





Predicting the Emotional Social Adjustment of Children with Autism Based on Mother-Child Anxiety and the Adaptability of Maternal Parenting

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ABSTRACT

Objective: This study aimed to predict the emotional social adjustment of children with autism based on mother-child anxiety and the adaptability of maternal parenting.

Methods and Materials: The research was descriptive and correlational. The population consisted of all mothers with autistic children in the city of Kut. The sample consisted of 200 mothers with autistic children, selected through convenient sampling. The research instruments included the Mother and Child Anxiety Scale (Ataabadi et al., 2021), the Social Emotional Skills Questionnaire for Children (Payton et al., 2008), and the Parenting Adaptability Scale (Yousefi, 2021). Descriptive statistics (mean and standard deviation) and inferential statistics (Pearson correlation coefficient and stepwise regression) were used for data analysis.

Findings: The results showed that among the predictor variables, mother-child anxiety and its dimensions, and parenting adaptability and its dimensions, were significantly correlated with emotional social adjustment. Among these variables and their dimensions, parental control, parenting concerns, and parent-child anxiety had predictive power for the emotional social adjustment of children.

Conclusion: Based on these results, it can be said that improving parenting variables is beneficial for the improvement of children's emotional social adjustment.

Keywords: Emotional social adjustment, Anxiety, Parenting adaptability, Reflective functioning, Mindful parenting, Family relations, Autism, Children, Mothers

1. Introduction

Autism is a pervasive and long-term developmental disorder that significantly affects how an individual perceives the world around them and their interactions with others. Some individuals with autism may eventually live independently, but others suffer from learning disabilities and require lifelong specialized support. They may be exceptionally sensitive or have very low sensory sensitivity (Hull et al., 2020).

Studies indicate that autism is three to four times more common in boys than in girls. Autism has its roots in neurophysiological dysfunction. Three significant symptoms in these individuals are crucial for diagnosis: 1) Difficulty in social interactions (lack of eye expression, facial expression, and having inappropriate interactions with peers); 2) Limited, repetitive, and stereotypical behaviors and inflexible activities that manifest as an obsession with a limited and unusual interest; 3) Deficits in communication skills and linguistic development and other communicative abilities, appearing as delays or absence of request expression, inability to engage intimately, and maintaining and continuing a conversation. These symptoms disrupt the child's development and learning (Marotta et al., 2020).

These three symptoms pose numerous challenges to emotional social learning among them. In social learning, individuals acquire skills and knowledge beneficial in various communities. In emotional social learning, an individual attains five crucial competencies vital for managing one's emotions, developing care and concern for others, making responsible decisions, fostering positive relationships, and managing challenging situations (Ross & Tolan, 2017). Emotional social development is essential for achieving self-regulation and self-discipline in learning (Savickas, 2019). According to the definition of the Collective System for Academic, Social, and Emotional Learning (Payton et al., 2008), social-emotional skills encompass a set of abilities that include developing care and concern for others, achieving positive communications, making responsible decisions, and effectively, constructively, and ethically managing situations (Richerme, 2022). Self-awareness is a cognitive capacity that marks a significant step in personal development. Students who are aware of their capabilities and emotions are reflective, recognize their state of being, and understand the reasons behind their emotional responses (Alexander & Vermette, 2019).

Since the problems of these children are pervasive, their families, including their mothers, experience significant anxiety due to the challenging parenting tasks of these children. Studies show that these mothers experience more parenting stress and less self-efficacy compared to other mothers (Enea & Rusu, 2020; Ng et al., 2021). Moreover, studies indicate that the condition and mood of mothers can affect the condition of their children, thus expecting that maternal anxiety could make the situation more difficult for the child with autism and other family members, increasing parental stress (Dissanayake et al., 2020; Enea & Rusu, 2020; Yilmaz et al., 2021). In this context, it seems that one of the important constructs in improving and reducing anxiety and finding optimal solutions for interpersonal issues is parental adaptability.

Adaptability has been a focus of attention in various texts for years, including in the fields of cognition, psychological damage, development, and career counseling, but this concept was introduced as an important concept in parenting for the first time by Yousefi (2022), who imported it from the career domain (Savickas, 2019) and matched it with parenting conditions. He defined parental adaptability as possessing attitudes and skills that help parents appropriately resolve developmental issues related to each stage of their children's growth with minimal interpersonal conflicts, consisting of five dimensions: concern, curiosity, control, trust, and commitment. Thus, parents with parental adaptability must have these five characteristics to be adaptable. Parental concern is about the future of children and parent-child relationships, which is the first and most important dimension of parental adaptability. Control means optimal control over parenting, the second most important dimension, referring to skills such as decision-making, assertiveness, autonomy, and attributes of effort and dynamism in upbringing; parental curiosity along with a sense of control, initiative, and interest in learning about various skills and knowledge for parenting refers also to a keen interest in knowing about themselves and their child and the world of parenting and its coordination. Trust, the fourth dimension of parental adaptability, is a precursor to success in facing challenges and overcoming obstacles. Lack of trust can lead to restraints in parenting, hindering the fulfillment of roles and achievement of goals. Finally, the last dimension of adaptability is commitment, indicating that parents consider themselves committed to optimal parenting (Siddiqui & M. Ventista, 2018).

Various studies have examined the psychological state of children with autism in relation to their parents, including

Sattari et al. (2022) who studied the resilience and self-compassion of individuals with autism based on the cognitive flexibility of fathers (Sattari et al., 2022), Fathi et al. (2021) demonstrated the effect of family empowerment on the anxiety of parents of children with autism (Fathi & Tabarsi, 2021); also, some studies have shown the effect of parental and maternal states on the psychological state of children with autism (Dissanayake et al., 2020; Yılmaz et al., 2021).

Nevertheless, mothers of children with autism face more difficulties and complex issues in socializing their children than other mothers, but no research has been conducted in this area in Iraq, specifically in the city of Kut, that examines the role of parenting characteristics in the emotional social development of children with autism among Iraqi mothers. Therefore, it is necessary to pay research attention to this topic and determine the effects of mothers' states and characteristics on the emotional social development of their children. The results of such research could pave the way for packages to improve the psychological state of children with autism in the area of emotional social adjustment. Hence, this research sought to answer whether mother-child anxiety, maternal parenting adaptability could predict the emotional social adjustment of children with autism.

2. Methods and Materials

2.1. Study design and Participant

Given the challenges of selecting participants for such experiments, the selection and screening of individuals were conducted purposively and conveniently, with participants being randomly assigned to groups. Therefore, this study is quasi-experimental in method and applied in purpose. The population of this study consisted of married women from Isfahan, and the sample included 48 married women selected voluntarily based on inclusion and exclusion criteria. All individuals filled out the relevant questionnaire and were then randomly divided into two groups: experimental and control. After obtaining the ethics code identified as IR.IAU.KHUISF.REC.1402.028, while the control group did not receive any training, the transdiagnostic experimental group underwent 10 weekly 90-minute sessions, and the solution-focused experimental group, 8 weekly 90-minute sessions. At the end of the training sessions, both experimental and control groups were post-tested, and a follow-up was conducted after 45 days. Inclusion criteria were being married with at least 10 years of marital life, literacy, no psychiatric disorders or addiction

to substances or alcohol, and an interest in voluntarily participating in the research and sharing experiences. Exclusion criteria included concurrent participation in individual, couple, or group counseling sessions, disrupting group training order, not completing group assignments, absence in more than one session, and lack of willingness to participate in or withdrawal from the research.

2.2. Measures

2.2.1. Mother-Child Anxiety

To measure mother-child anxiety, the scale by Ataabadi et al. (2021) was used. This scale consists of 14 questions scored on a five-point Likert scale from strongly agree (5) to strongly disagree (1). These researchers developed this questionnaire to measure the anxiety of mothers of children with stuttering, but its questions are formulated in a way that can assess mothers' anxiety in relation to any mental or physical illness in the child. They reported internal consistency ($\alpha = 0.943$) and test-retest reliability ($r = 0.45$, $p = 0.031$), which were deemed appropriate. The positive and significant correlation of this scale with the Beck Anxiety Inventory ($r = 0.316$, $p < 0.05$) and the Parental Stress Scale ($r = 0.36$, $p < 0.05$) indicated its concurrent and convergent validity, thus its construct validity was confirmed. Factor analysis of this scale showed two general factors: mother-related anxiety ($r = 0.965$, $p = 0.001$) and child-related anxiety ($r = 0.716$, $p = 0.001$) both significantly related to the total score, which validated the construct of the scale. The internal consistency of this questionnaire was reassessed in a preliminary study among mothers of autistic children using Cronbach's alpha, obtaining a score above 0.70 for all sub-scales (Lee et al., 2024).

2.2.2. Emotional Social Adjustment

The Social and Emotional Skills Scale (Payton et al., 2008) was used to assess emotional social adjustment. It contains 14 questions scored on a five-point Likert scale. This scale, designed for children and adolescents, was adapted in this study so the questions could be evaluated by the mother regarding her child. For convergent validity, the correlation between math and reading scores with emotional social adjustment was positive and significant, and internal consistency was above 0.80. This study again reassessed the internal consistency of this questionnaire in a preliminary study using Cronbach's alpha, obtaining a score above 0.80 (Payton et al., 2008).

2.2.3. Yousefi's Parental Adaptability

Yousefi's Parental Adaptability Questionnaire is a 20-item scale developed based on Savickas' (2019) constructivist career path theory, including four sub-scales: concern, control, curiosity, trust, and commitment. Each sub-scale contains four items, scored on a five-point Likert scale (Savickas, 2019). The psychometric properties reported by Yousefi in terms of content and face validity were acceptable and satisfactory. The divergent validity with parental stress was negative and significant, and the convergent validity with parental self-efficacy was positive and significant. Exploratory factor analysis confirmed the five aforementioned factors. In this research, Cronbach's alpha for control (0.70), concern (0.76), curiosity (0.80), trust (0.89), and commitment (0.89) was assessed.

Table 1

Descriptive Statistics of Research Variables

Research Variables	Mean	Standard Deviation	Correlation	Significance
Emotional Social Adjustment	25.64	5.89	1	.000
Parent-Child Anxiety	57.66	6.62	-.314	.000
Parental Anxiety	35.63	5.34	-.275	.000
Child-Specific Anxiety	22.03	2.45	-.250	.000
Control	15.99	2.62	.365	.000
Concern	16.10	2.87	.117	.040
Curiosity	13.17	2.15	.158	.013
Trust	12.72	2.86	.196	.003
Commitment	14.31	3.42	.152	.016
Parental Adaptability	27.47	11.45	.167	.009

The mean and standard deviation for emotional social adjustment of children with autism were 25.64 ± 5.89 ; total score of parent-child anxiety was 57.66 ± 6.62 ; parental anxiety was 35.63 ± 5.34 ; child-specific anxiety was 22.03 ± 2.45 ; control was 15.92 ± 2.62 ; concern was 16.10 ± 2.87 ; curiosity was 13.70 ± 2.15 ; trust was 12.72 ± 2.86 ; commitment was 14.31 ± 3.42 ; and the total score for parental adaptability was 11.45 ± 27.47 . As observed in

Table 2

Stepwise Regression Analysis for Predicting Emotional Social Adjustment Based on Parent-Child Anxiety and Its Dimensions and Parental Adaptability and Its Dimensions

Step	Variables Entered into the Equation	Regression Coefficient	R-Squared	Net Contribution	F	df1	df2	Significance
1	Control	.365	.133	.133	30.49	1	198	.000
2	Parent-Child Anxiety	.427	.182	.049	11.69	1	197	.001
3	Concern	.446	.199	.017	4.14	1	196	.043

As seen in Table 2, among the examined variables, in the first step, control, with a regression coefficient of 0.365, entered the regression equation and was able to predict

2.3. Data Analysis

Data from this study were analyzed using descriptive statistics (mean and standard deviation) and inferential statistics (correlation and multiple regression) using SPSS version 23 software.

3. Findings and Results

To test the hypothesis that mother-child anxiety, parental adaptability, and mindful parenting can predict the emotional social adjustment of children, stepwise regression was used. Table 1 shows the mean and standard deviation of the research variables.

Table 1, all predictor variables had a significant relationship with the emotional social adjustment of children with autism. Among the predictor variables, parent-child anxiety and its dimensions had a negative and significant relationship with emotional social adjustment, and adaptability and its dimensions had a negative and significant relationship with emotional social adjustment.

13.3% of the variance in emotional social adjustment ($p < 0.000$). In the second step, parent-child anxiety, with a regression coefficient of 0.427, along with control, could

predict 18.2% of the variance in emotional social adjustment and alone could explain 4.9% of the variance ($p < 0.001$). In the third step, concern, with a regression coefficient of 0.446, entered the model along with the two variables of

control and parent-child anxiety to predict 19.9% of the variance in emotional social adjustment and alone could predict 1.7% of the variance.

Table 3

One-Way ANOVA for Assessing the Significance of the Contribution of Control, Parent-Child Anxiety, and Concern

Variable	N	Sum of Squares	df	Mean Square	F	Significance
Control						
Regression	1	921.893	1	921.893	30.493	.000
Residual	198	5986.187	198	30.23		
Total	199	6908.08				
Parent-Child Anxiety						
Regression	2	1257.32	2	628.665	21.917	.000
Residual	197	5650.751	197	28.68		
Total	199	6908.08				
Concern						
Regression	3	1374.032	3	458.108	16.226	.000
Residual	196	5533.755	196	28.23		
Total	199	6908.08				

As observed in Table 3, the predictive shares at each stage were statistically significant and reliable ($p < 0.000$).

Table 4

Raw and Standardized Regression Coefficients for Predicting Emotional Social Adjustment Based on Control, Parent-Child Anxiety, and Concern

Variable	Raw Coefficient (B)	Standard Error	Beta Coefficient	T	Significance
Constant	28.313	4.77	-	5.93	.000
Control	0.904	0.187	0.404	4.82	.000
Parent-Child Anxiety	-0.200	0.059	-0.225	-3.37	.001
Concern	0.347	0.170	0.165	2.036	.043

As seen in Table 4, the raw and standardized prediction coefficients for emotional social adjustment based on control, parent-child anxiety, and concern are presented and were all statistically significant.

4. Discussion and Conclusion

This research aimed to predict the emotional social adjustment of children with autism based on parent-child anxiety and its dimensions, as well as parental adaptability and its dimensions. The results showed that both parent-child anxiety and its dimensions and parental adaptability and its dimensions have a significant relationship with the emotional social adjustment of children with autism. This relationship was negative for mother-child anxiety and its dimensions, and positive for parental adaptability and its dimensions. Moreover, the stepwise regression analysis revealed that the total score of parenting anxiety and from

the dimensions of parental adaptability, only parental control and parenting concern had a significant positive relationship.

In comparing these findings with other studies, it should be noted that no research has been published specifically on this topic among children with autism or other children to examine the congruence or incongruence of the results. However, previous research has shown relationships between parental states and psychological constructs of child development (Enea & Rusu, 2020; Lee et al., 2024; Ross & Tolan, 2017; Yılmaz et al., 2021). Like these studies, the results of this research also indicated that the life constructs of mothers with autistic children are related to the psychological state and perception of their psychological condition, aligning with other findings.

To explain the negative relationship between mother-child anxiety and its dimensions with the emotional social adjustment of children with autism, it can be said that this

construct is related to the individual's ability to form satisfactory relationships, which depends on the acceptance of conditions by the individual. This state is weakened and impaired in children with autism (Martínez-González et al., 2022). On the other hand, mother-child anxiety and its dimensions, i.e., maternal anxiety and anxiety for the child, suggest that mothers of these children doubt their correct performance of duties. They doubt their capabilities given their child's condition, viewing tasks as beyond their abilities. They also worry about their child's future; they are concerned that their child cannot adapt, cannot communicate, and will be ridiculed in society, thereby allocating a significant portion of the mother's energy to themselves, becoming a barrier in dedicating energy to the child. This anxiety also becomes a significant obstacle in accepting the child and their condition and may even distort the mother's perception of the child's emotional social adjustment, possibly leading to the mother's despair in making optimal efforts to improve this type of adjustment.

Explaining the positive relationship between parental adaptability and its dimensions with the child's emotional social adjustment, it can be said that since parental adaptability means having attitudes and skills that help parents appropriately resolve developmental issues related to each stage of their children's growth with minimal interpersonal conflicts, and consists of five dimensions: concern, curiosity, control, trust, and commitment, parents with parental adaptability must possess these five characteristics to be adaptable. Parenting concern relates to the future of children and parent-child relationships, which is the first and most important dimension of parental adaptability. Control means optimal control over parenting, the second most important dimension, referring to skills such as decision-making, assertiveness, autonomy, and attributes of effort and dynamism in upbringing; curiosity in parenting alongside control, initiative, and interest in learning about various skills and knowledge for parenting refers also to a keen interest in knowing about oneself, one's child, and the world of parenting and its coordination. Trust, the fourth dimension of parental adaptability, precedes success in facing challenges and overcoming obstacles. Lack of trust can lead to restraints in parenting, hindering the fulfillment of roles and achievement of goals. Finally, the last dimension of adaptability is commitment, indicating that parents consider themselves committed to optimal parenting. Therefore, such a mother is expected to be competent and committed to parental duties, confront and not avoid the challenges of parenting, possibly spending more time with

her child, thereby enhancing the child's emotional social adjustment and better perceiving it.

5. Limitations and Suggestions

This research, like other studies, had limitations, such as the unknown effect of the disorder's severity, the mother's age, and the number of children on the relationships between predictor variables and emotional social adjustment, which could be the subject of other research. Additionally, the non-random sample selection was another limitation of this study. Finally, since the statistical population of this research consisted of students with autism, generalizations to non-autistic children should be avoided.

Authors' Contributions

Authors contributed equally to this article.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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Declaration of Interest

The authors report no conflict of interest.

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Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

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