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Research Article

Psychopathology of the Parents of Autistic Children Based on the Clinical Personality Disorders

Abstract

Objective: The aim of this study was to investigate the psychopathology of parents of autistic children based on clinical personality disorders.

Methodology: In this is a cross-sectional study,130 parents of autistic children were selected from autism community rehabilitation centers in Tabriz, Iran and 154 parents of the mentally healthy children were selected as controls. Diagnostic interview based on DSM-IV-TR criteria was used to diagnose autism by two child and adolescent psychiatrists. The Millon Clinical Multiaxial Inventory-III (MCMI-III) was used to evaluate parents' personality profiles.

Results: The frequency of having personality disorders was higher in the parents of autistic children than controls (p<0.01).The most common psychiatric conditions among parents of autistic children were melancholic personality, persistent depression and negativism (44.6%, 29.2% and 25.4% respectively). Alcohol and substance use and antisocial personality were the least prevalent. Clinical patterns of personality disorders (avoidance, depressed, sadist, negativist, masochist), severe personality pathology (schizotypal, borderline, paranoid), clinical syndromes (generalized anxiety, somatoform, bipolar, persistent depression, PTSD), and severe clinical syndrome (thought disorder, delusional disorder) were higher in parents of autistic children than controls (p<0.05) and prevalence of histrionic personality disorder was lower (p<0.01).

Conclusion: Parents of autistic children have higher rate of psychopathology.

Introduction

Autism may be defined as child's inability to communicate with people or situations. The term "Autistic" refers to the children in whom a set of developmental disorders is observed pertaining mostly to the central nervous system. Impairment in social and communicational interactions, as well as limited and repeated interests are considered the triple most important deficits of autism [1]. The prevalence of autism spectrum disorders at the age of eight is estimated to be between 5.7 and 21.9 per 1000 [2]. This rate is estimated to be 6.26 per 10000 in Iranian children [3].

According to the systematic family theories, the behavior of each family member (especially parents) influence the behavior of other members (especially children); therefore, presence of a psychiatric disorder in a family member affect the behavior of others and might even cause psychiatric problems [4]. On the other hand, it should not be ignored that the genetic similarity of parents and children can make them both prone to have psychiatric disorders to a great extent. This is reflected in higher prevalence of psychiatric conditions in parents of children with psychiatric disorders [5-7], as well as higher level of stress before birth of the child [8].

Considering the fact that personality represents a general outline of each individual's mental state, character recognition helps understanding and predicting an individual's future behavior [9]. In this regard, evaluating clinical personality disorders in parents of autistic children may give valuable information. There are few reports is this issue. A study conducted on parents of children with pervasive

developmental disorders (PDD) in Japan indicated that they have experienced higher level of stress than mothers in general population. Mothers' emotional stress was associated with the specific personality traits such as neuroticism and agreeableness, perceived control by the husband and the severity of widespread developmental disorder scores [10]. Gary et al. [11], reported that mothers of children with PDD are more vulnerable than the fathers while dealing with problems and use different strategies to get on with the child's inability. Konstantareas et al. [12], reported that anger and call for the help of a spouse are more observed in mothers of autistic children than mothers of normal children.

A study conducted on 2 to 5 years old children with PDD, indicated that their behavioral and emotional problems have a considerable impact on increasing stress in the mother, parents' mental health problems and family performance [13]. Another study comparing parents of autistic children's with parents of disturbed non-autistic children indicated that mothers of autistic children suffered from neurotic personality based on Eysenck scale and had a higher score of extraversion. Moreover, there was a positive correlation between neuroticism and the severity of autism among children [14].

Another report showed that mothers of autistic children experienced higher stress and broader autism phenotype in comparison with the mothers of children without autism disorder. Controlling the severity of autism in children, parental stress and broader autism phenotype were the predictors of depressive symptoms in mothers [15].

Most of available studies on personality of parents are based on dimensional theories and few studies are available about psychopathology based on clinical symptoms. The current study was conducted to determine the psychopathology of parents of autistic children with respect to the clinical personality disorders.

Materials and Methods

This cross-sectional study was conducted during 2015. This study was approved by regional ethnic committee, Tabriz University of medical sciences. All of participants gave written informed consent. Privacy and autonomy for leaving the research were compiled for all of participants.

Using the convenience sampling method, 130 parents of autistic children were selected from the autism community rehabilitation centers in Tabriz, Iran. The diagnostic interviews were conducted by two child and adolescent psychiatrists to diagnose autism based on DSM-IV-TR criteria. A total of 154 parents of normal children who visited the university clinics for minor general health problems (such as common cold and gastrointestinal complaints) were selected as controls. The Strengths and Difficulties Questionnaire (SDQ) was used to screen the control group regarding developmental and psychiatric problems. The inclusion criteria were the diagnosis of autism based on DSM-IV-TR criteria for the parents of autistic children (AD group) and scoring normal on SDQ (controls), age of the child under18, and parental literacy. Adoption was the only exclusion criteria in this study.

Parents willing to participate were evaluated by Millon Clinical Multiaxial Inventory-III (MCMI-III) for personality profile.

Instruments

Kiddie Schedule for Affective Disorders and Schizophrenia-Present and Lifetime Version (K-SADS-PL): This questionnaire is a semi-structured diagnostic interview designed according to DSM-VI criteria. The test-retest and inter-rater reliability of Farsi version of K-SADS diagnostic interview is reported to be 0.81 and 0.69 in that order [16].

The Strengths and Difficulties Questionnaire (SDQ) – Parent Version: SDQ (Goodman, 17) includes 25 items and it is used to evaluate children's problem in four areas (emotional symptoms, behavioral problems, hyperactivity/inattention and peer relationship problems) and one skill (prosocial behavior). SDQ scoring is scored with a three-degree format (not true=0, somewhat true=1, certainly true=2). The psychometric properties of Farsi version of SDQ in Iranian children aged 3 to 17 were reported by Ghanizadeh et al. [17]. The reliability is reported to be 0.73.

Millon Clinical Multiaxial Inventory-III (MCMI-III)

MCMI-III was used to evaluate the personality profiles of the study sample. MCMI-III is a self-report tool for adults with 175 items which are answered with a yes/no format. MCMI-III is considered one of the most important objective tools for detecting clinical symptoms which are coded on axis I and II (personality disorders) based on DSM-IV diagnostic criteria. MCMI-III has 24 clinical scales divided in four classes as follows:

A) eleven personality clinical scales: Schizoid, Avoidant, Depressive, Dependent, Histrionic, Narcissistic, Antisocial, Sadistic, Compulsive, Negativistic, Masochistic; B) Three severe personality pathology scales: Schizotypal, Borderline, Paranoid; C) Seven Clinical Syndrome Scales: Anxiety, Somatoform, Bipolar, Dysthymia, Alcohol Dependence, Drug Dependence, Posttraumatic Stress Disorder; D) Three Severe Clinical Syndrome scales: Thought Disorder, Major Depression, and Delusional Disorder.

It also has 3 modifier scales used to identify disclosure, desirability and debasement. Each item was scored in proportion with the symptoms of each clinical scale. The Farsi version of MCMI-III has acceptable validity and reliability like the original version. In an Iranian study, the diagnostic validity of Farsi version was reported to be between 0.58 and 0.83 for all the scales of MCMI-III [18]. In the current study, Cronbach's alpha coefficient for reliability of subscales was between 0.68 and 0.86.

Statistical analysis

Data were analyzed by SPSS version 21. The descriptive statistical methods (frequency, percentage, mean, standard deviation) were used to describe the variables.

Results of MCMI were interpreted based on defined cut-off for each subscale. Then chi-square and Fisher's exact tests were employed to compare the characteristics and frequencies of disorders between the two groups. A logistic regression model was also employed to evaluate prognostic value of psychopathology of parents about presence of autism in their child. The p values less than 0.05 was considered significant.

Results

A total of 130 parents of autistic children (AD group) and 154 parents of normal-control children completed the study. Mean age of parents and children in the two groups was not different.

Mean age of children in AD group and controls was 6.87±4.98 and 8.24±4.98 in that order (t=1.86, df=282, p=0.06). Mean age of parents in AD group and controls was not statistically different either and was 35.68±5.95 and 37.05±7.002 respectively (t=1.75, df=282, p=0.08).

Table 1 describes the demographic characteristics of parents and children. There was not a significant statistical difference between the two groups in terms of the gender distribution, number of children, families living place or parents' psychiatric history. However parents in the AD group had lower educational level and mostly low-paid jobs (p<0.001).

Psychopathologies of parents are described in Table 2. Most of subscales of MCMI were higher in AD group. The most prevalent disorders in AD group were melancholic personality, persistent depression, and negativism (44.6%, 29.2%, and 25.4% respectively). Alcohol and substance dependence and anti-social personality disorder had the lowest prevalence.

The most common disorders in controls were histrionic, compulsive, and melancholic personality (24%, 22.7%, and 18.2% in that order). Alcohol dependence, substance use and anti-social personality disorders had the lowest rates.

Table 1: Demographic characteristics of the study sample.

Variables	Group	Autism		Control		Chi-Square	
		N	%	N	%	χ^2	p
Child's Gender	Female	22	16.9	39	25.3	2.95	0.11
	Male	108	83.1	115	74.7		
Parent's Gender	Mother	75	577	103	66.9	2.54	0.13
	Father	55	42.3	51	33.1		
Number of Children	1	61	46.9	64	41.6	4.13	0.12
	2	55	42.3	81	52.6		
	3	14	10.9	9	5.8		
Parent's Educational level	Below Diploma	33	25.4	30	19.5	23.83	<0.001
	Diploma	58	44.6	39	25.3		
	Associate's	8	6.2	11	7.1		
	Bachelor's	20	15.4	60	39		
	Master's/PhD	11	8.5	14	9.1		
Parent's job	Unemployed	6	4.6	4	2.6	29.10	<0.001
	Worker	13	10	6	3.9		
	Clerk	21	16.2	69	44.8		
	Housewife	57	43.8	53	34.4		
	Self-Employed	33	25.4	22	14.3		
Residence	Rural	117	90	140	90.9	0.06	0.84
	Urban	13	10	14	9.1		
Positive psychiatric history of parent		117	90	142	92.2	0.42	0.53

There was a statistically significant difference between the groups in terms of number of disorders. It means that 22 parents on AD group (26.2%) had one personality disorder, 25 (29.8%) had two/three disorders, and 37 (44%) had four/more disorders. In the control group, 36 parents (54.5%) had one personality disorder, 17 (25.8%) had two/three disorders, and 13 (19.7%) had four/more personality disorders (χ^2=14.47, df=2, p<0.01).

As indicated in Table 3, a binary logistic regression was conducted by entering 16 character attributes which were significant by Fisher's exact test. Results showed that two traits of bipolar disorder and post-traumatic stress in parents can predict autism in their children while histrionic personality disorder has a negative impact.

Discussion

This cross-sectional study was conducted to determine the psychopathology of parents with autistic children with a focus on personality problems. Results of the present study indicated high prevalence of pathological traits attributable to personality problems especially depressed mood disorders and dysthymia.

The research findings regarding psychological trauma pertaining to anxiety and depression in parents of autistic children are consistent with previous reports. The psychological burden, depression and anxiety were reported to be higher in parents of AD children in comparison with the parents of normal children [19,20].

In contrast to the previous report, there was no difference between prevalence of schizoid personality between parents of AD and mentally healthy children [21]. Different method of study may explain this difference. Parents with more severe schizoid personality disorder might refuse to participate for a self-report. Moreover, the current study used the cut-off point to make the definite diagnosis of schizoid personality disorder and might include a restricted number but more accurate diagnosis.

Our results showed that more severe clinical syndromes (e.g. thought disorder and delusional disorder) were observed in parents of AD children in comparison with controls. There have been contradictory reports about this issue [22]. However, these results are in line with evidences that support a relationship between autism and schizophrenia at the level of clinical and cognitive symptoms [23,24].

This study revealed the higher frequency of bipolar disorder and PTSD and the lower prevalence of histrionic personality disorder in parents of autistic children. This may represent a shared vulnerability to autism and PTSD and bipolar disorder within a family. High impact of having a child with autism might also play a role in precipitation of PTSD and mania. Moreover social behaviors of family members would be influenced by having autistic children, and parents would probably decrease their dramatic behaviors to prevent others from paying attention to them.

Our results showed that parents of autistic children have not only higher rate of personality disorder but higher rate of comorbidity as well. This finding is reflected in studies with a more narrow definition of personality disorders. As a study conducted by Piven et al. [25], showed that personality traits such as aloof, untactful, undemonstrative, and unresponsive were more observed in parents of AD children in comparison with the parents of children with Down syndrome. Furthermore, another study indicated that the scores of obsessive-compulsive symptoms, interpersonal sensitivity, depression, anxiety, paranoia, psychotic symptoms, hostility and sleep/diet problems were higher in the mothers of autistic children than mothers of healthy children [26].

Researchers commonly report that families of children with autism spectrum disorder experience more parenting stress than families of typically developing children or those diagnosed with other disabilities [27]. There is a multifaceted relation between parental mental health and parent-child relation. The fact that parents of autistic children have higher psychological problems might reflect the higher psychological burden of autism on parents [19,25]. Improvement of their mental health after reduction of autistic symptoms in their children strengthens this relationship [28]. Quality of emotional, social and supportive aspects of mother-child relationship influences their children's behavior [29], as well as both parents [30]. Their lower self-efficacy could have a negative impact on children's growth [31-33].

The findings of this study have some limitations. Study sample was enrolled from a specialized center and might not fully reflect the population. Autism community rehabilitation centers provide the care to majority of children with AD, but this sample might miss children with undiagnosed AD who might have higher parental psychopathology. Moreover, the intensity of autism was not controlled, and a self-report (though standard) tool was used to evaluate personality disorders.

Conclusion

Parents of autistic children have higher rate of psychopathology. The highest frequency of personality problems in these parents belong

Table 2: Psychopathology in Parents of Autistic and Normal Children.

		Control	Autism	Fisher's Exact Test	P	OR(95% CI)
Clinical Personality Patterns	Schizoid	8(5.2)	16(12.3)	4.61	0.052	
	Avoidant	10(6.5)	22(16.9)	7.66	0.008	2.93(1.33-6.45)
	Melancholic	28(18.2)	58(44.6)	23.33	<0.001	3.62(2.12-6.19)
	Dependent	14(9.1)	19(14.6)	2.09	0.19	
	Histrionic	37(24)	11(8.5)	12.15	<0.001	0.29(.014-0.60)
	Narcissistic	4(2.6)	8(6.2)	2.20	0.15	
	Antisocial	0	3(2.3)	3.59	0.09	
	Sadistic	3(1.9)	14(10.8)	9.74	0.002	6.07(1.70-21.63)
	Compulsive	35(22.7)	21(16.2)	1.92	0.18	
	Negativistic	13(8.4)	33(25.4)	14.90	<0.001	3.68(1.84-7.81)
	Masochistic	11(7.1)	29(22.3)	13.39	<0.001	3.73(1.78-7.81)
Severe Personality pathology	Schizotypal	3(1.9)	12(9.2)	7.47	0.007	5.11(1.41-18.55)
	Borderline	4(2.6)	11(8.5)	4.84	0.03	3.46(1.07-11.16)
	Paranoid	3(1.9)	13(10)	8.59	0.004	5.59(1.55-20.08)
Clinical Symptoms	Generalized anxiety	5(3.2)	19(14.6)	11.77	0.001	5.10(1.84-14.07)
	Somatic symptoms	4(2.6)	13(10)	6.86	0.01	4.16(1.33-13.11)
	Bipolar disorder	1(0.6)	13(10)	13.15	<0.001	17(2.19-131.81)
	Persistent depression	17(11)	38(29.2)	14.93	<0.001	3.32(1.77-6.24)
	Alcohol use	0	0			
	Drugs use	0	1(0.08)	1.18	0.45	
	PTSD	4(2.6)	20(15.4)	14.89	<0.001	6.81(2.26-20.51)
Severe clinical symptoms	Thought Disorder	6(3.9)	20(15.4)	11.18	0.001	4.48(1.74-11.53)
	Major Depression	2(1.3)	5(3.8)	1.90	0.25	
	Delusional Disorder	1.(0.6)	13(10)	13.15	0.001	17(2.19-131.81)

Table 3: Binary logistic regression result for personality profile of parents and autism in their children.

	B	Wald	Sig.	Exp(B)	95% C.I.for EXP(B)	
					Lower	Upper
Bipolar disorder	4.31	5.458	.01	74.88	2.004	2799.02
PTSD	1.76	3.843	.04	5.85	1	34.31
Histrionic	-.85	4.634	.03	.42	.19	.92

to depressive symptoms and negativism. These findings emphasized the necessity of paying attention to psychiatric condition of parents along with the treatment of autistic symptoms in children.

Acknowledgement

References

1. Russell-Smith SN, Comerford BJ, Maybery MT, Whitehouse AJ (2014) Further evidence for a link between inner speech limitations and executive function in high-functioning children with autism spectrum disorders. Journal of Autism Developmental Disorder 44: 1236-1243.

2. Wingate M, Kirby RS, Pettygrove S, Cunniff C, Schulz E, et al. (2014) Prevalence of autism spectrum disorder among children aged 8 years - autism and developmental disabilities monitoring network, 11 sites, United States, 2010. MMWR SurveillSumm 63: 1-21.

3. Samadi SA, Mahmoodizadeh A, McConkey R (2012) A national study of the prevalence of autism among five-year-old children in Iran. Autism 16: 5-14.

4. Miklowitz DJ (2004) The role of family systems in severe and recurrent psychiatric disorders: a developmental psychopathology view. DevPsychopathol 16: 667-688.

5. Gottesman II, Laursen TM, Bertelsen A, Mortensen PB (2010) Severe mental disorders in offspring with 2 psychiatrically ill parents. Arch Gen Psychiatry 67: 252-257.

6. Dean K, Stevens H, Mortensen PB, Murray RM, Walsh E, et al. (2010) Full spectrum of psychiatric outcomes among offspring with parental history of mental disorder. Arch Gen Psychiatry 67: 822-829.

7. Singh MK, DelBello MP, Stanford KE, Soutullo C, McDonough-Ryan P, et al. (2007) Psychopathology in children of bipolar parents. J Affect Disord 102: 131-136.

8. Beversdorf DQ, Manning SE, Hillier A, Anderson SL, Nordgren RE, et al. (2005) Timing of prenatal stressors and autism. Journal of Autism and Developmental Disorders 35: 471-478.

9. (2005) Comprehensive textbook of psychiatry. 8th ed Philadelphia: Lippincott Willias & Wilkins.

10. Yamada A, Suzuki M, Kato M, Suzuki M, Tanaka S, et al. (2007) Emotional distress and its correlates among parents of children with pervasive developmental disorders. Psychiatry Clin Neurosci 61: 651-657.

11. Gray DE (2003) Gender and coping: the parents of children with high functioning autism. Soc Sci Med 56: 631-642.

12. Konstantareas M, Homatidis S (1989) Assessing child symptom severity and stress in parents of Autistic children. J Child Psychol Psychiatry 30: 459-470.

13. Herring S, Gray K, Taffe J, Tonge B, Sweeney D, et al. (2006) Behaviors and emotional problems in toddlers with pervasive developmental disorders and developmental delay: associations with parental mental health and family functioning. J Intellect Disabil Res 50: 874-882.

14. Dor-Shav NK, Horowitz Z (1984) Intelligence and personality variables of parents of autistic children. J Genet Psychol 144: 39-50.

15. Ingersoll B, Meyer K, Becker MW (2011) Increased rates of depressed mood in mothers of children with ASD associated with the presence of the broader autism phenotype. Autism Res 4: 143-148.

16. Sharifi AA, Moulavi H, Namdari K (2008) The validity of MCMI-III (MILLON, 1994) Scales. DANESH VA PEZHOUHESH IN PSYCHOLOGY 9: 27-38.

17. Ghanizadeh A, Mohammadi MR, Yazdanshenas A (2006) Psychometric properties of the Farsi translation of the kiddie schedule for affective disorders and schizophreniapresentand lifetime version. BMC Psychiatry 6-10.

18. Al-Towairqi W, Alosaimi W, Al-Zaidi S, Farouk Helmy F, Al-Sherif E (2015) Depression among mothers of autistic spectral disorder children. Int J ContempPediatr 2: 119-126

19. Almansour MA, Alateeq MA, Alzahrani MK, Algeffari MA, Alhomaidan HT (2013) Depression and anxiety among parents and caregivers of autistic spectral disorder children. Neurosciences (Riyadh) 18: 58-63.

20. Wolff S, Narayan S, Moyes B (1988) Personality characteristics of parents of autistic children: a controlled study. J Child Psychol Psychiatry 29: 143-153.

21. Lennox C, Callias M, Rutter M (1977) Cognitive characteristics of parents of autistic children. J Autism Child Schizophr 7: 243-261.

22. King BH, Lord C (2011) Is schizophrenia on the autism spectrum? Brain Res 22: 1380: 34-41.

23. Woodbury-Smith MR, Boyd K, Szatmari P (2010) Autism spectrum disorders, schizophrenia and diagnostic confusion. Journal of Psychiatry & Neuroscience. JPN 35: 360.

24. Tajmirriyahi M, Nejati V, Pouretemad H, Mansuri Sepehr R (2013) Reading the mind in the face and voice in parents of children with Autism Spectrum Disorders. Research in Autism Spectrum Disorders 7: 1543-1550.

25. Piven J, Wzorek M, Landa R, Lainhart J, Bolton P, et al. (1994) Personality characteristics of the parents of autistic individuals. Psychol Med 24: 783-795.

26. Ou WX, Cha CH, Wang LH (2010) Mental health state of parents of children with autism. Zhongguo Dang Dai Er Ke Za Zhi 12: 947-949.

27. Hayes S, Watson S (2013) The Impact of Parenting Stress: A Meta-analysis of Studies Comparing the Experience of Parenting Stress in Parents of Children With and Without Autism Spectrum Disorder. J Autism Dev Disord 43: 629-642.

28. Falk NH, Norris K, Quinn MG (2014) The factors predicting stress, anxiety and depression in the parents of children with autism. J Autism Dev Disord 44: 3185-3203.

29. Waters AM, Zimmer-Gembeck MJ, Farrell LJ (2012) The relationships of child and parent factors with children's anxiety symptoms: Parental anxious rearing as a mediator. Journal of Anxiety Disorders 26: 737-745.

30. Wilson CL, Rholes WS, Simpson JA, Tran S (2007) Labor, delivery, and early parenthood: an attachment theory perspective. PersSocPsychol Bull 33: 505-518.

31. Stepp SD, Whalen DJ, Pilkonis PA, Hipwell AE, Levine MD (2011) Children of Mothers with Borderline Personality Disorder: Identifying Parenting Behaviors as Potential Targets for Intervention. Personality disorders 3: 76-91.

32. Macfie J (2009) Development in Children and Adolescents Whose Mothers Have Borderline Personality Disorder. Child development perspectives 3: 66-71.

33. Rezendes DL, Scarpa A (2011) Associations between Parental Anxiety/Depression and Child Behavior Problems Related to Autism Spectrum Disorders: The Roles of Parenting Stress and Parenting Self-Efficacy. Autism Res Treat 395190.

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