

Study of the psychological status of mothers of autism spectrum disorder children

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Abstract

Introduction: Autism spectrum disorder (ASD) is characterised by deficits in verbal and nonverbal communication and social interaction. These children depend on lifelong parental care leading to psychological distress and economic burden on the family

Objectives: To assess the psychological status of mothers of ASD children attending the outpatient department of a South Indian tertiary care teaching hospital affiliated to Kasturba Medical College, Mangalore.

Method: A descriptive study was carried out on mothers of children diagnosed to have ASD. Mothers who had organic psychiatric problems were excluded. The symptom checklist 90 R was used to analyse the psychopathology

Results: Thirty mothers of children with ASD were interviewed. Mean age group of the mothers was 28.4 years. Psychological assessment revealed that 20% of the mothers were normal. Depression was the most common psychopathology followed by anxiety seen in 33.3% and 30% of the mothers respectively. Anxiety was more in the mothers of male children ($p=0.045$) and depression was the predominant psychopathology observed in mothers with first born child affected with autism ($p=0.028$). More anxiety and depression was noted in nuclear families ($p=0.005$).

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Conclusions: Mothers of ASD children had significant psychopathology. High level of depression and anxiety in mothers of ASD children, male child, first born child and nuclear family were significant risk factors for the psychopathology.

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(Key words: Autism spectrum disorder, disability and family support, mental health, mother, psychopathology)

Introduction

Autism spectrum disorder (ASD) is characterised by deficits in verbal and nonverbal communication and social interaction^{1,2}. Comorbidities like motor deficits, seizures, catatonia, delayed self-help skills, seen frequently in ASD, are factors which impair the quality of life of person with ASD or their families^{3,4}. Caring of a child with ASD can be challenging for parents due to extensive physical and developmental comorbidities⁵. Studies have reported that the families with ASD experience more stress than other children with special needs or normally developing children^{6,7}. Most of the ASD children depend on lifelong parental care. The mother, being the primary caregiver of the child, is subjected to economic burden and psychological distress^{8,9}. Higher levels of anxiety and depression have been reported in mothers of ASD children than in mothers of children with normal development^{10,11}. The psychological distress in the mother can lead to compromised child care. Emotional wellbeing helps the mother to deal with the challenges associated with ASD children⁸. Hence, early recognition of emotional disturbance in mothers, and providing them psychological support, results in better care of ASD children. Promoting mental health and wellbeing of individuals has been the target of the United Nations Sustainable Development Goal 3¹².

Objectives

To assess the psychological status of mothers of ASD children attending the outpatient department of a South Indian tertiary care teaching hospital affiliated to Kasturba Medical College, Mangalore.

Method

A descriptive study was carried out in the hospital over a period of 18 months. Ethical approval was granted by the Institutional Ethics Committee of

Kasturba Medical College, after which permission was obtained from the Authorities of concerned hospital for conduction of study. Mothers of children diagnosed to have ASD according to DSM-IV criteria, and who were literate in English, were included in study. ASD was diagnosed by clinical psychologists. DSM-IV criteria were used rather than DSM-V criteria because authors had earlier done a study on clinical spectrum of ASD children when DSM-IV was used and mothers of these children were recruited later for present study¹³. Mothers with organic psychiatric problems and mothers with social factors like separated family were excluded. Sample was selected by convenient sampling. Mothers were interviewed to collect the following demographic data: maternal age, type of family, educational qualification, occupation, gender of the child and birth order of child. These details were entered in a structured proforma. The symptom checklist 90 R (SCL 90-R)¹⁴, a detailed self-report questionnaire to analyse the psychopathology, was given to mothers. Principal investigator had explained about the study questionnaire to the participants and was available to answer any queries during the process of filling the questionnaire. The SCL-90R is self-symptom report inventory comprising of 90 items which adopts a five point scale (0-4) ranging from “not at all” to “extremely” to rate the distress. The SCL-90R scores and interprets nine primary symptom dimensions and three global indices of distress¹⁴. Commercially available SCL90-R kit was used for the study which included SCL-90R manual, answer sheets, profile forms, worksheets and answer keys. Childhood autism rating scale (CARS) score, to quantify the severity of autism, was recorded from medical records. Collected data were coded and entered into Statistical Package for Social Sciences 11.5. Results were interpreted with frequency tables and bar charts. Statistical significance was computed using Chi-square, unpaired Student t-

test, Kruskal-Wallis test, and Mann-Whitney test. $p < 0.05$ was considered as statistically significant.

Results

Thirty mothers of ASD children were interviewed to study the psychological impact of the condition. Mean age of the mothers was 28.4 years. Eighty percent of mothers had an educational level of graduation and above and 86.6% of mothers were from nuclear families. The psychological assessment by SCL 90-R¹⁴ checklist revealed that in 20% of the mothers no psychopathology was identified. Depression was the most common psychopathology, followed by anxiety seen in 33.3% and 30% of the mothers respectively. Table 1 describes the type of psychological abnormality observed.

Table 1
Type of psychological abnormalities observed in mothers of autism spectrum disorder children

Type	Number (%)
No psychopathology identified	06 (20.0)
Anxiety	09 (30.0)
Depression	10 (33.3)
Interpersonal sensitivity	01 (03.3)
Obsessive compulsive disorder	01 (03.3)
Paranoid reaction	01 (03.3)
Phobic anxiety	01 (03.3)
Psychotism	01 (03.3)

Global severity index (GSI) was used as indicator of the current level or the depth of the disorder. Value of 0.57 was considered as significant. GSI values suggested significant psychopathology and distress in 90% of the sample. The psychopathology of mothers in relation to gender, birth order, type of family and severity of autism is shown in Table 2.

Table 2
Psychopathology of mothers in relation to gender, birth order, type of family and severity of autism (n=30)

Variable	No psychopathology identified	Anxiety	Depression	Others	p-value
<i>Gender</i>					
Male n (%)	03 (50)	06 (66.7)	05 (50)	02 (40)	0.045
Female n (%)	03 (50)	03 (33.3)	05 (50)	03 (60)	
<i>Birth order</i>					
One n (%)	02 (33.3)	06 (66.7)	10 (100)	05 (100)	0.028
Two n (%)	03 (50.0)	03 (33.3)	0	0	
Three n (%)	01 (16.7)	0	0	0	
<i>Type of family</i>					
Nuclear n (%)	03 (50)	07 (77.8)	09 (90)	05 (100)	0.005
Joint n (%)	03 (50)	0	01 (10)	0	
Extended n (%)	0	02 (22.2)	0	0	
<i>Childhood autism rating scale</i>					
Mild n (%)	03 (50)	03 (33.3)	0	0	0.156
Moderate n (%)	03 (50)	03 (33.3)	04 (40)	02 (40)	
Severe n (%)	0	03 (33.3)	06 (60)	03 (60)	

Anxiety was more in the mothers of male children ($p=0.045$) and depression was the predominant psychopathology observed in mothers with first born child affected with autism ($p=0.028$). More anxiety and depression was noted in nuclear families ($p=0.005$). Depression was more in the mothers of children with severe autism, but was not statistically significant ($p=0.156$). Table 2 also shows the relation between childhood autism rating scale (CARS) scoring and psychopathology.

Discussion

The present study showed psychopathology in 80% mothers of ASD children. The most common finding was depression seen in 33.3% mothers. Study by Zhou *et al* has reported depressive symptoms and anxiety in 72.5% and 80.2% mothers, respectively⁵. Study by Bitiska *et al* has reported significant anxiety in 45% and major depression in 55% of mothers of ASD children¹⁵. Mothers of ASD children had elevated depression scores compared to the fathers as found by Olsson and Hwang¹⁶.

Data from ordinal regression model studies reported that higher anxiety and depression levels were found in mothers of children with severe ASD^{5,17}. In the present study, even though depression was more in the mothers of children with severe ASD, results were not statistically significant. In the present study, more anxiety and depression were noticed in mothers from nuclear families compared to those from joint or extended families. Social support can be a protective factor against psychological distress in mothers of ASD children¹⁸. Education up to high school was a protective socioeconomic factor against depression in mothers of ASD in comparison to the well-educated group. More intelligent mothers will have a higher life expectation and may have difficulty in accepting the reality⁵.

The study had several limitations. The psychological status was evaluated by maternal self-report symptom questionnaire which can have potential bias. The psychological abnormalities found were not confirmed by conventional tests. Small sample size of the study population has limitation in generalising the study results. Our study participants included mainly educated mothers which again may be a limitation in applying the results to the community.

Conclusions

Our study revealed that mothers of children with ASD had significant psychopathology. High level of depressive symptoms and anxiety in mothers of ASD children, male child, first born child and nuclear family were significant risk factors for the psychopathology.

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