

The Correlation between Mothers' Tolerance of Distress and Marital Adjustment and Behavioral Disorders in Children with Autism

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Abstract

Background: Given the profound effects of children's behavioral disorders, particularly in children with autism, on families, the present study aimed to explore the association between mothers' distress tolerance and marital adjustment and behavioral disorders (BD) in children with autism in Ahvaz, Iran.

Methods: This descriptive-correlational study included all children with autism and their mothers registered at the Autism Association of Ahvaz, Iran in 2023. A total of 262 participants were recruited using a convenience sampling approach. Data were collected using the Child Behavior Checklist (CBCL), Distress Tolerance Scale (DTS), and Dyadic Adjustment Scale (DAS). Data were subjected to Pearson's correlation analysis and stepwise regression analysis using SPSS version 27.

Results: The mean scores for child behavioral disorders, tolerance of distress, and marital adjustment were 34.95 (± 8.14), 45.29 (± 9.86), and 80.23 (± 19.15), respectively. Pearson's correlation analysis indicated a significant inverse relationship between children's BD and mothers' tolerance of distress ($r = -0.36$, $P < 0.001$) and marital adjustment ($r = -0.60$, $P < 0.001$). Additionally, a significant positive correlation was found between mothers' tolerance of distress and marital adjustment ($r = 0.39$, $P < 0.001$).

Conclusions: The results indicated that mothers' tolerance of distress and marital adjustment are crucial in alleviating BD in children with autism. Interventions aimed at enhancing mothers' coping skills and marital satisfaction may be beneficial in improving children's behavioral outcomes.

Keywords: Autistic disorder, Mental disorders, Psychological distress, Women

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1. Introduction

Autism spectrum disorder is a lifelong neurodevelopmental condition characterized by persistent difficulties in social interaction and communication, as well as restricted, repetitive patterns of behavior, interests, or activities (1). A core feature of autism spectrum disorder is social impairment, manifested in difficulties understanding the emotions of others (2). Autism spectrum disorder is considered as one of several developmental disorders (3). Behavioral and emotional problems are common in childhood and adolescence, affecting 14% to 24% of young people (4). Early childhood behavioral disorders (BD) can precede the development of antisocial behavior in adolescence, and can have detrimental effects on both individual and social functioning (5). In this disorder, individuals exhibit excessive anger outbursts, active defiance of rules, and harmful behaviors compared to their peers. BD involves a persistent pattern of negative, hostile, and defiant

behavior without violating serious social norms or the rights of others. Children and adolescents with this disorder often have difficulties with peers, parents, teachers, and other situations that require appropriate social interaction (6).

Autism is rapidly emerging as one of the most prevalent developmental disorders, with annual prevalence rates increasing by 10-17% (7). Prior research has primarily investigated family factors as determinants of childhood BD (8). Parenting a child with autism spectrum disorder is undoubtedly a demanding task. Autism spectrum disorder has multifaceted and pervasive effects on parents of affected children. From a broader perspective, not only does autism affect family mental health, but family conflicts are also associated with the occurrence of autism symptoms (9, 10). Children with autism spectrum disorder can negatively impact family dynamics, leading to disrupted routines and strained social relationships for mothers. Moreover, these children often face challenges in

social interaction, further exacerbating family stress. Given these complexities, maternal distress tolerance is a critical factor to consider (11). Low distress tolerance in mothers has been associated with increased child behavioral problems. Distress tolerance is an individual's ability to withstand emotional discomfort (12).

On the other hand, having a child with autism spectrum disorder leads to decreased quality of life, social withdrawal, reduced social activities, and feelings of rejection, consequently decreasing marital adjustment in mothers of children with this disorder (13). Marital adjustment does not mean the absence of problems in life but rather the capacity to adapt to problems and the ability to solve them. It is an evolutionary process in the relationship between a husband and wife that refers to a state of adaptation in various aspects of the couple where conflicts may exist (14). In fact, marital adjustment refers to the degree of closeness to a spouse, shared enjoyable activities, satisfying and close sexual relations, and sharing values and ideas without coercion (15). Examining marital adjustment from various perspectives is important because if a couple cannot reach a relative agreement and adaptation in their relationship, family functioning is disrupted (16). According to Mahmood and Gul (17), parental stress and family burden negatively impact the marital adjustment of parents of children with Down syndrome. In contrast, self-differentiation positively influences marital adjustment in these parents.

Families with a child diagnosed with autism are a vulnerable population in need of greater support and guidance. Unfortunately, these families often do not receive the necessary individualized information and comprehensive support to make informed treatment decisions. Consequently, it is essential to consider the entire family when treating a child with autism. Recently, research has focused on mothers' experiences of having a child with autism. Research indicates that when parents of a child with autism do not effectively manage this characteristic, it can result in the development of behavioral issues and disorders in the mothers over time. (18). Given the negative consequences and impacts of BD for children with autism, the lack of research examining the combination of variables in the present study, and the unique and different circumstances of these children, conducting this study was highly necessary. A review of literature

showed that there is a need to plan to address the challenges faced by these children and their mothers. Therefore, the aim of this study was to examine the correlational role of child BD with distress tolerance and marital adjustment in mothers of children with autism.

2. Methods

A cross-sectional correlational design was employed to examine the correlations between the study variables. The study population consisted of all children with autism and their mothers residing in Ahvaz, Iran, between February and May 2023. A convenience sample of 262 participants was selected from this population. Inclusion criteria mandated a confirmed autism spectrum disorder diagnosis based on child records and psychological assessment, concurrent maternal residence, absence of comorbid conditions, no psychological intervention within the preceding three months, and non-use of psychotropic medications. Participants were excluded if questionnaires were incomplete or not fully returned. Upon obtaining an informed consent, the questionnaires were distributed to mothers of children with autism. To ensure confidentiality, all data were collected and analyzed anonymously. Results were reported at the aggregate level to protect individual privacy.

2.1. Procedure

The institutional review board reviewed the study design, participant consent procedures, and data confidentiality measures to ensure ethical compliance. Data collection took place between February and May 2023 at the Autism Association of Ahvaz City, Iran. Mothers of children with autism were recruited using a convenience sampling method. The questionnaires were administered in a face-to-face setting by trained research assistants. Participants completed the questionnaires in a private room, ensuring confidentiality. To minimize response bias, the researchers provided clear instructions and were available to answer any questions that participants might have had.

2.2. Instruments

2.2.1. The Child Behavior Checklist (CBCL)

CBCL is a 30-item self-report inventory developed by Rutter in 1967 (19). Respondents rate

the frequency of each behavior on a three-point Likert scale, resulting in a total score ranging from 0 to 60. The Persian adaptation of CBCL has demonstrated satisfactory psychometric properties. Inter-rater reliability has been deemed adequate, and internal consistency, as measured by Cronbach's alpha, has been found to be 0.85 (20), indicating an acceptable reliability score. Mohammadipour and co-workers (13) reported a content validity index (CVI) of 0.93 and a content validity ratio (CVR) of 0.91 for the Persian version of CBCL. In the present study, a Cronbach's alpha of 0.82 was reported, indicating a high level of internal consistency.

2.2.2. The Distress Tolerance Scale (DTS)

DTS is a self-report measure developed by Simons and Gaher (21) to assess individual differences in distress tolerance. DTS consists of four subscales: tolerance, appraisal, absorption, and regulation, each with 15 items rated on a five-point Likert scale. Higher scores on DTS reflect greater ability to endure emotional distress. DTS evaluates distress tolerance based on the ability of respondents to tolerate negative emotions, appraise mental distress, focus on negative affect, and employ coping strategies to mitigate distress. The scale demonstrates acceptable internal consistency, with a Cronbach's alpha of 0.77 (22). Azizi (23) reported that DTS demonstrated strong content validity, with a CVI of 0.96 and a CVR of 0.93. In the present study, DTS exhibited excellent internal consistency, as evidenced by a Cronbach's alpha coefficient of 0.79.

2.2.3. The Dyadic Adjustment Scale (DAS)

Spanier's Dyadic Adjustment Scale (DAS) (24) is a 32-item instrument assessing marital quality across four dimensions: dyadic satisfaction, consensus, cohesion, and affectional expression. Scores range from 0 to 151, with values above 100 indicating adequate marital adjustment and scores below 100 suggesting potential marital discord. The Persian adaptation of DAS demonstrated

acceptable reliability, with a Cronbach's alpha of 0.84 (25). Maroufizadeh and co-workers (25) found that DAS exhibited robust content validity, as indicated by a CVI of 0.96 and a CVR of 0.91. Furthermore, DAS demonstrated excellent internal consistency in the present study, with a Cronbach's alpha coefficient of 0.77.

2.3. Data Analysis

SPSS version 27 was used for data analysis. Descriptive statistics, including mean and standard deviations, were computed. Inferential analyses involved Pearson correlation coefficients and stepwise regression.

3. Results

Demographic characteristics of the sample indicated a mean maternal age of 35.42 years (SD=4.19). While 40.07% of mothers were employed, 59.92% were housewives. The majority of the participants (41.60%) held a high school diploma, followed by a bachelor's degree (32.06%). A smaller proportion had a master's degree (17.94%) or a doctoral degree (8.40%). Table 1 presents descriptive statistics, including means, standard deviations, skewness, kurtosis, and Pearson correlation coefficients, for all study variables. Given the absolute values of skewness and kurtosis (less than 1 for all variables), the normality assumptions were met for the sample.

Table 1 presents the Pearson correlation coefficients among child behavioral disorders, tolerance of distress, and marital adjustment. The results revealed a significant negative correlation between child BD and maternal distress tolerance ($r=-0.36$, $P<0.001$), indicating that higher levels of maternal distress tolerance were associated with lower levels of child BD. Furthermore, a significant negative correlation was found between child BD and marital adjustment ($r=-0.60$, $P<0.001$), suggesting that lower levels of child BD were associated with higher levels of marital adjustment. Finally, a significant positive correlation emerged

Table 1: Descriptive statistics and Pearson correlation coefficients

Variables	Mean	SD	Kurtosis	Skewness	1	2	3
1- Child behavioral disorders	34.95	8.14	0.08	-0.61	1		
2- Tolerance of distress	45.29	9.86	-0.05	-0.65	-0.36**	1	
3- Marital adjustment	80.23	19.15	0.19	0.23	-0.60**	0.39**	1

** $P<0.01$

Table 2: Results of stepwise regression analysis

Independent variables	B	β	t	SE	P
Marital adjustment	-0.25	-0.60	-12.03	0.02	0.001
Distress tolerance	-0.30	-0.36	-6.30	0.05	0.001

SE: Standard Error

between maternal distress tolerance and marital adjustment ($r=0.39$, $P<0.001$), indicating that higher levels of maternal distress tolerance were associated with higher levels of marital adjustment.

To examine the association between maternal distress tolerance, marital adjustment, and child behavioral disorders, a stepwise regression analysis was conducted. The results of this analysis are presented in Table 2. In the initial model, marital adjustment emerged as an independent variable of child BD ($\beta=0.60$). Subsequently, distress tolerance was added to the model. Although both independent variables were found to be significant, marital adjustment demonstrated a more pronounced correlation with child BD ($\beta=-0.60$) compared with distress tolerance ($\beta=-0.36$).

4. Discussion

This study examined the impact of maternal distress tolerance and marital adjustment on child behavioral disorders (BD) in children with autism in Ahvaz, Iran. The results indicated significant associations between these maternal factors and child BD. In line with previous research (26, 27), the study found a significant negative correlation between maternal distress tolerance and child BD. Firoozi and Feiz Abadi (26) also reported that maternal distress tolerance was associated with both internalizing and externalizing behavioral problems in children. The research (26) suggested that a mother's distress, as manifested through her parenting style, stress management skills, and interactions with her child, could significantly influence her child's behavioral difficulties. Robinson and colleagues (27) demonstrated that childhood maltreatment was associated with increased risk for various mental health issues. They also found that individuals with higher levels of distress tolerance were less susceptible to adverse mental health consequences.

This finding can be explained by the role of distress tolerance in mitigating the impact of stress and adversity. Mothers with higher levels of distress tolerance are better able to handle the daily stressors

and challenges of raising a child with autism, which can lead to a decrease in child BD (26). Distress tolerance enables mothers to cope more effectively with the stress associated with caring for a child with autism, thereby allowing them to implement more effective behavioral strategies (27).

Distress tolerance in mothers of children with autism refers to their ability to cope effectively with the challenges and stressors associated with parenting a child with autism (27). More generally, distress tolerance is an individual's ability to adapt to adversity and maintain psychological and emotional well-being. For mothers of children with autism, distress tolerance can play a pivotal role in how they manage challenges and their impact on family life and the child. Mothers with high levels of resilience are better able to cope with the stress and challenges associated with raising a child with autism. High maternal distress tolerance is often associated with strong social support networks, such as family, friends, support groups, and professional counselors, which can help the mother manage the demands of parenting a child with autism (26). Resilient mothers are able to adapt to unexpected changes and fluctuations in their child's condition. This flexibility allows them to quickly adjust to their child's changing needs and employ new strategies to cope with challenges. Resilient mothers typically possess a high ability to identify problems and find creative solutions to everyday challenges. These skills help them to effectively address the specific challenges associated with autism.

This study also found a significant negative correlation between marital adjustment and child BD. This finding was consistent with the results of previous research (28, 29), which demonstrated that higher levels of marital adjustment were associated with lower rates of child behavioral problems. Marital adjustment, which refers to the quality and satisfaction of a marital relationship, can significantly influence the behavior of children with autism. A strong and supportive marital relationship can help parents cope with the challenges of raising a child with autism (30).

The quality of the marital relationship and positive interactions between parents can create a stable and supportive environment for children. Positive interactions between parents can improve the quality of care and attention to the child's needs, thereby affecting the child's behavior. When parents have high marital adjustment, caregiving responsibilities are likely to be divided more effectively, which can reduce maternal stress and psychological pressure, and consequently improve children's behavior (15). Marital stress can lead to decreased marital adjustment and, as a result, increased behavioral problems in children with autism (9). On the other hand, a positive and supportive marital relationship can lead to increased distress tolerance and improved child behavior. Healthy family interactions and emotional support can improve marital adjustment and reduce child BD (5). Therefore, high marital adjustment in mothers can have a positive impact on children's behavior. When the marital relationship of parents is satisfying and harmonious, it can lead to a stable and supportive environment for children. This supportive environment can help reduce maternal stress and psychological pressure and facilitate the improvement of behavior in children with autism.

4.1. Limitations

One limitation of this study was reliance on maternal self-report measures for assessing distress tolerance and marital adjustment. This can introduce biases, such as recall bias, and dishonest responses. Distress tolerance and marital adjustment may be heavily influenced by individual characteristics and personal experiences of mothers. This individual variability can complicate research findings and limit their generalizability. Other environmental and economic factors, such as family socioeconomic status, support networks, and social conditions, can significantly impact distress tolerance and marital adjustment. These factors may not be fully accounted for in the study. The findings may be limited to the specific population studied and, therefore, generalization to other groups should be approached with caution.

5. Conclusions

The results of this study highlighted the substantial influence of maternal distress tolerance and marital adjustment on behavioral disorders in children with autism. Both constructs

demonstrated negative correlations with child behavioral problems, indicating that higher levels of distress tolerance and marital satisfaction were associated with lower levels of behavioral issues. Furthermore, these variables collectively accounted for a substantial portion of the variance in child behavioral disorders, with maternal distress tolerance emerging as a slightly stronger independent variable. These findings emphasize the importance of focusing on maternal well-being and marital dynamics as potential strategies for intervention and support in families with children on the autism spectrum.

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Authors' Contribution

Seyyed Gholamali Jafari: Contributed to the conception and design of the study, participated in data analysis and interpretation, drafted the manuscript and critically revised it for important intellectual content. Alireza Heidari: Conducted literature reviews and contributed to the methodology development, assisted in data collection and analysis, revised the manuscript for significant intellectual content. Parviz Asgari: Involved in data collection and management, helped analyze the results and provided substantial input on the statistical analysis, contributed to the manuscript revision. Somayeh Esmaeili: Provided clinical insight and expertise during the design of the study, contributed to the interpretation of data, reviewed and edited the manuscript for clarity and coherence. All authors have read and approved the final manuscript and agree to be accountable for all aspects of the work, such that the questions related to the accuracy or integrity of any part of the work.

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Ethical Approval

The research was approved by the Ethics Review

Board of the Islamic Azad University Ahvaz Branch, Ahvaz, Iran with the code of IR.IAU.AHVAZ.REC.1403.189. Also, written informed consent was obtained from the participants.

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