting finding was the positive correlation between social skills and parental self-efficacy, which is also consistent with prior studies that found that parental

self-efficacy was a significant positive predictor of ASD children's social skills [8] [19]. Yet, the most important contribution of our research was the finding of a negative moderating effect of parental self-efficacy on the relationship between parental stress and children's social skills. In particular, the negative relationship between parental stress and social skills weakened at higher levels of parental self-efficacy. This result failed to support the second hypothesis. One explanation is that parents with higher self-efficacy see parenting difficulties as easier to handle and may have greater confidence in their ability to foster children's growth, even in challenging situations. According to earlier research, parental self-efficacy is associated with more adaptive parenting practices, such as greater emotional reactivity and better support for children's social development [24]. Conversely, parents with lower self-efficacy might feel less equipped to handle parenting responsibilities, which could amplify the detrimental effects of parenting stress on their children's social development [25] [26]. Higher parental self-efficacy may therefore serve as a psychological buffer against the detrimental effects of parental stress on children's social skills.

6. Limitations and implications

The study's cross-sectional and explanatory design may limit its generalizability. To improve the validity of the findings, it is advised that future research examine longitudinal structural models on the moderating effect of parental self-efficacy on the relationships between parental stress and ASD children's social skills. In addition, the outcome variable in the present study was children's social skills. Future study should focus on how social skills in children with autism spectrum disorder relate to other developmental outcomes including emotional adjustment and behavioral functioning, as well as if parental self-efficacy moderates these relationships. Several theoretical implications for the literature on family factors and child development in children with autism spectrum disorder are provided by this study. First, by emphasizing the influence of parental psychological factors on the social development of children with ASD, the findings build on earlier studies. The current study shows that parental self-efficacy may serve as a significant moderating component in this relationship, whereas previous research has mostly concentrated on the direct impacts of parental stress on child outcomes. This discovery advances our understanding of the complex ways in which family factors impact children's social development. In addition, by highlighting the protective function of parental self-efficacy, this study enhances the theoretical framework of parenting and child development. Furthermore, the study offers empirical support for the significance of parents' views in their parenting abilities by demonstrating that parental self-efficacy may modify the strength of the link between parental stress and children's social skills. These results imply that future studies should investigate family psychological resources that can mitigate the possible detrimental effects of parenting stress on child development. In addition, the current study has a number of useful implications for support services and therapies for families of children with ASD. When creating intervention programs, practitioners and educators should give parents' psychological health more consideration because parental stress may have an impact on children's social development. Giving parents emotional support and stress-reduction techniques could help foster a more encouraging atmosphere for children's social development. Moreover, the results also emphasize how crucial it is for family-based interventions to raise parental self-efficacy. Parents may be better able to handle parenting difficulties and foster their children's social skill development if they participate in training programs that boost their self-confidence. In order to enhance overall family functioning and foster favorable developmental outcomes, intervention programs aimed at children with ASD should include parent-focused elements in addition to the children themselves.

7. Conclusion

Among Chinese children with autism spectrum disorder, this study was one of the first studies aimed at comprehending the moderating function of parental self-efficacy in the relationship between parental stress and social skills. The findings contribute to the current literature by shedding light on how parental psychological factors may influence the social development of children with ASD. In particular, the findings imply that the relationship between parental stress and children's social abilities can be influenced by parental self-efficacy. The creation of family-based intervention programs targeted at enhancing social outcomes for children with ASD may benefit from the discovery of protective characteristics, such as parental self-efficacy. The possible detrimental effects of parental stress on children's social functioning may be mitigated by boosting parents' self-confidence in their parenting skills. Intervention efforts must be tailored to the unique needs of parents and their children, as families differ in their levels of parental confidence and stress.

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