

# Impact of Social Support on the Psychological Health of Mothers of Children with Autism Spectrum Disorders: A Pakistani Perspective

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## Abstract

This study investigates the impact of social support on the psychological health of mothers of children with ASD in Pakistan. The incidence of ASD varies across the globe, and this study aims to address the gap in understanding the specific challenges faced by Pakistani mothers. The quantitative analysis is performed using a convenience sample of 110 mothers from autism intervention centers situated in Islamabad and Rawalpindi. The Social Provisions Scale (SPS) and the Depression Anxiety Stress Scale (DASS-21) were used to collect the participants' responses. The findings of the study indicate that social support plays an important role in reducing depression, anxiety, and stress among these mothers. This finding of the study emphasizes the need for enhanced social support systems and public awareness campaigns in Pakistan to improve the well-being of mothers and their children with ASD.

**Keywords:** Autism Spectrum Disorders, Psychological Health, Social Support, Mothers, Pakistan

## Introduction

Autism spectrum disorders (ASD) could be referred to as a range of neurodevelopmental disorders with persistent deficits in three main areas including social communication,

interaction, and restricted and repetitive behaviors. These symptoms typically become evident in early childhood, particularly the first 3 years of life (American Psychiatric Association, 2013). ASD significantly impacts a person's ability to express themselves verbally, perform daily activities, and engage socially. The global prevalence of autism spectrum disorders (ASD) is currently estimated at 1 in 100 (Zeidan et al., 2022). In Europe, the prevalence ranges from 0.42% to 3.13% (Bougeard et al., 2021). According to the Centers for Disease Control and Prevention (CDC, 2014), 1 in 36 children are estimated to have ASDs in the USA (Maenner et al., 2023). In the UK, 1 in 57 children (1.76%) is estimated to be on the autism spectrum according to a recent study conducted on school children in England (Roman-Urrestarazu et al., 2021). In the Middle East, the ASD prevalence was 1 in 146 children in the United Arab Emirates (Virolainen et al., 2020). In Asia, it ranges from 0.29-0.70% for children aged 6-12 in China and South Korea, 2.64% (Hong et al., 2020).

Studies have shown that the psychological health of parents, particularly mothers, is directly related to the emotional and psychological health of children (Gao et al., 2022; Clifford, 2023). Autism Spectrum Disorders (ASD) in children have been shown in the literature to have a negative impact on parental psychological health (England & Sim, 2009). Particularly, the mothers of children with ASD face significant psychological health challenges, and increased rates of depression, anxiety, and stress compared to mothers of typically developing children (Wiss, 2018; Hayes et al., 2020). These health challenges mainly arise from managing their child's behavioral issues, communication difficulties, and social impairments, which place considerable emotional and physical demands on them (Marsack-Topolewski, 2020). Studies such as (Vadivelan et al., 2020; Megreya et al., 2020; Ansari et al., 2021) have confirmed that mothers of children with ASD, who are the primary caregivers in most families are at increased risk of depression compared to mothers of typically developing children. Gao et al., (2022) and Clifford, (2023) have identified that the psychological well-being of mothers is very important because it directly influences the emotional and psychological health of their children

Coping with parental stress can be challenging and parents use multiple means for coping with the challenges of caring for a child with autism (Shepherd et al., 2018). Among other factors, several studies have found that social support has emerged as one of the most important factors of this coping mechanism (Miranda et al., 2019; Reddy et al., 2019; Chong & Kua, 2017; Ilias et al., 2018; Gervais et al., 2023). According to research, mothers receive social support from a variety of sources, including their parent's family, partner, peers, other parents of disabled children, and medical professionals, and social support from each source is associated with positive outcomes. Existing literature also presents evidence that parental stress can be mitigated by a strong social support network (Cooley et al., 2019; Angley et al., 2015; Sadiki, 2023).

This study is focused specifically on Pakistan. The analysis of the relationship between ASD, perceived social support, and mother's psychological health is of particular interest because of several reasons, for instance, in Pakistan, the estimated number of children affected by ASD is around 350,000 (Khalid et al., 2020). The country is facing challenges in addressing the needs of these children and their families due to limited resources, social stigma, and insufficient awareness about ASD. Mothers in Pakistan, similar to their counterparts globally,

are at an increased risk of psychological distress. However, the specific role of social support in mitigating this distress among Pakistani mothers remains underexplored.

The primary objective of this study is to examine the relationship between perceived social support, and the psychological health (depression, anxiety, and stress) of mothers of children with ASD in Pakistan. It also aims to determine if this relationship remains constant across different severity levels of the child's ASD. This study aims to fill a significant gap in understanding the relationship between social support and the psychological health of mothers of children with ASD in Pakistan. The findings of this study aim to contribute to the existing literature by providing targeted interventions to enhance the well-being of these mothers and their children. The findings will also contribute as they provide healthcare policymakers with developing tailored psychosocial support services, potentially reducing the global disease burden associated with maternal psychological distress.

The rest of the study is structured as follows, section two presents the details of the material and methods used in the study, section 3 presents the results and discussion, and section 5 presents the conclusion and recommendations.

## **Methodology**

### *Participants and Data Collection*

Since there is no secondary source of large-scale data on patients of ASD and their families, this study is based on primary data collected through a structured questionnaire from the capital city of Pakistan and its twin city Rawalpindi. A convenience sample of mothers of children with ASD was selected to partake in this study from autism intervention centers in Islamabad and Rawalpindi. This form of sampling was employed due to ease of access, affordability, efficiency, and ease of implementation (Doebel & Frank, 2022). The questionnaires used to collect the data comprised three parts, the first part included the demographic details of the mothers, and the second and third parts were based on the Social Provisions Scale (SPS) and the Psychological Health of Mothers (DASS-21).

### *Measures*

The assessment required the participants to fill out a questionnaire including items on the socio-demographic characteristics of the mother and the ASD child, as well as assessment tools on social support and maternal psychological health.

*Social Provisions Scale (SPS):* The SPS comprises six dimensions: attachment, social integration, reassurance of worth, reliable alliance, guidance, and opportunity for nurturance. Attachment assesses the emotional closeness and sense of security individuals derive from their relationships. Social integration measures the extent to which individuals feel connected to their social network and community. Reassurance of worth assesses the extent to which individuals feel valued and respected by others in their social circle. Reliable Alliance evaluates the perceived availability of practical help and support from others in times of need. Guidance reflects the extent to which individuals receive advice, feedback, and guidance from their social network. Opportunity for Nurturance evaluates the ability of individuals to provide support and care for others, contributing to a sense of purpose and fulfillment in relationships (Cutrona & Russell, 1987). This scale consisted of subscales that were formulated both positively and negatively for a total sum of 24 items. It is rated using a four Likert system rating

scales, ranging from 1 (Strongly Disagree) to 4 (Strongly Agree) to measure the six dimensions of social support including attachment, social integration, reassurance of worth, reliable alliance, guidance, and nurturance (So & Fiori, 2022). When validated by (Donnelly, 2022) the SPS scale demonstrated a strong concurrent validity and high internal consistency (Cronbach's alpha of 0.930). Another study (Chiu et al., 2016) examined the factorial and construct validity as well as reliability of the Social Provisions Scale (SPS)-24, found Cronbach's alpha of 0.89 and its 24 items were determined to be highly correlated with total scores and the internal consistency was excellent.

*Psychological Health of Mothers (DASS-21):* The DASS-21 is a 21-item scale with a set of three self-report scales designed specially to measure the level of depression, anxiety, and stress in a general population (Park et al., 2020). Each of the three scales in DASS-21 contains 7 independent items that are further divided into subscales. The depression scale is used to determine hopelessness, dysphoria, self-depreciation, devaluation of life, lack of interest, and anhedonia and inertia (Coker et al., 2018). The anxiety scale in the DASS-21 measures autonomic arousal, situational anxiety, skeletal muscle effects, and experience of anxious effects while the stress scale is major. The anxiety scale in the DASS-21 measures autonomic arousal, situational anxiety, skeletal muscle effects, and experience of anxious effects while the stress scale majorly assesses nervous arousal, difficulty in relaxation, being easily upset tending to be more reactive, and becoming more impatient (Olaseni et al., 2024). To determine the level of depression, anxiety, and stress, the scores in each of the three subscales are summed to get the total scoring (Zanon et al., 2021). Interpretation of the DASS-21 is based on the scores ranging from normal for a score of 0-9, mild for a score of 10-13, moderate for a score of 14-20, severe for a score of 21-27, and extremely severe for a score of 28 or higher for depression. For anxiety, a score of 0-7 is interpreted as normal, 8-9 as mild, 10-14 as moderate, 15-19 as severe, and 20 or higher as extremely severe. For stress, a score of 0-14 is interpreted as normal, 15-18 as mild, 19-25 as moderate, 26-33 as severe, and 34 or higher as extremely severe (Lovibond & Lovibond, 1995).

#### *Ethical Approval*

The study was approved by the Ethics Committee for Research Involving Human Subjects at Universiti Putra Malaysia. Mothers who met the following inclusion were enrolled in the study: (1) Pakistani mothers who can speak English and have children younger than 12 years of age. (2) The children were diagnosed with ASD by a child psychiatrist following the criteria of the Diagnostic and Statistical Manual of Mental Disorder-Fourth or Fifth Edition (DSM-IV) or DSM-V. Permissions were obtained from all autism centers and informed consent was signed by all the mothers, after which all assessments were carried out face-to-face at the autism centers.

#### *Estimation Procedure*

Statistical Package for Social Sciences (SPSS) version 26.0 was used for the analysis. The Descriptive analysis was performed for all study variables, while frequency distributions were obtained to present the demographic details. Ordinary least square regression analysis was performed between each independent construct of DASS-21 and cumulative indicator of social support (SPS).

## Results and Discussion

Table 1 presents the demographic details of the mothers. Table 1 shows that a total of 110 mothers with ASD children completed the two questionnaires: DASS-21 and SPS. The mean age of the participants was  $33.6 \pm 4.79$  SD years old. The mean age of the children with ASD at the time of diagnosis was 3.3 years old  $\pm 0.86$  SD, ranging between 2.5 to 7 years old who were predominantly male (90%). In terms of education, more than half of the participants held a bachelor's degree (64.5%), however, the majority of the participants 81% were unemployed and stayed at home to take care of their children.

Table 2 presents the descriptive statistics including, means, standard deviations, Skewness, and Kurtosis. The mean value for each scale and related subscales shows that the values of Skewness lie between the normal range; SPS= 0.039 and DASS-21 = 0.497. Similarly, kurtosis values for SPS= 1.02 and DASS-21= -0.19 indicate that the variables were normally distributed.

Table 1

*Basic demographic characteristics of participants (mothers)*

Items	Number	Percentage (%)
Age (mothers) (M $\pm$ SD)	33.6 $\pm$ 4.79	
<b>Education level of mothers</b>		
Secondary school graduate	6	5.5
Diploma	7	6.4
Bachelor	71	64.5
Master	24	21.8
PhD	2	1.8
<b>Employment status of mothers</b>		
Employed	21	19
Unemployed	89	81

Table 2

*Descriptive Statistics for all Variables (N=110)*

Scale	M	SD	Skewness	Kurtosis
Social Provisions Scale	3.26	7.98	.039	1.02
DASS-21	3.25	2.95	.497	-.019
Depression	2.40	5.58	-	-
Anxiety	2.53	5.10	-	-
Stress	2.3	4.31	-	-

Table 3 presents the estimates of internal consistency for both scales. For SPS, Cronbach's Alpha of 0.948 indicates excellent internal consistency and confirms that the items on the SPS scale are highly correlated and measure the same underlying concept. For DASS-21, Cronbach's Alpha of 0.950 also indicates excellent internal consistency. The value once again implies that the items on the DASS-21 scale are highly correlated and measure the intended constructs effectively. The Cronbach's Alpha values for the sub-scale also confirm excellent internal consistency for the sub-scales of DASS-21.

Table 3

*Alpha Coefficients for Scales and Subscales*

Sr.	Scale	No of Items	$\alpha$
1	Social Provisions Scale	24	.94
2	DASS-21 (composite)	21	.95
2.1	Depression	7	0.87
2.2	Anxiety	7	0.92
2.3	Stress	7	.89

To determine the relationship between social support and the health of the mother bivariate regression analysis was performed using each construct of DASS-21. Table 4 presents the results. From the results, it can be seen that social support has a statistically significant negative effect on depression anxiety, and stress of mothers. The coefficient of Depression Indicates that for each unit increase in social support, the depression score decreases by 0.4%, showing a beneficial effect of social support. With the value of -0.3468, the coefficient of Anxiety also shows that one unit change in social support reduces anxiety among mothers by 0.3468. finally, the coefficient of stress also confirms a statistically significant negative effect due to an increase in social support.

Table 4

*Regression Analysis*

Dependent Variable	Coefficient (SPS)	Standard Error	t-value	p-value (Coefficient)
<b>Depression</b>	-0.4169	0.087	-4.767	0.04
<b>Anxiety</b>	-0.3468	0.102	-3.383	0.00
<b>Stress</b>	-0.3520	0.090	-3.909	0.00
	R-squared	Adj. R-squared	F-statistic	p-value (F-statistic)
<b>Depression</b>	0.174	0.166	22.72	5.88
<b>Anxiety</b>	0.096	0.088	11.45	0.00
<b>Stress</b>	0.124	0.116	15.28	0.00

The results presented in this study have important implications in the context of Pakistan, where a lack of awareness and cultural and societal norms can influence the availability and efficacy of social support mechanisms (Khan & Ferrari, 2020; Azeem et al., 2021). The results obtained in this study corroborate existing literature that highlights social support as a critical determinant of psychological health in caregivers of children with disabilities (Wang et al., 2022). However, the effect of the social support is not very strong. Possible reasons for weak coefficients can be the cultural factors specific to the Pakistani context, such as societal stigma and limited resources for ASD (Anwar et al., 2018; Aftab et al., 2024; Rathod et al., 2023).

Recent research consistently underscores the importance of social support in enhancing the mental health of mothers of children with ASD. For instance, a study by Benson (2023) demonstrated that mothers with robust social support networks experienced significantly lower levels of stress and anxiety compared to those with limited support. The study highlighted that social support not only provides emotional relief but also practical assistance, which is crucial in managing the demands of caring for a child with ASD.

Further, Acoba et al. (2024) found that perceived social support effectively mediates the relationship between stress and psychological well-being. Their study concluded that mothers

who perceive high levels of social support report better mental health outcomes, emphasizing the role of social networks in buffering the adverse effects of stress.

Moreover, research by Hu and Bentler (2023) showed that social support from family, friends, and support groups significantly enhances life satisfaction and reduces depressive symptoms in parents of children with ASD. This study aligns with the findings of the current research, underscoring the universal benefit of social support across different cultural contexts.

### Conclusion

The objective of this study was to examine the relationship between perceived social support and the psychological health (depression, anxiety, and stress) of mothers of children with autism spectrum disorder (ASD) in Pakistan. Additionally, the study aimed to determine if this relationship is consistent across different severity levels of the child's ASD. For quantitative analysis, a convenience sample of 110 mothers of children with ASD was selected from autism intervention centers in Islamabad and Rawalpindi. Participants completed the Social Provisions Scale (SPS) and the Depression, Anxiety, and Stress Scale (DASS-21). Descriptive statistics, reliability tests (Cronbach's Alpha), factor analysis, and regression analysis were conducted to analyze the data. The findings confirmed that social support significantly and negatively affects health issues such as depression, anxiety, and stress among mothers. It can be concluded that higher social support is associated with lower levels of psychological distress among the mothers of children with ASD.

Based on the findings of the study, to improve the psychological health of mothers of children with ASD in Pakistan, the following policy recommendations are suggested:

It is important to launch nationwide campaigns to educate the public about ASD and the importance of social support. The healthcare professional needs to be equipped with training programs to offer better support to families with ASD children. **Developing a Support Network** where mothers can share experiences and receive emotional and practical support can be of significant importance. Finally, it is also recommended to implement programs that address societal stigma and cultural barriers to effective support for parents and children suffering from ASD.

Finally, one of the major limitations of this study is the availability of the large data for Pakistan, and the use of cross-sectional design, which restricts the ability to draw causal inferences about the relationship between social support and psychological health outcomes. Subject to the availability of the data, future research should aim to address these issues by employing more representative sampling methods.

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