

# Depression, Anxiety, Stress, and Coping Mechanisms among Parents of Children with Autism Spectrum Disorder and Non ASD

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## ABSTRACT

The present study examined depression, anxiety, stress, and coping mechanisms among parents of children with Autism Spectrum Disorder (ASD) and non-ASD children. The primary objective was to determine and compare the levels of psychological distress and coping strategies among parents in both groups. A total sample of 150 parents of children with ASD and non-ASD was selected, and standardized questionnaires were administered to assess psychological variables and coping patterns.

Descriptive statistics, including mean and standard deviation, were used to analyze the socio-demographic characteristics of the sample. Group differences were assessed using the independent samples t-test or Mann–Whitney U test, depending on data distribution, and the Chi-square test for categorical variables. Pearson or Spearman correlation coefficients were calculated to examine the relationships among the components of the Indian Scale for Assessment of Autism (ISAA), Depression Anxiety Stress Scales (DASS), and Brief COPE. Discriminant function analysis was performed to identify the most significant variables differentiating the ASD and non-ASD groups.

The findings revealed that parents of children with ASD reported significantly higher levels of depression, anxiety, and stress, with severe and extremely severe categories being markedly more prevalent ( $p < 0.001$ ) compared to parents of non-ASD children. Furthermore, parents of children with ASD demonstrated lower levels of coping skills, whereas parents of non-ASD children showed moderate levels of coping mechanisms. The results highlight the substantial psychological burden experienced by parents of children with ASD and emphasize the need for targeted psychological support and coping-based interventions.

**Keywords:** Depression, Anxiety, Stress, Coping mechanism and Autism Spectrum Disorder (ASD)..

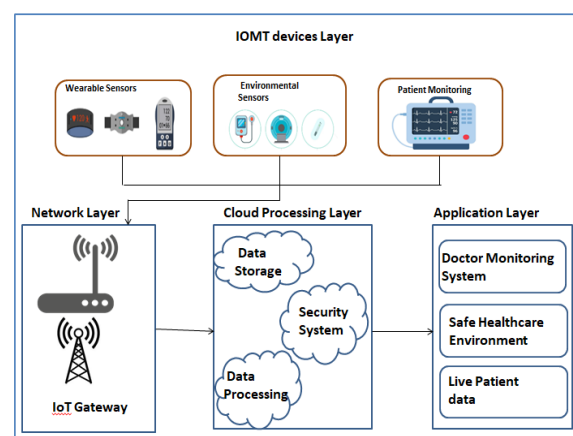
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## INTRODUCTION

Autism Spectrum Disorder (ASD) is a complex neurodevelopmental condition characterized by persistent deficits in social communication and interaction along with restricted and repetitive patterns of behavior, interests, or activities (American Psychiatric Association, 2022). The global prevalence of ASD has increased substantially over the past decades, making it a significant public health concern affecting children and families worldwide (Lord et al., 2020). The chronic and lifelong nature of ASD requires continuous caregiving involvement from parents, often placing substantial psychological and emotional demands on families. Parents of children with ASD frequently experience increased caregiving responsibilities, financial burden, social isolation, and uncertainty regarding the child's future, all of which contribute to elevated levels of psychological distress (Hayes & Watson, 2013). Psychological distress among parents is commonly expressed through depression, anxiety, and stress. Depression is a prevalent mental health condition characterized by persistent sadness, diminished interest in activities, and impaired daily functioning (World Health



Organization, 2023). Anxiety involves excessive worry, emotional tension, and physiological arousal, whereas stress refers to a psychological and physiological response to challenging or threatening life situations (American Psychological Association, 2022). Persistent exposure to psychological distress may negatively influence parental well-being, marital relationships, and family functioning,

ultimately affecting the developmental outcomes of children (Estes et al., 2013).

Research evidence suggests that excessive early screen exposure is significantly associated with language delays, social withdrawal, and increased repetitive behaviors. Daily screen duration and limited parental interaction have been identified as key predictors of virtual autism-like symptoms, underscoring the importance of parental awareness, digital hygiene practices, and timely early intervention (Vidhupriya et al., 2025). In a similar vein, toddlers exposed to more than two hours of screen time per day demonstrate reduced eye contact, diminished joint attention, and lower levels of symbolic play compared to children with minimal exposure (less than 30 minutes per day). These findings indicate that prolonged screen engagement during critical developmental periods may impede socio-communicative growth and functional play skills (Srinivas et al., 2025). Furthermore, children with Autism Spectrum Disorder (ASD) consistently exhibit impairments in executive functions—including working memory, inhibitory control, and cognitive flexibility—which negatively influence academic achievement, behavioral self-regulation, and social adaptation. These executive dysfunctions highlight the necessity of examining cognitive control processes to better understand the functional challenges experienced by children with ASD (Jagruth et al., 2021).

Parents of children with ASD consistently report higher levels of depression, anxiety, and stress compared to parents of typically developing children or children with other developmental conditions (Bonis, 2016; Hayes & Watson, 2013). Mothers, who often serve as primary caregivers, are particularly vulnerable to psychological difficulties due to increased caregiving demands and reduced opportunities for social and occupational engagement. Recent research indicates that mothers of children with ASD demonstrate significantly lower quality of life across multiple domains, including parental functioning and family relationships (Hamad, 2025). Approximately two-thirds of mothers of children with ASD report low levels of family functioning and psychological well-being, highlighting the profound emotional burden associated with caregiving. Anxiety disorders are also highly prevalent among parents of children with ASD. A clinical investigation reported a high prevalence of generalized anxiety disorder among mothers of children with ASD and identified a significant positive relationship between the severity of ASD symptoms and maternal anxiety levels (Science Step Journal, 2024). These findings suggest that the severity of the child's condition may directly influence the psychological health of caregivers. Increased behavioral challenges, communication difficulties, and dependence on caregivers contribute to chronic stress and emotional exhaustion among parents (Craig et al., 2016).

In addition to psychological distress, coping mechanisms play a crucial role in determining how parents manage caregiving challenges. Coping mechanisms refer to cognitive and behavioral strategies used to manage stressful situations and emotional demands (Carver, 1997). Effective coping strategies are associated with improved

psychological adjustment and reduced emotional distress among parents of children with developmental disorders (Pottie & Ingram, 2008). However, research indicates that parents of children with ASD often demonstrate reduced resilience and coping capacity compared to parents of typically developing children (Alrahili, 2023). Factors such as social isolation, financial strain, lack of institutional support, and limited community awareness contribute to reduced coping ability among caregivers (Santoso, 2022). Although many studies report lower resilience among parents of children with ASD, findings remain inconsistent. Some researchers have reported comparable or higher resilience levels among parents of children with neurodevelopmental disorders, suggesting that long-term caregiving experience may enhance adaptive coping abilities (Flores-Buils & Andrés-Roqueta, 2022; Pastor-Cerezuela et al., 2021). Age and educational status have also been identified as important predictors of parental resilience, with older mothers often demonstrating more effective coping strategies and emotional regulation (Buchholz, 2022). While parents of children with ASD experience unique caregiving challenges, parents of non-ASD children also encounter significant stress related to parenting responsibilities and environmental factors. Parenting practices play a critical role in children's emotional and cognitive development, and positive parenting contributes to improved psychological adjustment among children and parents alike (Lanjekar, 2022). In contrast, negative or inconsistent parenting practices are associated with increased psychological distress and family conflict. Parental stress is influenced by several demographic and socioeconomic factors. Studies have shown that parents in larger families experience higher stress levels compared to parents in smaller families, particularly in low-income households (Qian et al., 2021). Economic disadvantage has also been linked to increased parental stress and strained parent-child relationships, emphasizing the importance of social and healthcare support systems for vulnerable families (Ho, 2022).

Research suggests that parents frequently experience increased emotional distress, decreased self-efficacy, and reduced psychological well-being while managing parenting responsibilities. Effective coping strategies are therefore essential for maintaining parental mental health. Mindfulness-based interventions and stress-management programs have shown promising results in reducing parental stress and improving emotional well-being (Helm, 2025). Despite the growing body of research on parental stress and coping in ASD, comparative studies examining depression, anxiety, stress, and coping mechanisms simultaneously among parents of children with ASD and non-ASD children remain limited, particularly in developing country settings. Most existing studies focus primarily on mothers or single psychological variables rather than providing a comprehensive comparison of psychological distress and coping patterns between ASD and non-ASD groups. A systematic comparison of psychological distress and coping mechanisms is essential for understanding the differential psychological burden experienced by parents and for designing effective

intervention programs. Identifying the patterns of depression, anxiety, stress, and coping strategies among parents of children with ASD may contribute to the development of targeted parental training and psychological support services.

Therefore, the present study aims to assess and compare depression, anxiety, stress, and coping mechanisms among parents of children with Autism Spectrum Disorder and non-Autism Spectrum Disorder children. The study seeks to identify differences in psychological distress and coping patterns between the two groups and to provide empirical evidence for the development of effective parent-focused interventions.

#### Methodology

##### Study Aim

The present study aimed to examine and compare depression, anxiety, stress, and coping mechanisms among parents of children with Autism Spectrum Disorder (ASD) and parents of non-ASD children.

##### Objectives

To assess the level of depression among parents of children with ASD and non-ASD children.

To assess the level of anxiety among parents of children with ASD and non-ASD children.

To assess the level of stress among parents of children with ASD and non-ASD children.

To assess coping mechanisms among parents of children with ASD and non-ASD children.

##### Hypotheses

Parents of children with ASD will demonstrate significantly higher levels of depression than parents of non-ASD children.

Parents of children with ASD will demonstrate significantly higher levels of anxiety than parents of non-ASD children.

Parents of children with ASD will demonstrate significantly higher levels of stress than parents of non-ASD children.

Parents of children with ASD will demonstrate significantly lower coping skills compared to parents of non-ASD children.

##### Research Design

A cross-sectional comparative research design was employed to examine differences in psychological distress and coping mechanisms between parents of children with ASD and parents of non-ASD children.

A non-randomized purposive sampling method was used to recruit participants who met the inclusion criteria. The study included two groups: parents of children diagnosed with Autism Spectrum Disorder and parents of non-ASD children.

ASD diagnosis was confirmed through clinical records and assessment reports from rehabilitation and child development centers.

##### Participants

The study sample consisted of 150 parents, divided into two equal groups: 75 parents of children diagnosed with Autism Spectrum Disorder (ASD) and 75 parents of children without Autism Spectrum Disorder (non-ASD). Participants included both mothers and fathers from diverse socioeconomic, occupational, and educational backgrounds. The participants represented a heterogeneous

group of parents in order to obtain a comprehensive understanding of psychological distress and coping mechanisms across different demographic characteristics.

##### Sample Selection

Participants in the ASD group were recruited from rehabilitation centers and child development clinics, where children had previously received a clinical diagnosis of Autism Spectrum Disorder. Parents in the non-ASD comparison group were recruited from the general community. A purposive sampling technique was used to select participants who met the inclusion and exclusion criteria.

##### Inclusion Criteria

Participants were included in the study if they were parents of children diagnosed with Autism Spectrum Disorder (ASD group) or parents of children without Autism Spectrum Disorder (non-ASD group). Parents of any age group were eligible to participate in the study. Both mothers and fathers were included. Participants with any level of education and occupational background were considered eligible for inclusion.

##### Exclusion Criteria

Participants were excluded from the study if they had a history of alcohol dependence syndrome or any psychotic disorder or severe psychiatric illness. Parents who were unable to understand or complete the assessment tools were also excluded from participation.

##### TOOLS

##### Depression Anxiety Stress Scales (DASS-21)

Depression, anxiety, and stress were assessed using the Depression Anxiety Stress Scales – 21 Items (DASS-21), a standardized self-report instrument designed to measure negative emotional states in adults. The DASS-21 consists of 21 items divided into three subscales: depression, anxiety, and stress, with each subscale containing seven items. Responses are rated on a four-point Likert scale ranging from 0 (did not apply to me at all) to 3 (applied to me very much or most of the time). The scale typically requires 5–10 minutes for completion. The depression subscale measures dysphoria, hopelessness, lack of interest, and anhedonia. The anxiety subscale assesses physiological arousal and subjective feelings of fear and worry. The stress subscale evaluates chronic tension, irritability, and difficulty relaxing. Scores for each subscale were calculated by summing item scores and multiplying by two to obtain final scores. Higher scores indicate greater levels of psychological distress.

##### Brief COPE Inventory

Coping mechanisms were assessed using the Brief COPE Inventory, a standardized self-report instrument designed to measure coping strategies used by individuals in response to stress. The Brief COPE consists of 28 items assessing multiple coping strategies including active coping, planning, positive reframing, acceptance, emotional support, instrumental support, self-distraction, denial, behavioral disengagement, self-blame, religion, and humor. Participants rated each item on a Likert scale based on the frequency with which they used each coping strategy in dealing with stressful situations. Higher scores indicate greater utilization of coping strategies.

#### Indian Scale for Assessment of Autism (ISAA)

The Indian Scale for Assessment of Autism (ISAA) was used to confirm the presence and severity of Autism Spectrum Disorder among children of participating parents in the ASD group. The ISAA is a standardized diagnostic instrument widely used in India for the assessment of autism spectrum disorder and provides a reliable measure of symptom severity.

#### Brief Psychiatric Rating Scale (BPRS)

The Brief Psychiatric Rating Scale (BPRS) was administered as a screening tool to assess the presence of major psychiatric symptoms among participating parents. This measure helped ensure that participants did not have severe psychiatric conditions that could influence study outcomes.

#### Severity of Alcohol Dependence Questionnaire (SADQ)

The Severity of Alcohol Dependence Questionnaire (SADQ) was used as a screening instrument to identify participants with alcohol dependence. Participants who met criteria for alcohol dependence were excluded from the study.

#### Procedure

Participants who met the inclusion criteria were approached in rehabilitation centers and community settings. The purpose and objectives of the study were explained to the participants, and written informed consent was obtained prior to data collection. Participants completed the assessment tools individually in a quiet and comfortable environment. Necessary assistance was provided when required to ensure accurate completion of questionnaires. Confidentiality and anonymity of all participants were strictly maintained throughout the study.

#### Statistical Analysis

All statistical analyses were performed using IBM SPSS Statistics Version 24.0. Descriptive statistics were computed to summarize the characteristics of the study sample and the distribution of study variables. Continuous variables, including age, income, depression, anxiety, stress (DASS-21), Brief COPE scores and their subscales, Brief Psychiatric Rating Scale (BPRS), Severity of Alcohol Dependence Questionnaire (SADQ), Indian Scale for Assessment of Autism (ISAA), and ISAA subscales, were analyzed using means and standard deviations. Categorical variables such as gender, educational level, occupation, socioeconomic status, and type of family were summarized using frequencies and percentages. Prevalence rates were calculated for levels of depression, anxiety, stress (DASS components), and coping strategies as measured by the Brief COPE and its subscales.

The internal consistency reliability of the instruments was evaluated using Cronbach's alpha ( $\alpha$ ) coefficients for the DASS-21 subscales, Brief COPE and its subscales, ISAA, BPRS, and SADQ. Group differences between parents of children with Autism Spectrum Disorder and parents of non-ASD children were examined using the independent samples t-test for normally distributed variables and the

Mann-Whitney U test for variables that did not meet normality assumptions. Associations between ASD group status and demographic and socioeconomic variables, as well as DASS components and coping strategies, were examined using the Chi-square test.

Relationships among autism severity (ISAA), psychological distress (DASS-21), and coping strategies (Brief COPE) were examined using Pearson correlation coefficients for normally distributed variables and Spearman rank correlation coefficients for non-normally distributed variables. To identify the most significant variables differentiating parents of children with ASD from parents of non-ASD children, discriminant function analysis was conducted. A classification matrix was generated to evaluate the predictive accuracy of the discriminant model. A p-value of  $\leq 0.05$  was considered statistically significant for all analyses.

#### Results & Discussion

The present study aimed to examine depression, anxiety, stress, and coping mechanisms among parents of children with Autism Spectrum Disorder (ASD) and parents of non-ASD children. Statistical analyses included descriptive statistics, Chi-square tests, independent sample *t*-tests or Mann-Whitney U tests, correlation analysis, and discriminant function analysis.

Descriptive statistics, including means and standard deviations, were calculated for quantitative variables such as age, income, Depression, Anxiety and Stress (DASS-21), Brief COPE and its subscales, Brief Psychiatric Rating Scale (BPRS), Severity of Alcohol Dependence Questionnaire (SADQ), and Indian Scale for Assessment of Autism (ISAA) scores. Frequencies and percentages were computed for categorical variables including gender, education, occupation, socioeconomic status, and type of family.

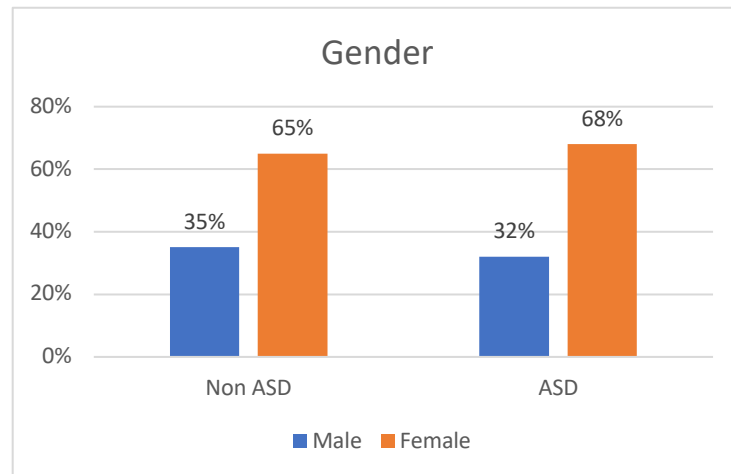
In the present study, DASS-21, Brief COPE, SADQ, and BPRS scores were considered dependent variables, whereas ISAA scores were treated as the independent variable representing autism severity. Depression, anxiety, and stress were measured using the DASS-21 scale with score ranges of 0–28+ for depression, 0–20+ for anxiety, and 0–34+ for stress, while coping strategies were assessed using the Brief COPE scale with a score range of 28–112. Autism severity was assessed using ISAA scores ranging from below 70 to above 153.

#### Socio-Demographic Variables

##### 1. Gender Distribution

The graph representing gender distribution shows that in the Non-ASD group, 35% were males and 65% were females, whereas in the ASD group, 32% were males and 68% were females. In both groups, female participants constituted the majority.

The Chi-square analysis revealed no statistically significant association between gender and group status ( $\chi^2 = 0.120$ ,  $p = 0.729$ ). This indicates that the ASD and Non-ASD groups were comparable in terms of gender distribution.

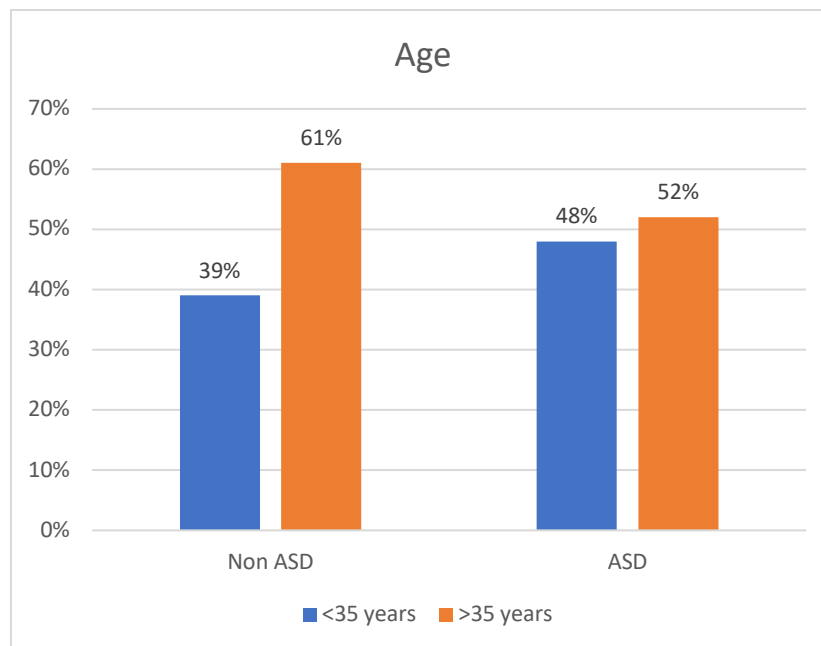


**Figure 1: Gender of the participants**

### 2. Age Distribution

The graph depicting age distribution indicates that in the Non-ASD group, 39% of participants were below 35 years, while 61% were 35 years or older. In the ASD group, 48% were below 35 years and 52% were aged 35 years or above.

Although slightly more younger parents were observed in the ASD group, the difference was not statistically significant ( $\chi^2 = 1.330$ ,  $p = 0.249$ ). Hence, age distribution did not differ significantly between the two groups.

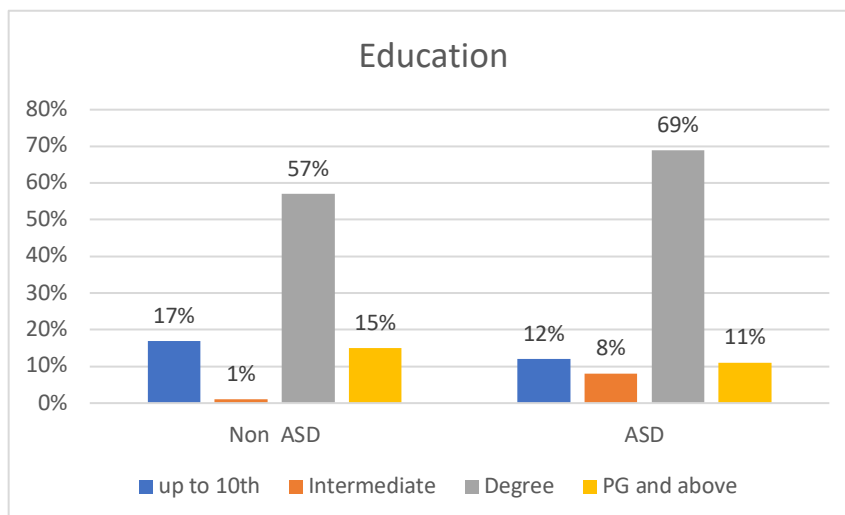


**Figure 2: Age range of the participants**

### 3. Educational Qualification

The graph illustrating educational status shows that the majority of participants in both groups had completed a Degree (57% in Non-ASD and 69% in ASD). Smaller proportions were educated up to 10th standard, Intermediate, or PG/PhD levels.

Statistical analysis showed no significant association between education level and group ( $\chi^2 = 2.339$ ,  $p = 0.505$ ). This suggests that educational qualifications were comparable between ASD and Non-ASD parents.

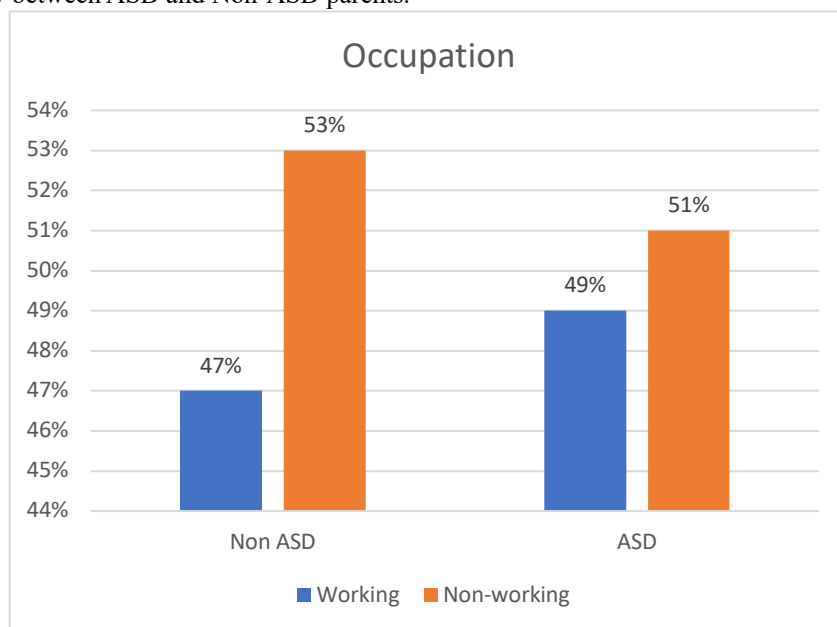


**Figure 3: Education of the participants**

#### 4. Occupation Status

The occupation graph indicates that in the Non-ASD group, 47% were working and 53% were non-working. In the ASD group, 49% were working and 51% were non-working.

The difference between groups was not statistically significant ( $\chi^2 = 0.107$ ,  $p = 0.744$ ). Therefore, occupational status did not significantly vary between ASD and Non-ASD parents.

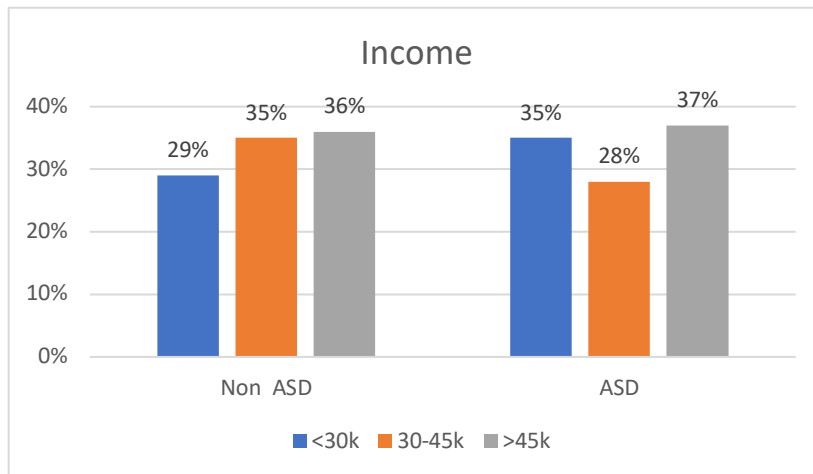


**Figure 4: Occupation of the participants**

#### 5. Income Distribution

The income graph demonstrates that participants were relatively evenly distributed across income categories in both groups. In the Non-ASD group, 29% earned  $\leq$  ₹30,000, 35% earned ₹30,001–45,000, and 36% earned  $\geq$  ₹45,000. In the ASD group, 35% earned  $\leq$  ₹30,000, 28% earned ₹30,001–45,000, and 38% earned  $\geq$  ₹45,000.

No statistically significant association was found between income and group status ( $\chi^2 = 0.883$ ,  $p = 0.643$ ). Thus, income levels were similar across groups.

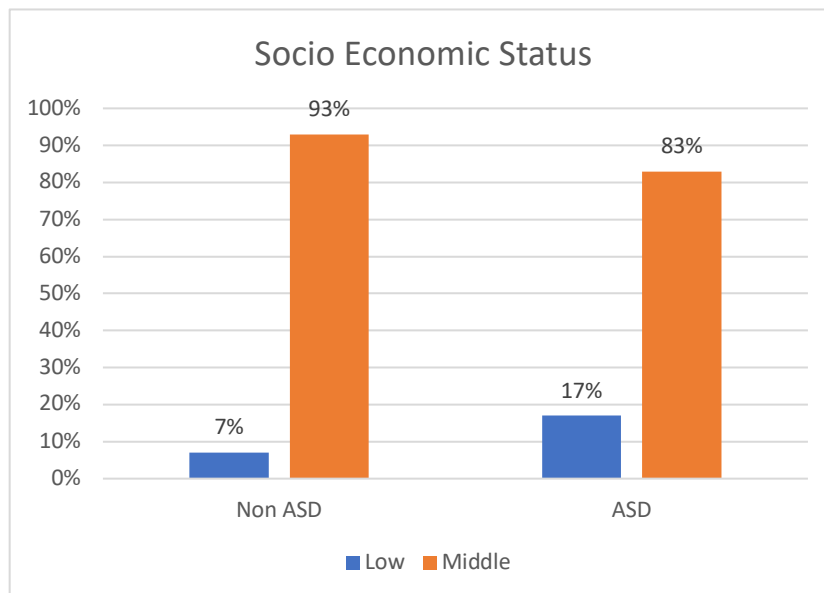


**Figure 5: Income of the participants**

### 6. Socio-Economic Status (SES)

The SES graph indicates that the majority of participants belonged to the middle socio-economic category in both groups (93% in Non-ASD and 83% in ASD). However, a higher proportion of low SES participants was observed in the ASD group (17%) compared to the Non-ASD group (7%).

The Chi-square test revealed a statistically significant association between SES and group status ( $\chi^2 = 4.040, p = 0.044$ ). This suggests that socio-economic status differs significantly between ASD and Non-ASD groups, with a relatively higher representation of low SES families in the ASD group.



**Figure 6: Socio-Economic Status of the participants**

### 7. Type of Family

The graph representing type of family shows that the majority of participants belonged to nuclear families (91% in Non-ASD and 85% in ASD), while a smaller proportion belonged to joint families.

The difference between groups was not statistically significant ( $\chi^2 = 1.010, p = 0.315$ ). Therefore, family structure did not significantly differ between ASD and Non-ASD groups.

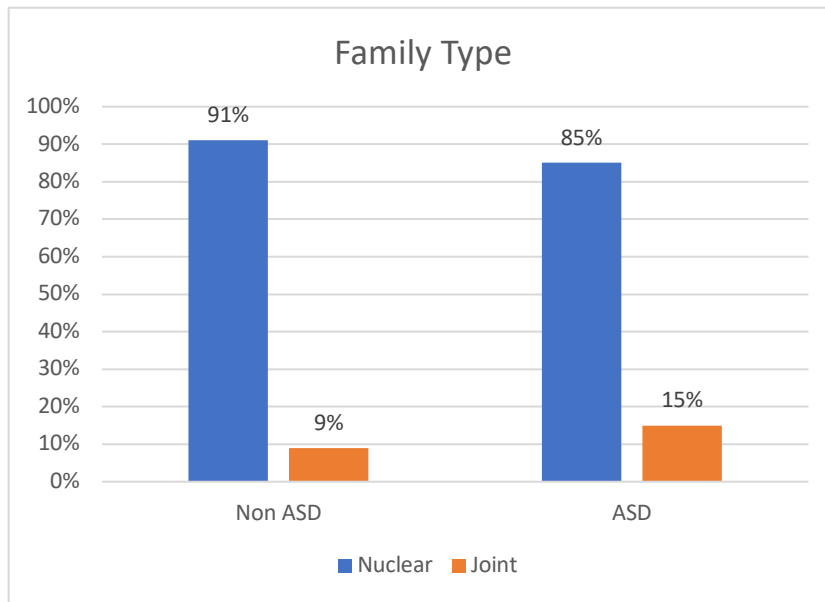


Figure 7: Type of Family of the participants

The graphical representation of socio-demographic variables indicates that both ASD and Non-ASD groups were largely comparable in terms of gender, age, education, occupation, income, and family type. However, socio-economic status (SES) showed a statistically significant difference, suggesting that economic background may play a role in group characteristics.

Table 1: Comparison of Age and Monthly Income Between Parents of Children With ASD and Non-ASD

Variable	Group	n	M	SD	p
Age (years)	Non-ASD	75	34.57	3.72	.935
	ASD	75	34.52	4.30	
Monthly Income (INR)	Non-ASD	75	40,906.67	13,173.66	.621
	ASD	75	42,066.67	15,431.92	

Note. Values are presented as mean (M) and standard deviation (SD). p values are based on independent samples comparisons (Mann–Whitney U test).

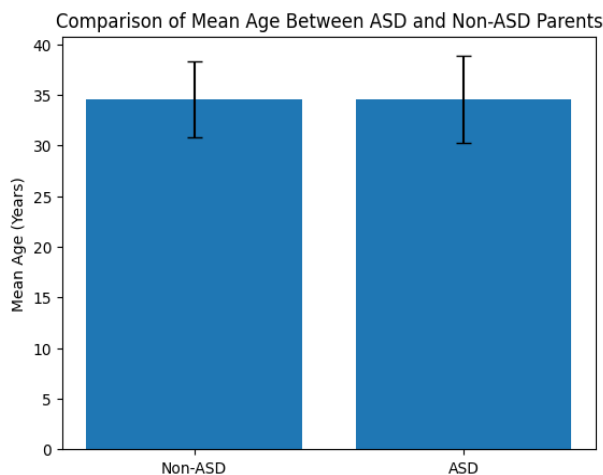


Figure 8. Mean age (in years) of parents in ASD and Non-ASD groups. Error bars represent standard deviations. No significant difference was observed ( $p = .935$ ).

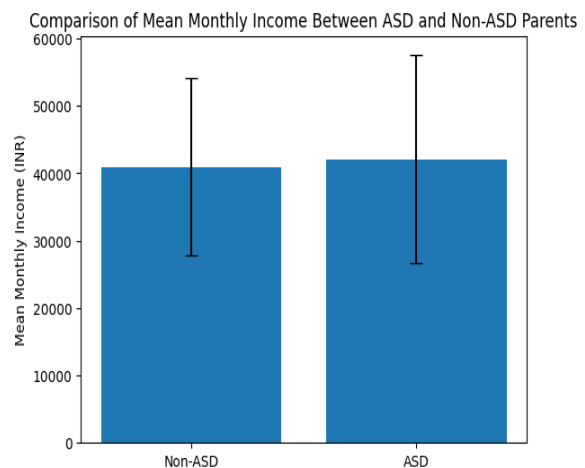


Figure 9. Mean monthly income (in INR) of parents in ASD and Non-ASD groups. Error bars represent standard deviations. No significant difference was observed ( $p = .621$ ).

No statistically significant differences were observed between parents of children with ASD and Non-ASD in terms of age or monthly income. The mean age of parents in the ASD group (M = 34.52, SD = 4.30) was comparable to that of the Non-ASD group (M = 34.57, SD = 3.72),  $p = .935$ . Similarly, monthly income did not significantly differ between the ASD group (M = ₹42,066.67, SD = 15,431.92) and the Non-ASD group (M = ₹40,906.67, SD = 13,173.66),  $p = .621$ . These findings indicate that the two groups were demographically comparable with respect to age and economic background. Therefore, subsequent differences observed in psychological variables are unlikely to be attributable to age or income disparities.

**Table 2: Association Between DASS Severity Categories and ASD Status**

Variable	Severity Level	Non-ASD n (%)	ASD n (%)	$\chi^2$	p
<b>Depression</b>	Normal	39 (52.0)	0 (0.0)	86.68	< .001
	Mild	22 (29.3)	9 (12.0)		
	Moderate	14 (18.7)	29 (38.7)		
	Severe	14 (18.7)	33 (44.0)		
	Extremely Severe	0 (0.0)	4 (5.3)		
<b>Anxiety</b>	Normal	63 (84.0)	9 (12.0)	83.59	< .001
	Mild	12 (16.0)	32 (42.7)		
	Moderate	0 (0.0)	0 (0.0)		
	Severe	0 (0.0)	23 (30.7)		
	Extremely Severe	0 (0.0)	11 (14.7)		
<b>Stress</b>	Normal	61 (81.3)	0 (0.0)	114.36	< .001
	Mild	0 (0.0)	10 (13.3)		
	Moderate	6 (8.0)	27 (36.0)		
	Severe	8 (10.7)	8 (10.7)		
	Extremely Severe	0 (0.0)	30 (40.0)		
<b>Brief COPE</b>	Low Coping	30 (40.0)	75 (100.0)	64.29	< .001
	Moderate Coping	11 (14.7)	0 (0.0)		
	High Coping	34 (45.3)	0 (0.0)		

**Note.** Values are presented as frequency (percentage). Chi-square tests were used to examine associations between ASD status and psychological severity categories

A highly significant association was observed between ASD status and severity levels of depression, anxiety, stress, and coping (all  $p < .001$ ).

#### Depression

More than half of the Non-ASD parents (52%) fell within the normal range for depression, whereas none of the parents in the ASD group were classified as normal. Severe and extremely severe depression was substantially higher among ASD parents (49.3%) compared to Non-ASD parents (18.7%). The association was statistically significant ( $\chi^2 = 86.68$ ,  $p < .001$ ), indicating a strong relationship between parenting a child with ASD and elevated depressive symptom severity.

The absence of “normal” depression scores among ASD parents highlights the chronic psychological burden associated with ASD caregiving. These findings align with large-scale epidemiological research showing significantly higher odds of depressive disorders among parents of children with ASD compared to parents of typically developing children (Daniels et al., 2008; Hayes & Watson, 2013). A meta-analysis by Hayes and Watson (2013) concluded that parents of children with ASD experience significantly higher levels of psychological distress compared to parents of children with other developmental disabilities. Contributing factors may include behavioral challenges, caregiving demands, social isolation, and uncertainty regarding long-term prognosis.

#### Anxiety

The majority of Non-ASD parents (84%) were within the normal range for anxiety, whereas only 12% of ASD parents fell within this category. Severe and extremely severe anxiety was reported by 45.4% of ASD parents, while none of the Non-ASD parents were classified in these categories. This association was highly significant ( $\chi^2 = 83.59$ ,  $p < .001$ ). The significantly elevated anxiety levels observed among ASD parents are consistent with prior research indicating heightened anticipatory stress, concerns about future independence, and social stigma (Vasilopoulou & Nisbet, 2016). Anxiety may be exacerbated by unpredictable behavioral manifestations and limited access to structured support systems.

#### Stress

Stress levels showed the most striking difference. While 81.3% of Non-ASD parents reported normal stress levels, none of the ASD parents were categorized as normal. Notably, 40% of ASD parents reported extremely severe stress compared to none in the Non-ASD group ( $\chi^2 = 114.36$ ,  $p < .001$ ). Stress emerged as the most severe domain in the present study, with 40% of ASD parents reporting extremely severe stress. Chronic stress in ASD caregiving has been linked not only to psychological morbidity but also to physiological dysregulation, including altered cortisol responses (Ruiz-Robledillo & Moya-Albiol, 2013). Long-term stress exposure may therefore have both mental and physical health implications.

#### Coping (Brief COPE)

All ASD parents (100%) were categorized as having low coping levels, whereas 45.3% of Non-ASD parents demonstrated high coping abilities. The association between ASD status and coping level was statistically significant ( $\chi^2 = 64.29, p < .001$ ), suggesting impaired coping mechanisms among parents of children with ASD. The finding that all ASD parents fell into the low coping category suggests a potential depletion of adaptive coping resources. Previous research indicates that while parents of children with ASD often engage in problem-focused and social-support coping strategies, prolonged stress may shift coping patterns toward emotional exhaustion or avoidance (Pottie & Ingram, 2008). Lower coping levels may function as a mediating factor in the relationship between ASD caregiving and psychological distress. This highlights the need for structured coping enhancement programs within ASD intervention frameworks. The results can be understood within the framework of Lazarus and Folkman's Stress and Coping Theory (1984), which posits that psychological distress arises when perceived demands exceed available coping resources. In ASD caregiving contexts, persistent stressors combined with reduced coping efficacy may explain the observed severity levels.

**Table 3: Comparison of Mean Psychological Scores**

Variable	Non-ASD (Mean ± SD)	ASD (Mean ± SD)	p-value
<b>Total DASS</b>	24.1 ± 15.29	64.8 ± 16.42	<0.001
<b>Depression</b>	9.3 ± 5.78	21.7 ± 4.73	<0.001
<b>Anxiety</b>	3.7 ± 3.98	14.6 ± 5.74	<0.001
<b>Stress</b>	11.0 ± 7.21	28.5 ± 9.01	<0.001
<b>Brief COPE</b>	73.1 ± 19.72	44.4 ± 8.57	<0.001
<b>SADQ</b>	6.45 ± 3.73	5.8 ± 3.17	0.325
<b>BPRS</b>	22.7 ± 3.18	21.4 ± 2.61	0.002

A highly significant association was observed between ASD status and severity levels of depression, anxiety, stress, and coping (all  $p < .001$ ).

**Depression**

More than half of the Non-ASD parents (52%) fell within the normal range for depression, whereas none of the parents in the ASD group were classified as normal. Severe and extremely severe depression was substantially higher among ASD parents (49.3%) compared to Non-ASD parents (18.7%). The association was statistically significant ( $\chi^2 = 86.68, p < .001$ ), indicating a strong relationship between parenting a child with ASD and elevated depressive symptom severity.

**Anxiety**

The majority of Non-ASD parents (84%) were within the normal range for anxiety, whereas only 12% of ASD parents fell within this category. Severe and extremely severe anxiety was reported by 45.4% of ASD parents, while none of the Non-ASD parents were classified in these categories. This association was highly significant ( $\chi^2 = 83.59, p < .001$ ).

**Stress**

Stress levels showed the most striking difference. While 81.3% of Non-ASD parents reported normal stress levels, none of the ASD parents were categorized as normal. Notably, 40% of ASD parents reported extremely severe stress compared to none in the Non-ASD group ( $\chi^2 = 114.36, p < .001$ ).

**Coping (Brief COPE)**

All ASD parents (100%) were categorized as having low coping levels, whereas 45.3% of Non-ASD parents demonstrated high coping abilities. The association between ASD status and coping level was statistically significant ( $\chi^2 = 64.29, p < .001$ ), suggesting impaired coping mechanisms among parents of children with ASD.

**Table 4: Subdomains of Brief COPE**

Subscale	Non-ASD	ASD	p-value
<b>Problem-Focused Coping</b>	22.6 ± 6.23	12.7 ± 1.79	<0.001
<b>Emotion-Focused Coping</b>	30.5 ± 7.61	17.8 ± 4.19	<0.001
<b>Avoidant Coping</b>	19.8 ± 6.27	13.9 ± 2.25	<0.001

**Note.** p-values based on Mann-Whitney U test. Cohen's *d* interpreted as small (0.2), medium (0.5), and large (0.8) effect sizes.

Significant differences were observed across all Brief COPE subdomains between parents of children with ASD and Non-ASD (all  $p < .001$ ).

Parents of children with ASD reported substantially lower use of:

**Problem-focused coping** ( $M = 12.70, SD = 1.79$ ) compared to Non-ASD parents ( $M = 22.60, SD = 6.23$ ), demonstrating a very large effect size ( $d = 2.14$ ).

**Emotion-focused coping** ( $M = 17.80, SD = 4.19$ ) compared to Non-ASD parents ( $M = 30.50, SD = 7.61$ ), also reflecting a very large effect size ( $d = 2.04$ ).

**Avoidant coping** ( $M = 13.90, SD = 2.25$ ) compared to Non-ASD parents ( $M = 19.80, SD = 6.27$ ), with a large effect size ( $d = 1.24$ ).

The magnitude of these effect sizes suggests clinically meaningful differences rather than merely statistical significance.

The present findings reveal significantly diminished coping capacities across all domains among parents of children with ASD. These results align with theoretical and empirical literature suggesting that chronic caregiving stress may erode adaptive coping mechanisms over time.

**Problem-Focused Coping**

Problem-focused coping involves active strategies such as planning, information seeking, and taking direct action to address stressors. The significantly lower scores observed among ASD parents suggest reduced perceived control over caregiving challenges. According to Lazarus and Folkman's (1984) transactional model of stress, problem-focused coping is most effective when individuals perceive stressors as modifiable. However, ASD-related challenges—such as developmental delays, behavioral unpredictability, and long-term care demands—may be perceived as less controllable, thereby limiting engagement in active coping

strategies. Previous studies have shown mixed findings; some research suggests that parents of children with ASD attempt to use problem-focused coping initially, but sustained stress exposure may reduce coping effectiveness (Karst & Van Hecke, 2012).

#### Emotion-Focused Coping

Emotion-focused coping includes strategies such as seeking emotional support, positive reframing, and acceptance. The significantly lower emotion-focused coping scores among ASD parents indicate potential emotional exhaustion or reduced access to social support networks. Pottie and Ingram (2008) reported that emotion-focused coping can buffer stress among parents of children with ASD when adequate social support is available. However, persistent stigma, caregiver isolation, and service barriers may diminish these coping resources. Lower emotion-focused coping may partially explain the elevated depression and anxiety levels observed in earlier analyses.

#### Avoidant Coping

Interestingly, avoidant coping was also lower among ASD parents. While avoidant coping is generally considered maladaptive, lower scores may reflect emotional overload rather than adaptive functioning. Chronic caregiving demands may leave little psychological space for disengagement strategies. Alternatively, the reduced avoidant coping could indicate a state of constant engagement with caregiving responsibilities, leaving minimal opportunity for psychological withdrawal. Meta-analytic evidence demonstrates that coping strategies significantly mediate the relationship between parenting stress and psychological outcomes in ASD caregiving contexts (Hayes & Watson, 2013). The extremely large effect sizes observed in the present study suggest that coping deficits may play a central role in exacerbating parental distress. These findings reinforce the conceptualization of ASD caregiving as a chronic stress condition requiring structured coping support rather than informal adaptation alone.

#### DISCUSSION

The present study investigated levels of depression, anxiety, stress, and coping mechanisms among parents of children with Autism Spectrum Disorder (ASD) compared to parents of non-ASD children. The findings reveal a clear and statistically significant elevation in psychological distress among parents of children with ASD, accompanied by markedly reduced coping capacities. These results reinforce the conceptualization of ASD caregiving as a chronic psychological stress condition with substantial emotional consequences.

#### Depression

Consistent with the first hypothesis, parents of children with ASD reported significantly higher levels of depression, with a substantial proportion falling within severe and extremely severe categories. These findings align with large-scale epidemiological evidence demonstrating elevated risk for depressive disorders among parents of children with ASD. For example, Daniels et al. (2008) reported that mothers (OR = 2.95) and fathers (OR = 2.41) of children with ASD were significantly more likely to receive a depression diagnosis compared to parents of non-

ASD children. Furthermore, Hayes and Watson (2013), in their meta-analysis, concluded that parents of children with ASD experience greater psychological distress than parents of typically developing children and even those with other developmental disabilities.

The elevated depressive symptoms observed in the present study may reflect cumulative caregiving demands, behavioral challenges, social stigma, financial burden, and uncertainty regarding long-term developmental outcomes. Research also indicates that sleep disturbances—both in children with ASD and in parents—contribute significantly to depressive symptomatology (as evidenced in prior studies examining sleep quality and parental mental health). These multidimensional stressors likely interact to increase vulnerability to mood disturbances.

#### Anxiety

The second hypothesis anticipated elevated anxiety levels among parents of children with ASD. The findings confirm significantly higher anxiety levels in the ASD group relative to the non-ASD group, although severity patterns may vary across samples and cultural contexts. Elevated anxiety among ASD parents has been consistently linked to anticipatory concerns about the child's independence, educational placement, social inclusion, and long-term care needs (Vasilopoulou & Nisbet, 2016).

Interestingly, some cross-cultural research (e.g., Slovenian samples) has reported no clinically elevated anxiety levels, suggesting that contextual variables such as perceived social support, access to services, and coping strategies may moderate anxiety outcomes. In the present study, limited coping capacity may have amplified anxiety symptoms, particularly in environments where structured support systems are insufficient.

#### Stress

The third hypothesis predicted higher stress levels among parents of children with ASD, and the results strongly supported this expectation. Stress emerged as the most pronounced domain, with a substantial proportion of ASD parents reporting extremely severe stress levels. Chronic parenting stress in ASD contexts has been documented extensively and is associated not only with psychological distress but also with physiological dysregulation, including altered cortisol patterns, elevated blood pressure, and increased autonomic arousal (Ruiz-Robledillo & Moya-Albiol, 2013).

Research incorporating physiological markers of stress further substantiates the psychological burden associated with ASD caregiving. Persistent exposure to behavioral unpredictability, service coordination demands, and prolonged diagnostic processes (often exceeding six months) may exacerbate stress responses. The findings therefore support the view that ASD caregiving represents a sustained stress exposure condition with potential long-term mental and physical health implications.

#### Coping Mechanisms

The fourth hypothesis predicted reduced coping skills among ASD parents, which was strongly supported. Parents of children with ASD demonstrated significantly lower coping scores across domains compared to parents of non-ASD children. Lower problem-focused coping suggests

diminished perceived control over caregiving stressors, consistent with Lazarus and Folkman's (1984) transactional model of stress and coping. When stressors are appraised as uncontrollable or chronic—as is often the case in ASD—engagement in active problem-solving strategies may decline.

Reduced emotion-focused coping may reflect emotional exhaustion, social withdrawal, or limited access to supportive networks. Prior research has shown that coping strategies such as positive reinterpretation and growth are associated with higher perceived social support and lower depression and anxiety levels. Therefore, diminished use of adaptive emotion-focused strategies may partially explain the elevated distress observed.

Interestingly, avoidant coping was also lower. While typically maladaptive, lower avoidant coping in this context may reflect continuous caregiving engagement rather than psychological resilience. Parents may have limited opportunity for disengagement due to constant caregiving responsibilities.

Overall, coping deficits appear to function as a mediating factor in the relationship between caregiving burden and psychological morbidity. These findings underscore the importance of structured coping enhancement interventions within ASD service frameworks. The absence of significant differences in substance dependence suggests that psychological distress in this population is not primarily mediated by maladaptive substance use behaviors. Rather, distress appears more directly attributable to caregiving demands and coping limitations. The comparability of age and income across groups strengthens internal validity and suggests that psychological disparities are not attributable to demographic confounders. Instead, caregiving-related stressors likely explain the observed differences.

#### Problem-Focused Coping

Problem-focused coping scores were significantly lower among ASD parents. According to Lazarus and Folkman's (1984) transactional model of stress, problem-focused coping is effective when stressors are perceived as controllable. However, ASD-related challenges—such as neurodevelopmental impairments and behavioral unpredictability—may be perceived as less modifiable, thereby reducing engagement in active coping strategies. Karst and Van Hecke (2012) similarly noted that while parents initially attempt active coping, chronic stress may reduce coping efficacy over time.

#### Emotion-Focused Coping

Emotion-focused coping was also significantly lower in the ASD group. Emotion-focused strategies, including positive reframing and seeking emotional support, can buffer stress when social networks are strong (Pottie & Ingram, 2008). However, stigma, isolation, and reduced community support may diminish access to these resources. Lower emotion-focused coping may partly explain the elevated depression and anxiety levels observed.

#### Avoidant Coping

Interestingly, avoidant coping was also lower among ASD parents. While typically considered maladaptive, lower avoidant coping in this context may reflect emotional overload and constant caregiving engagement rather than

resilience. Parents may have limited opportunity for psychological disengagement due to continuous caregiving responsibilities. The findings are best interpreted within Lazarus and Folkman's (1984) Stress and Coping Theory, which posits that distress arises when perceived demands exceed coping resources. In ASD caregiving, persistent stressors combined with reduced coping flexibility likely contribute to the severity of psychological symptoms observed.

Furthermore, coping deficits may act as mediators between caregiving burden and psychological outcomes, amplifying vulnerability to mood and anxiety disorders. The absence of significant differences in SADQ scores suggests that substance-related behaviors did not mediate psychological distress in this sample. This indicates that distress among ASD parents may be more directly associated with caregiving demands rather than maladaptive substance coping patterns. Age and income were comparable across groups, strengthening internal validity. Therefore, the psychological differences observed are unlikely attributable to demographic disparities and are more plausibly linked to caregiving burden.

## CONCLUSION

The present study provides compelling empirical evidence that parents of children with Autism Spectrum Disorder experience significantly elevated levels of depression, anxiety, and stress compared to parents of non-ASD children. In addition, these parents exhibit markedly reduced coping capacities across multiple domains.

The severity of psychological distress observed indicates that ASD caregiving constitutes a chronic psychological risk condition rather than a transient adjustment challenge. The findings highlight the cumulative impact of behavioral management demands, service navigation challenges, social stigma, sleep disruption, and uncertainty regarding long-term outcomes.

Importantly, diminished coping capacity appears to exacerbate vulnerability to mood and anxiety symptoms. This suggests that psychological distress among ASD parents is not solely a function of caregiving burden but also of reduced adaptive coping flexibility.

From a clinical perspective, these results underscore the urgent need to integrate parental mental health assessment and intervention into ASD care models. Routine screening for depression, anxiety, and stress should become standard practice within developmental and pediatric clinics. Structured interventions—such as cognitive-behavioral coping enhancement programs, resilience training, psychoeducation modules, and facilitated parent support groups—are strongly indicated.

At a broader systems level, policymakers and healthcare providers must recognize parental psychological well-being as an essential component of comprehensive ASD management. Supporting parental mental health may indirectly improve child outcomes by enhancing caregiving quality and family functioning.

In conclusion, the study contributes to the growing body of literature emphasizing the profound psychological impact of ASD caregiving. Addressing parental mental health is not

merely beneficial but essential for sustainable, family-centered autism care.

#### Clinical and Practical Implications

Routine psychological screening for depression, anxiety, and stress should be incorporated into standard practice within ASD clinics to ensure early identification and timely intervention for parental psychological distress.

Structured cognitive-behavioural coping enhancement programs should be implemented to strengthen both problem-focused and emotion-focused coping strategies among parents.

Facilitated parent support groups may help enhance social support networks, reduce isolation, and promote adaptive coping through shared experiences.

ASD intervention models should adopt a family-centered framework that integrates parental mental health modules alongside child-focused therapeutic services.

Public health systems and policymakers should recognize parental psychological burden as a critical component of ASD management and allocate resources accordingly for family-based mental health services.

#### LIMITATIONS

The cross-sectional design of the study limits the ability to draw causal inferences regarding the relationship between ASD caregiving and psychological distress.

The relatively limited sample size restricts the generalizability of findings; future research should include larger, multi-site samples to enhance external validity.

The reliance on self-report measures may introduce response bias, including social desirability and subjective reporting inaccuracies.

Cultural factors were not extensively examined, and further validation and cultural adaptation of assessment instruments are recommended.

The study did not explore mediational or moderational relationships; advanced statistical modeling (e.g., structural equation modeling) could provide deeper insight into the mechanisms underlying psychological distress.

#### Future Directions

Longitudinal research designs are recommended to examine changes in parental distress and coping trajectories over time.

Future studies should investigate mediational models exploring coping strategies and social support as buffering or moderating variables.

Randomized controlled trials are needed to evaluate the efficacy of structured psychological and coping-based interventions for parents of children with ASD.

Cross-cultural comparative studies should be conducted to understand contextual and sociocultural influences on parental mental health outcomes.

The integration of biological markers such as cortisol levels and other psychophysiological indicators may provide a more comprehensive understanding of chronic stress in ASD caregiving contexts

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