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**Research Article**

# Prevalence Of Stress, Anxiety and Depression in Mother of Children with Autism Spectrum Disorder

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**ABSTRACT**

**Background:** Mothers of children with autism spectrum disorder (ASD) often experience increased levels of stress, anxiety, and depression due to the unique challenges associated with caregiving. Managing a child's behavioral, social, and developmental difficulties can lead to emotional strain, impacting their overall well-being. Understanding the prevalence of these mental health issues is essential for developing effective support systems.

**Study Design:** A Cross-sectional study.

**Aim:** To determine the prevalence of stress, anxiety, and depression in mothers of children with autism spectrum disorder.

**Objectives:**

- To determine the prevalence of stress, anxiety, and depression in mothers of children with autism spectrum disorder.
- To examine the relationship between the severity of autism spectrum disorder symptoms and the prevalence of stress, anxiety, and depression in mothers.
- To assess how the age of children with autism spectrum disorder affects the levels of stress, anxiety, and depression in their mothers.

**Participants:** 98 mothers of children aged 3-5 years diagnosed with autism spectrum disorder were included as per inclusion and exclusion criteria.

**Methods:** Children were selected based on age (3-5 years) and severity of autism spectrum disorder, diagnosed using the Childhood Autism Rating Scale (CARS). The mothers were assessed using the DASS-42 scale, and the data was analyzed statistically.

**Results:** A total of 98 mothers participated in the study. The mean autism severity was 35.72 (SD=3.45), and the mean scores for depression, anxiety, and stress were 13.83 (SD=5.34), 15.82 (SD=4.73), and 23.79 (SD=5.62), respectively. A strong positive correlation was found between autism severity and maternal depression ($r=0.720$, $p<0.01$), anxiety ($r=0.773$, $p<0.01$), and stress ($r=0.695$, $p<0.01$). No significant correlation was found between the child's age and maternal depression ($r=0.099$, $p=0.332$), anxiety ($r=0.109$, $p=0.285$), or stress ($r=-0.100$, $p=0.327$).

**Conclusion:** This study found that higher autism severity is associated with increased maternal depression, anxiety, and stress levels. However, no significant relationship was found between the child's age and maternal psychological distress.

**Keywords:** Autism Spectrum Disorder, DASS-42, stress, anxiety, depression.

## INTRODUCTION

Autism Spectrum Disorder (ASD) is a neuro-developmental condition related to brain development, characterized by challenges in communication and social interaction. The term "spectrum" highlights the broad range of abilities and difficulties experienced by individuals with autism[1]. This disorder is defined by repetitive behaviors, restricted interests, and difficulties with social engagement. In the past, conditions such as Pervasive Developmental Disorders (PDD-NOS), Asperger's disorder, and childhood disintegrative

disorder were classified as Pervasive Developmental Disorders (PDDs) in the DSM-IV. However, in the DSM-5, these conditions were merged under the single diagnosis of autism spectrum disorder[2].

Stress is an inevitable part of life, though its effects are not always immediately apparent. It can manifest in various ways, including irritability, mood fluctuations, and changes in behavior. Stress impacts individuals differently, resulting in both physical and emotional effects. While stress can sometimes have a positive impact, such as providing motivation, excessive stress can be detrimental. Although stress isn't inherently negative—some people thrive under pressure and use it to accomplish tasks—clinically, stress refers to situations that induce discomfort or distress, potentially contributing to mental health problems like anxiety and depression[3].

Anxiety is a feeling of fear, worry, or unease, often accompanied by physical symptoms like sweating, muscle tension, and a rapid heartbeat. It can arise as a natural response to stress, such as when tackling a work challenge, preparing for an exam, or making an important decision. In these contexts, anxiety can be helpful by providing extra energy or focus to manage the task at hand. However, for many individuals with anxiety disorders, this fear is constant and can become overwhelming. While anxiety can be a useful emotion in some situations, chronic or excessive anxiety can develop into a medical condition. Anxiety disorders, a group of mental health conditions, are marked by intense feelings of fear, uneasiness, and worry, which can affect emotional processing and behavior, and lead to physical symptoms. While mild anxiety may cause discomfort, severe anxiety can significantly disrupt daily functioning. Anxiety disorders are the most common mental health condition in the United States, affecting approximately 40 million people, yet only 36.9% of those affected seek treatment[4].

Major depressive disorder (MDD), often referred to as depression, is a persistent and serious condition that impacts an individual's thoughts, emotions, and behavior[5]. Fortunately, it is treatable. Depression typically manifests as feelings of sadness and a disinterest in activities once found enjoyable. It can also result in both emotional and physical difficulties, making it challenging to function at work or in daily life. As a mood disorder, depression is chiefly marked by emotions of sadness, hopelessness, or frustration that significantly disrupt everyday functioning. The Centers for Disease Control and Prevention (CDC) reports that 8.1% of adults in the United States aged 20 and older experienced depression during a two-week period between 2013 and 2016. Depression affects individuals in various ways, often interfering with work, leading to absenteeism, and reducing productivity. It can also put a strain on relationships and exacerbate existing chronic health issues[5,6].

Mothers of children with autism spectrum disorder (ASD) often face a variety of challenges, including managing behavioral concerns, communication barriers, and navigating complex healthcare and educational systems. These responsibilities typically place a significant strain on mothers, contributing to heightened levels of stress, anxiety, and depression. Research has consistently highlighted that mother of children with ASD experience more psychological distress than those of neurotypical children or those with other developmental disabilities[7]. Gaining insight into the prevalence and underlying factors of this distress is essential for creating targeted support strategies and interventions. This study focuses on examining the mental health experiences of mothers raising children with ASD.

## METHODOLOGY

This study was conducted as a cross-sectional study to assess specific characteristics and behaviors of children diagnosed with autism spectrum disorder (ASD). Data was collected from two centers: Thera Kids Noida and West Child Development Centre, Greater Noida. A total of 98 participants were included in the study. The sample size was determined by a statistical expert. The study focused on children aged between 3 and 5 years, selected based on age-specific diagnostic and developmental criteria. The study was conducted over a period of 1 month, which allowed for a detailed snapshot of the children's behavior and developmental patterns.

### Inclusion Criteria:

- Children aged between 3 and 5 years.
- Children diagnosed with autism spectrum disorder (ASD) by a pediatrician, based on the severity of their symptoms.
- Both male and female children diagnosed with ASD.
- Biological mothers or mothers who are the legal guardians of the children were included in the study.

### Exclusion Criteria:

- Mothers with any psychiatric conditions or neurological conditions screen out by psychiatry were excluded from the study.
- Children diagnosed with other **c**ondition**s** apart from autism spectrum disorder, such as developmental delays, intellectual disabilities, or other neurodevelopmental disorders.

### Outcome Measures:

### 1. DASS-42 (Depression, Anxiety, and Stress Scale):

The DASS-42 measures distress on a dimensional basis, capturing depression, anxiety, and stress as varying along a continuum of severity. The DASS does not directly correspond to diagnostic categories like those in the DSM or ICD. The manual offers suggested cutoffs for traditional severity levels. The DASS-42 (Depression, Anxiety, and Stress Scale) has demonstrated high reliability with Cronbach's alpha coefficients of 0.93 for depression, 0.87 for anxiety, and 0.91 for stress, and strong test-retest reliability with correlations between 0.72 and 0.84. It also has confirmed construct validity and strong convergent and discriminant validity[10].

## DATA COLLECTION

Data were collected from 98 mothers of children aged 3–5 years, selected from Thera Kids Noida and West Child Development Centre, Greater Noida. Informed consent was obtained from the mothers of each child. The study focused on three key components: depression, anxiety, and stress, which were measured using the DASS-42 scale.

## DATA ANALYSIS

After completing the evaluations, the data were compiled into a master chart. The data were analyzed using SPSS Version 22. The Pearson correlation coefficient was used to assess the relationship between the severity of autism symptoms in children and the levels of depression, anxiety, and stress in their mothers. Additionally, the relationship between the child's age and the levels of depression, anxiety, and stress in the mothers was also evaluated.

## RESULT

The study explored the relationship between autism severity in children and maternal psychological states, including depression, anxiety, and stress, as well as the impact of the child's age on these factors. A significant and strong positive correlation was found between autism severity and maternal depression ($r = 0.720$, $p < 0.01$), anxiety ($r = 0.773$, $p < 0.01$), and stress ($r = 0.695$, $p < 0.01$) shown in Table 3. This indicates that as the severity of autism in children increases, mothers are more likely to experience heightened levels of these psychological states. In contrast, the child's age showed negligible correlations with maternal depression ($r = 0.099$, $p = 0.332$), anxiety ($r = 0.109$, $p = 0.285$), and stress ($r = -0.100$, $p = 0.327$), none of which were statistically significant. Descriptive statistics revealed a mean autism severity score of 35.72 (SD = 3.452), while the mean scores for maternal depression, anxiety, and stress were 13.83 (SD = 5.342), 15.82 (SD = 4.731), and 23.87 (SD = 5.618), respectively shown in Table 1. These findings emphasize a strong link between autism severity and maternal psychological challenges, while the child's age appears to have a negligible influence.Table 2 presents the descriptive statistics for the variables, including the mean age of the children (3.98, SD = 0.812), and the mean scores for maternal depression (13.83, SD = 5.342), anxiety (15.82, SD = 4.731), and stress (23.87, SD = 5.618)

**Table.1. Descriptive Statistics of Autism severity**

| | Mean | Std.Deviation | N |
|---|---|---|---|
| AUTISM SEVERITY | 35.72 | 3.452 | 98 |
| DEPRESSION | 13.83 | 5.342 | 98 |
| ANXIETY | 15.82 | 4.731 | 98 |
| STRESS | 23.87 | 5.618 | 98 |

**Table.2. Descriptive Statistics according age**

| | Mean | Std.Deviation | N |
|---|---|---|---|
| AGE | 3.98 | .812 | 98 |
| DEPRESSION | 13.83 | 5.342 | 98 |
| ANXIETY | 15.82 | 4.731 | 98 |
| STRESS | 23.87 | 5.618 | 98 |

**Table.3. Correlation between autism severity, age, depression, anxiety and stress**

| | | DEPRESSION | ANXIETY | STRESS |
|---|---|---|---|---|
| AUTISM SEVERITY | | | | |
| Pearson Correlation | 1 | .720** | .773** | .695** |
| Sig.(2-tailed) | | .000 | .000 | .000 |
| N | 98 | 98 | 98 | 98 |
| AGE | | .099 | .109 | -.100 |
| Pearson Correlation | 1 | .332 | .285 | .327 |
| Sig.(2-tailed) | | | | |
| N | 98 | 98 | 98 | 98 |

Note :(**) indicate a statistically significant correlation (p-value < 0.01)

## DISCUSSION

The results of this study reveal a notable link between the severity of autism in children and heightened psychological distress in their mothers, including symptoms of depression, anxiety, and stress. This highlights the significant emotional and mental health struggles encountered by mothers of children with more pronounced autism spectrum disorder (ASD). The strong positive correlations found suggest that as the severity of the child's condition increases, so does the burden feel by the caregiver. This is consistent with earlier research indicating that caregiving demands, combined with difficulties in managing behaviors related to ASD, intensify parental stress and mental health concerns.

Interestingly, the child's age exhibited minimal and statistically insignificant correlations with the psychological states of the mothers. This suggests that the challenges of caregiving and the resulting emotional impact may neither lessen nor increase as the child grows older, indicating that maternal distress is more closely related to the severity of the child's condition rather than developmental stages. This finding is crucial as it points to the necessity for ongoing support for caregivers, regardless of the child's age. A study by Du, X., & Sun (2023), which focused on younger children (ages 3–6), found that maternal stress is significantly influenced by parent-child conflict and child behavioral problems, such as psychosomatic disorders. While the age range in this study was narrow, it highlighted that stress levels are affected by daily caregiving dynamics rather than age alone[6].

These findings support previous studies that stress the complex effects of autism severity on family dynamics. For instance, earlier research has indicated that parents of children with severe autism typically report elevated levels of psychological stress due to increased caregiving responsibilities, insufficient support, and the child's difficulties in becoming independent (Olsson & Hwang, 2001). The lack of a strong connection between the child's age and the mental health of mothers may illustrate the persistent and unyielding nature of caregiving in ASD, regardless of the child's developmental phase. Olsson, M. B., & Hwang, C. P. (2001) revealed that parents of children with severe autism faced greater levels of stress, depression, and anxiety compared to those caring for children with milder conditions, highlighting the impact of symptom severity on parental mental health outcomes[7]. Similarly, Bitsika, V & Sharpley, C. F. (2004) identified the severity of autism symptoms as a major predictor of parental distress[8]. In Weitlauf et al. (2014), an extensive review highlighted the ongoing nature of stress and mental health difficulties among parents of children with ASD, advocating for reliable support systems to mitigate these challenges[9].

## CONCLUSION

In conclusion, the present study demonstrates a significant positive correlation between the severity of autism symptoms in children and the psychological distress (depression, anxiety, and stress) experienced by their mothers. Specifically, higher autism severity was found to be associated with elevated levels of maternal depression, anxiety, and stress, highlighting the profound impact caregiving demands have on maternal mental health. However, no significant relationship was observed between the child's age and maternal psychological distress, suggesting that the severity of autism symptoms, rather than the child's developmental stage, plays a more significant role in influencing maternal well-being.

## LIMITATIONS OF THE STUDY

1. In the present study, we may not have accounted for other factors, such as family support, income, or the mother's own health, which could affect the levels of stress, anxiety, and depression. This makes it difficult to determine if these mental health outcomes are solely due to having a child with autism. The study did not account for the educational qualifications of the mothers.
2. The present study relies on mothers' self-reports of their stress, anxiety, and depression levels, which may introduce bias, as participants might underreport or overreport their symptoms due to social expectations.

## FUTURE RECOMMENDATIONS

1. To achieve more effective results, a larger sample size should be included in future studies.
2. Future studies are recommended to include children aged 7 and above.
3. It is recommended that future studies consider the educational qualifications of mothers as a potential influencing factor.
4. The scope of the study could be expanded to include a broader demographic and various factors influencing maternal mental health.

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