

Mental health of parents of children with autism: a comparative study

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Abstract

The study compared the mental health of parents of children with autism to that of parents of children without autism. This study has also investigated among relationships the nine mental health dimensions. Using the purposive sampling technique, this study involved a sample of 140 parent (70 mothers and 70 fathers) of whom 70 had a child with autism and 70 had a child without autism. Data were collected through translated version of the SCL-90 and analyzed using Pearson correlation and ANOVA. The outcome demonstrated a significant and positive correlation among all nine mental health dimensions. The study found that parents of children with autism reported poorer mental health, with higher levels of anxiety, depression, interpersonal sensitivity, somatic complaints, obsessive-compulsive symptoms, anger-hostility, phobic anxiety, paranoid ideation, and psychoticism. In addition, mothers were reported poorer mental health than fathers, across both groups.

Introduction

Autism Spectrum Disorder (ASD) is primarily characterized by marked and persistent difficulties in social interaction, which can have profound implications not only for the child but also for the psychological well-being and parenting practices of their caregivers (Hoppes & Harris, 1990). It is a neuro-developmental condition characterized by deficits in social reciprocity, communication, and the presence of repetitive behaviors or restricted interests, which can vary in severity across individuals (American Psychiatric Association [APA], 1994).

Mental health refers to a state of well-being in which individuals are able to realize their abilities, cope with the normal stresses of life, work productively, and contribute to their communities (World Health Organization [WHO], 2022).

Parents' mental health, parenting style, and interactive behaviors may be influenced by their autistic child's significant and persistent difficulties in social interaction, which is

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a core feature of Autism Spectrum Disorder (ASD) (Hoppes & Harris, 1990; Kasari & Sigman, 1997; Nouri, 2009; Riahi & Izadi-Mazidi, 2012; Rutgers et al., 2007; Sigman et al., 1986). Numerous previous studies also indicated that mothers of children with autism and other disabilities possessed significantly lower mental health, higher anxiety/insomnia and stress compared to mothers of children in a control group (Nouri, 2009; Riahi & Izadi-Mazidi, 2012; Tarabek, 2011; Yamada et al., 2007; Gray, 1997).

Across the literature, parents of children with ASD had frequently been identified as having with higher levels of anxiety (Stein et al., 2011; Kuusikko-Gauffin et al., 2013; Falk et al., 2014), higher levels of depression (Stein et al., 2011; Falk et al., 2014; Hayes & Watson, 2013; Zablotzky et al., 2013; Weitlauf et al., 2014), and more health-related problems (Stein et al., 2011; Dykens & Lambert, 2013). Group comparison research further found that parents of children with ASD are likely to have higher levels of stress and lower level of well-being than parents of typically developing children (Dabrowska & Pisula, 2010; Estes et al., 2013; Hayes & Watson, 2013) and/or parents of children with other developmental disabilities, such as Down syndrome (Dabrowska & Pisula, 2010; Wang et al., 2011; Dykens & Lambert, 2013; Estes et al., 2013). Existing literature has have shown that parents of children with autism are more likely to encounter various psychosocial difficulties including anxiety, emotional discomfort, low levels of emotional well-being and quality of family life, as well as adjustment problems and strained marital relationships (Dabrowska & Pisula, 2010; Hayes & Watson, 2013) than parents of children without autism. It has also been found that mothers mental health is poorer than that of fathers of children with autism (Sharpley et al., 1997).

Existing literature tends to demonstrate that parents are highly likely to be affected by the obsessive-compulsive problems in regards to the severity level of autism of the children and multiplex autism families (Hollander et al., 2003). Previous research also indicates that ASD has considerable impact on provoking parents' mental distress, including depression, anxiety, somatization, and anger-hostility (Stewart, 2016). It has also been identified that parents of children with ASD are likely to attract higher rates of interpersonal sensitivity, paranoid ideation, obsessive-compulsive behaviors, and depression (Hodge et al., 2010). Previous research findings also show that mothers of children with autism are inclined to suffer from psychopathological problems (e.g., somatization obsessive-compulsive, interpersonal sensitivity, depression, anxiety, anger-hostility, phobic anxiety, paranoid thought, psychotism) in comparison with the mothers having mentally retarded children (Firat et al., 2002).

It has been observed that parents often feel anxious, confused, fearful, and even hopeless as a result of their child's diagnosis (Da Paz et al., 2018) and that stress remains persistent throughout the duration of their child's diagnosis, treatment, and ongoing care. It has further been observed that as a result of their child's diagnosis, parents also encounter relationship strain, social stigma, and difficulties in managing family responsibilities which results in affecting their mental well-being in an adverse manner (Han et al., 2023; Kinnear

et al., 2016). Meta-analytic evidence estimates that about one-third of these parents experience anxiety (33%) and depression (31%) (Schnabel et al., 2020).

Rationale of the study

Autism is intimately connected with enhanced psychological distress and parenting challenges, which often undermines parents' mental health and their coping capacity. The existing literature has focused on the role of counselling, psychotherapy, and family support. However, the mental health of parents of children with autism in Bangladesh is yet to be fully investigated, and addressing that research gap would be of assistance to formulate culturally appropriate strategies for supporting families. Thus, the current study seeks to explore the mental health of parents of children with autism in the context of Bangladesh. In particular, this study aims to investigate and draw a comparison between the mental health of parents of children with and without autism. It also aims to examine the differences across nine mental health dimensions somatic complaints, obsessive-compulsive symptoms, interpersonal sensitivity, anxiety, depression, anger-hostility, phobic anxiety, paranoid ideation, and psychoticism and to explore gender differences.

Objectives

The specific objectives of this study are:

1. To explore the mental health state of parents of children with autism.
2. To compare the mental health state of parents of children with autism and without autism.
3. To examine gender differences in the mental health of parents of children with autism and parents of children without autism.
4. To investigate the correlation among various mental health dimensions.

Materials and Methods

Participants

A total of 140 parent participated in the study, selected through purposive sampling from various areas of Dhaka city. The sample included 70 parents (35 mothers, 35 fathers) of children diagnosed with autism and 70 parents (35 mothers, 35 fathers) of children without autism. Demographic information was collected on parents' age and gender, number and ages of children, number of children with special needs, occupation, monthly income, and educational qualifications. Participants were aged 22–65 years, with education levels ranging from primary school (class two) to PhD. Monthly family income ranged from 5,000 to 300,000 BDT, and families had 1-5 children, including up to two autistic children. Participants were recruited from the Teachers' Training Center (TTC) and three branches of the Society for the Welfare of the Intellectually Disabled, Bangladesh (SWID Bangladesh), in Dhaka.

Personal Information Form (PIF)

A personal information form was used to gather socio-demographic data, including parents' age, gender, education level, occupation, number of children, number of children with special needs, the child's disability status (autistic or typical), the child's age, and family income.

The Symptoms Checklist (SCL-90)

The Symptoms Checklist (SCL-90) was developed by Derogatis, Lipman, & Covi in 1973 (Derogatis et al., 1973). The SCL-90 is a 90-item, multidimensional self-report inventory measuring nine primary symptom dimensions: somatization (12 items), obsessive-compulsive (10), interpersonal sensitivity (9), depression (13), anxiety (10), hostility (6), phobic anxiety (7), paranoid ideation (6), and psychoticism (10), with an additional 7 items forming supplementary scales. Items are rated on a 5-point Likert scale from 0 ("not at all") to 4 ("extremely"), yielding a total score range of 0-360, where higher scores indicate greater psychological distress.

The English version demonstrates excellent reliability (Cronbach's $\alpha = .98$). For this study, it was translated into Bangla using back to back translation, reviewed by five experts, and finalized with the supervisor's approval. Test-retest reliability over 14 days was satisfactory: somatization ($r = .94$), obsessive-compulsive ($r = .91$), interpersonal sensitivity ($r = .88$), depression ($r = .87$), anxiety ($r = .96$), hostility ($r = .94$), phobic anxiety ($r = .94$), paranoid ideation ($r = .93$), psychoticism ($r = .95$). Content and face validity were confirmed, supporting its use to assess parents' mental health.

Procedure

Data were collected through personal interviews following an ethical approval (Approval number- PSY 22/11/010) from the Ethical Review Committee of the Department of Psychology, University of Dhaka. Initially, the participants were provided with an information sheet and a consent form. A rapport was established prior to administering the questionnaires. The participants were assured that their responses would remain anonymous and confidential, and that the data would be used solely for research purposes. General instructions had also been given, and participants were asked to carefully read each item and respond promptly.

Results and Discussion

The current study seeks to draw a comparison between parents of children with autism and the parents of children without autism. It also seeks to investigate the correlation among different dimensions of mental health. Data were analyzed using Pearson's product-moment correlation coefficients and two-way analysis of variance (ANOVA). The correlation results are presented in Table 1, descriptive statistics are reported in Table 2, and the interaction effects are detailed in Tables 3 through 11.

Table 1. Pearson product-moment correlation coefficients among nine dimensions (N = 140)

Variables	1	2	3	4	5	6	7	8	9
1. Somatic-complaints									
2. Obsessive-Compulsive Symptoms	.764**								
3. Interpersonal sensitivity	.629**	.766**							
4. Anxiety	.750**	.759**	.675**						
5. Depressive Symptoms	.738**	.813**	.817**	.752**					
6. Anger-Hostility	.533**	.605**	.522**	.621**	.586**				
7. Phobic Anxiety	.656**	.719**	.742**	.789**	.696**	.563**			
8. Paranoid Ideation	.561**	.687**	.751**	.602**	.717**	.671**	.585**		
9. Psychoticism	.685**	.787**	.747**	.745**	.761**	.584**	.705**	.723**	

** $p < .001$

Table 1 demonstrates significant positive correlations among all nine mental health dimensions. Somatic complaints were positively associated with obsessive-compulsive symptoms, interpersonal sensitivity, anxiety, depressive symptoms, anger-hostility, phobic anxiety, paranoid ideation, and psychoticism. Obsessive-compulsive symptoms also showed strong correlations with interpersonal sensitivity ($r = .766$, $p < .001$), anxiety ($r = .759$, $p < .001$), depressive symptoms ($r = .813$, $p < .001$), anger-hostility ($r = .605$, $p < .001$), phobic anxiety ($r = .719$, $p < .001$), paranoid ideation ($r = .687$, $p < .001$), and psychoticism ($r = .787$, $p < .001$). Similarly, interpersonal sensitivity, anxiety, depressive symptoms, anger-hostility, phobic anxiety, paranoid ideation, and psychoticism were all positively related to each other. Overall, the findings indicate that increases in any mental health problem are associated with higher levels of other mental health difficulties.

Table 2. Descriptive statistics of dimensions of mental health scores across parents' gender and status of the parents (having children with autism and without autism) (N = 140)

No.	Variables	Group			
		Parents having autistic children?		Parents' gender	
		Yes Mean (SD)	No Mean (SD)	Father Mean (SD)	Mother Mean (SD)
1.	Somatic complaints	13.31 (8.98)	10.20 (7.64)	9.37 (6.41)	14.14 (9.56)
2.	Obsessive-Compulsive Symptoms	14.24 (7.53)	9.74 (6.55)	10.81 (6.80)	13.17 (7.79)
3.	Interpersonal sensitivity	11.44 (6.68)	8.00 (5.25)	8.96 (6.28)	10.49 (6.13)
4.	Anxiety	10.86 (7.54)	7.03 (7.04)	7.69 (6.91)	10.20 (7.93)
5.	Depressive symptoms	18.51 (9.85)	12.50 (8.17)	13.76 (8.64)	17.26 (10.05)
6.	Anger-hostility	5.27 (4.41)	4.57 (4.48)	5.16 (4.57)	4.66 (4.32)
7.	Phobic anxiety	5.80 (3.96)	3.24 (3.44)	3.86 (3.77)	5.19 (3.97)
8.	Paranoid ideation	7.01 (4.14)	5.13 (4.00)	6.01 (4.09)	6.13 (4.26)
9.	Psychoticism	9.23 (6.66)	5.87 (5.62)	6.90 (6.06)	8.20 (6.63)
	<i>n</i>	70	70	70	70

Table 2 shows that parents of children with autism scored higher across all nine mental health dimensions than parents of children without autism. In particular, they had been identified with enhanced degree of anxiety, depression, and interpersonal sensitivity, consistent with earlier findings (Falk et al., 2014; Hayes & Watson, 2013; Hoppes & Harris, 1990; Kasari & Sigman, 1997; Kuusikko-Gauffin et al., 2013; Nouri, 2009; Riahi & Izadi-Mazidi, 2012; Rutgers et al., 2007; Sigman et al., 1986; Stein et al., 2011; Weitlauf et al., 2014; Zablotsky et al., 2013). Existing research similarly indicates that these parents encounter more somatic complaints, obsessive-compulsive symptoms, anger, phobic anxiety, paranoid ideation, and psychoticism. The results further show that mothers generally exhibit poorer mental health than fathers, regardless of child diagnosis, aligning with previous studies (Gray, 1997; Nouri, 2009; Riahi & Izadi-Mazidi, 2012; Tarabek, 2011; Yamada et al., 2007) showing that mothers of children with autism or other developmental disorders report higher anxiety, insomnia, and stress than mothers in control groups.

Table 3. Two-way analysis of variance (ANOVA) for somatic complaints scores by parents' gender and child status

Source of variance	SS	df	MS	F	p
Parents' gender	796.83	1	796.83	12.33	.001
Parents' status	339.46	1	339.46	5.25	.023
Parents' gender x parents' status	2.31	1	2.31	0.04	.850
Error	8789.14	136	64.63		
Total	29280.00	140			
Corrected Total	9927.74	139			

Note. SS = sum of squares, df = degrees of freedom, MS = mean square

Table 3 demonstrated that mothers had been identified with significantly higher somatic complaints than fathers, regardless of the status of the children. Parents of children with autism also had higher somatic complaints than parents of neurotypical children. No interaction effect between parent gender and child status was found. Overall, somatic complaints were prominent among mothers and among parents of children with autism, aligning with previous evidence that parents of children with ASD experience more health-related difficulties (Stein et al., 2011; Dykens & Lambert, 2013).

Table 4. Two-way analysis of variance (ANOVA) for obsessive and compulsive symptoms by parents' gender and child status

Source of variance	SS	df	MS	F	p
Parents' gender	194.46	1	194.46	3.97	.048
Parents' status	708.75	1	708.75	14.46	< .001
Parents' gender x parents' status	0.01	1	0.01	0.00	.990
Error	6667.77	136	49.03		
Total	27707.00	140			
Corrected Total	7570.99	139			

Note. SS = sum of squares, df = degrees of freedom, MS = mean square

Table 4 demonstrates a significant difference in obsessive-compulsive symptoms between fathers and mothers, with mothers reporting higher scores than fathers. A significant difference was also found between parents of children with autism and those without, with parents of autistic children showing higher symptoms than parents of non-autistic children. No significant interaction effect between parent gender and child status was observed. In essence, mothers and parents of autistic children exhibited higher obsessive-compulsive symptoms, consistent with previous research (Hollander et al., 2003; Hodge et al., 2010).

Table 5. Two-way analysis of variance (ANOVA) for interpersonal sensitivity scores by parents' gender and child status

Source of variance	SS	df	MS	F	p
Parents' gender	81.78	1	81.78	2.27	.134
Parents' status	414.86	1	414.86	11.54	.001
Parents' gender x parents' status	3.15	1	3.15	0.09	.768
Error	4890.34	136	35.96		
Total	18621.00	140			
Corrected Total	5390.14	139			

Note. SS = sum of squares, df = degrees of freedom, MS = mean square

No significant gender difference was found in interpersonal sensitivity scores, although mothers scored slightly higher than fathers. Parents of children with autism showed significantly higher interpersonal sensitivity than those with neurotypical children, with no significant interaction between parent gender and child status. These results align with previous findings that parents of autistic children experience greater psychosocial difficulties, including heightened anxiety, emotional distress, and family adjustment challenges (Dabrowska & Pisula, 2010; Hayes & Watson, 2013; Hodge et al., 2010).

Table 6. Two-way analysis of variance (ANOVA) for anxiety scores by parents' gender and child status (N = 140)

Source of variance	SS	df	MS	F	p
Parents' gender	221.26	1	221.26	4.26	.041
Parents' status	513.03	1	513.03	9.87	.002
Parents' gender x parents' status	50.40	1	50.40	0.97	.327
Error	7070.86	136	51.99		
Total	19052	140			
Corrected Total	7855.54	139			

Note. SS = sum of squares, df = degrees of freedom, MS = mean square

A significant difference in anxiety scores was observed between fathers and mothers, with mothers reporting higher anxiety than fathers, regardless of whether they had children with autism. Anxiety also varied significantly by parental status, with parents of children

with autism showing higher anxiety than parents of children without autism. However, the interaction of gender and status did not significantly affect anxiety. These findings align with previous research, which consistently reports higher anxiety levels among mothers and among parents of children with autism (Dabrowska & Pisula, 2010; Gray, 1997; Hoppes & Harris, 1990; Nouri, 2009; Riahi & Izadi-Mazidi, 2012; Stein *et al.*, 2011; Tarabek, 2011; Yamada *et al.*, 2007).

Table 7. Two-way analysis of variance (ANOVA) for depressive symptoms scores by parents' gender and child status (N = 140)

Source of variance	SS	df	MS	F	p
Parents' gender	428.75	1	428.75	5.38	.022
Parents' status	1266.01	1	1266.01	15.89	< .001
Parents' gender x parents' status	26.58	1	26.58	0.33	.565
Error	10835.66	136	79.67		
Total	46223.00	140			
Corrected Total	12556.99	139			

Note. SS = sum of squares, df = degrees of freedom, MS = mean square

Table 7 shows a significant difference in depressive symptoms between fathers and mothers, with mothers scoring higher than fathers, regardless of whether they have children with autism. Depressive symptoms also differed significantly between parents of children with autism and those without, with parents of children with autism reporting higher scores than parents of children without autism. No significant interaction was found between parent gender and child status. These findings align with previous research showing higher levels of depression among parents of children with autism (Falk *et al.*, 2014; Hayes & Watson, 2013; Stein *et al.*, 2011; Weitlauf *et al.*, 2014; Zablotsky *et al.*, 2013).

Table 8. Two-way analysis of variance (ANOVA) for anger-hostility scores by parents' gender and child status

Source of variance	SS	df	MS	F	p
Parents' gender	8.75	1	8.75	0.45	.505
Parents' status	15.78	1	15.78	0.81	.371
Parents' gender x parents' status	54.06	1	54.06	2.76	.099
Error	2661.20	136	19.57		
Total	6111.00	140			
Corrected Total	2739.79	139			

Note. SS = sum of squares, df = degrees of freedom, MS = mean square

Table 8 indicates no significant differences in anger-hostility scores by parent gender or child status, nor any interaction between these factors. Fathers and mothers showed similar levels of anger-hostility, regardless of whether they had children with autism, and parents of autistic and non-autistic children did not differ. This contrasts with earlier

studies (Firat et al., 2002; Stewart, 2016) reporting higher anger-hostility among parents of children with ASD, particularly mothers, suggesting the need for further investigation.

Table 9. Two-way analysis of variance (ANOVA) for phobic anxiety scores by parents' gender and child status

Source of variance	SS	df	MS	F	p
Parents' gender	61.78	1	61.78	4.63	.033
Parents' status	228.86	1	228.86	17.15	< .001
Parents' gender x parents' status	23.21	1	23.21	1.74	.190
Error	1815.09	136	13.35		
Total	4991.00	140			
Corrected Total	2128.94	139			

Note. SS = sum of squares, df = degrees of freedom, MS = mean square

Table 9 indicates significant differences in phobic anxiety scores by both parent gender and child status. Mothers reported higher phobic anxiety than fathers, and parents of children with autism showed higher symptoms than those of neurotypical children. No significant interaction between gender and status was found. Overall, mothers experienced more phobic anxiety regardless of child status. This contrasts with a previous finding (Firat et al., 2002), which reported higher phobic anxiety among mothers of children with autism compared to those with children with intellectual disabilities, possibly reflecting cultural differences.

Table 10. Two-way analysis of variance (ANOVA) for paranoid ideation scores by parents' gender and child status

Source of variance	SS	df	MS	F	p
Parents' gender	.457	1	.457	0.03	.868
Parents' status	124.46	1	124.46	7.58	.007
Parents' gender x parents' status	48.03	1	48.03	2.93	.089
Error	2232.34	136	16.41		
Total	7566.00	140			
Corrected Total	2405.29	139			

Note. SS = sum of squares, df = degrees of freedom, MS = mean square

Table 10 shows no significant difference in paranoid ideation scores between fathers and mothers, indicating similar levels of symptoms. However, a significant difference was observed between parents of children with autism and parents of children without autism, with parents of children with autism exhibiting higher paranoid ideation. No significant interaction effect was found between parents' gender and status. These findings align with a previous study (Hodge et al., 2011), which reported elevated paranoid ideation among parents of children with ASD, but differ from previous studies (Firat et al., 2002), which suggested higher symptoms in mothers of children with autism compared to mothers of children with intellectual disabilities.

Table 11. Two-way analysis of variance (ANOVA) for psychoticism scores by parents' gender and child status

Source of variance	SS	df	MS	F	p
Parents' gender	59.15	1	59.15	1.56	.215
Parents' status	394.46	1	394.46	10.37	.002
Parents' gender x parents' status	0.35	1	0.35	0.01	.924
Error	5174.69	136	38.05		
Total	13609.00	140			
Corrected Total	5628.65	139			

Note. SS = sum of squares, *df* = degrees of freedom, MS = mean square

Table 11 shows no significant difference in psychoticism scores between fathers and mothers, indicating gender does not affect psychoticism, regardless of having children with or without autism. However, a significant difference was found between parents of children with autism and those without autism, with parents of autistic children exhibiting higher psychoticism scores. No significant interaction effect between parent gender and status was observed. These findings differ from a previous study (Firat *et al.*, 2002), which reported that mothers of children with autism show more psychoticism symptoms than mothers of children with intellectual disabilities. Overall, parents of children with autism appear at higher risk for psychotic symptoms than parents of children without autism.

Conclusion

The study revealed that parents of children with autism, particularly mothers, experience markedly poorer mental health than parents of children without autism, with higher levels of anxiety, depression, and other psychological symptoms. These findings must be considered in light of certain limitations: participants were recruited only from urban areas of Dhaka, self-report measures may have introduced bias, the cross-sectional design restricts causal interpretation, socio-economic burden, service access, and stigma are not deeply explored, and the relatively small sample size reduces generalizability. Despite these constraints, the results highlight the urgent need for culturally appropriate interventions to support parental well-being. Counselling, stress management, family therapy, and parent training should be prioritized, with particular attention to gender-sensitive approaches that address maternal stress and promote shared parenting. Community-based support groups, stigma reduction initiatives, and policy measures to ensure affordable mental health services and financial assistance are also critical. Further longitudinal research is recommended to clarify causal pathways, explore socio-economic and family factors, and evaluate the effectiveness of interventions aimed at improving both parental mental health and child development.

Authors' Contribution

Mst. Ambia Khatun: Conceptualization, methodology, literature review, data collection, data analysis, interpretation, and original manuscript drafting. **Most. Aeysa Sultana:** Research design, supervision of data collection and analysis, manuscript review, and revision. **Mahfuza Khanam:** Research design, supervision, critical manuscript review, and revision. **Mst. Afia Azad:** Methodological validation, triangulation, rigour, interpretation of findings, and manuscript editing. All authors reviewed and approved the final manuscript and accept responsibility for all aspects of the work.

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