
IMPLICATIONS OF A CHILD WITH AUTISM AND MATERNAL DISTRESS ON THE PSYCHOLOGICAL ADJUSTMENT OF HIS TYPICAL SIBLINGS

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ABSTRACT

To compare the psychological adjustment of typical siblings of children with autism and siblings of “Children without Autism” within the context of their mothers’ distress.

Study Design: Comparative cross-sectional study. The study was conducted in institutes dealing with children with Autism in Lahore

Children with autism were identified and their typical siblings and counterparts of siblings were then tested for their psychological adjustment; mothers were tested for their distress. Childhood Autism Rating Scale was used for the assessment of the severity of autism. Strengths and Difficulties Questionnaire was used to assess the psychological adjustment of typical siblings. Depression Anxiety and Stress scale was used to assess mothers’ psychological distress.

Analyses revealed that typical siblings of autistic children had significantly poorer <.001 psychological adjustment $M=20.59(4.16)$ than siblings of “Children without Autism” $M=14.98(7.3)$ and their mothers showed significantly <.01 greater stress $M=19.22(8.24)$ than mothers of “Children without Autism” $15.32(6.02)$. Having a child with autism significantly predicted psychosocial functioning. Maternal distress moderated the relationship between having a sibling with autism and the psychological adjustment of typical siblings. Maternal depression and stress also had a significant effect on psychological adjustment and pro-social behavior of siblings.

A child with autism has serious psychological implications for his typical siblings and mothers in comparison to siblings and mothers of “Children without Autism” and they do need professional help to provide quality care to a child with autism and improve their psychological wellbeing.

Keywords: *Psychological Implications, Maternal Distress, Typical siblings, Autism, Psychological Adjustment*

INTRODUCTION

Raising a typically growing child is demanding but parenting a special child is arduous (Dempsey, & Keen, 2008). The prevalence of an unfortunate mental illness such as Autistic Spectrum Disorder in one of the children demands a change in the natural parenting style. It leads to disturbed family life with an intuitive impact on other siblings (Ahmed, 2015). ASD is one of the most severe childhood psychiatric disorders and so parental responsibilities are further intensified by the special needs of a child with autism (Ramzan & Minhas, 2014). The siblings must also adapt and adjust to this newfound role of their parents because of the condition of the autistic brother or sister, who may require a fairly large chunk of the mother’s physical as well as mental energies (Habib, Jameel, & Fazal, 2015; Lakhani, Gavino, & Yousafzai, 2013). Being a sibling of a child with such a disability therefore is not only demanding but devastating and exhausting at the same time. In a country like Pakistan, where the pedagogical support is almost negligible, the situation becomes all the more precarious. The extra time that a mother spends with the child with ASD makes her ignore or overlook other children’s needs, leaving them all alone to deal with the stress with inadequate coping skills. Despite the rising rate of autism in Pakistan, the research on the subject is very little. Although a few researchers (Rezendes, & Scarpa, 2011) have studied parental stress of children with disabilities in general and of mothers of children with autism in particular (Batool & Khurshid, 2015; Khawar & Saeed, 2016) the impact of having a sibling with autism has largely been ignored. Moreover, mothers of children with autism, on account of being the primary care-takers, are seriously affected and exhibit psychosomatic symptoms of stress, depression, and anxiety, especially in a country like Pakistan. Their stress and anxiety affect their own mental and physical health and have a far-reaching impact on their typically developing children. The objectives of the present research were, therefore, to compare the psychological adjustment of typical siblings of children with autism with siblings of “Children without

Autism”; to compare maternal distress of children with Autism to those of mothers of “Children without Autism” and to investigate the effect of maternal distress and demographic characteristics of the child and mothers on the psychological adjustment of siblings of children with autism.

METHOD

This comparative cross-sectional study was conducted at different institutes of Lahore, Pakistan from 1st October 2011 to 30th March 2013. The total sample comprised of 310 participants in two groups. The first group consisted of children with autism (diagnosed using Childhood Autism Rating Scale; CARS, their typical siblings, their mothers, and the second group was siblings of “Children without Autism” and their mothers. Siblings in the first cohort were matched to the siblings in the second cohort based on age, gender, educational institution, and birth order. Children with autism were excluded from the study if they either had another sibling with some other disability or chronic sickness (Developmental delay, Down syndrome) or their parents had serious physical ailment (cancer, etc.) or belonged to broken families. Data collection was started after the approval of research work by the Advanced Studies and Research Board (ASRB) University of the Punjab, Lahore. Written permission was taken from the heads of Special Education Institutes. Data was collected from different sources such as from families of children with autism who were already admitted to special schools, from Autism Meet up a group on the internet, and from parents attending training workshops. A demographic form was used to collect basic information. CARS (Schopler, 1994) consisting of 15 domains, was used to measure behaviors associated with autism. Each domain scored is on a 4-point Likert scale. A higher score depicts a higher level of impairment. The Cronbach alpha of the CARS was .93 for the present study. Siblings were tested for their psychological adjustment and the four domains of adjustment (emotional problems, conduct problems, hyperactivity, and peer problems) with the Strengths and Difficulties Questionnaire (SDQ) (Goodman, 1997). This questionnaire includes 20 problem items and a five-item pro-social behavior scale. The items were measured on a three-point scale with 0 being not true, 1 being somewhat true and 2 being certainly true for the child. A higher score indicates greater problems. Cronbach's alpha of the SDQ was .76 in the present study. To measure maternal distress, a 42-item questionnaire of Depression, Anxiety & Stress Scale (DASS; (Lovibond & Lovibond, 1995) was used. It included three self-report measures with 14 items each. Based on their state of mind during the most recent week, the participants rated their experiences on a 4-point scale. Cronbach's alpha for the scale was $\alpha = .91$. The study's objectives, ethical issues, required time for their involvement, and confidentiality were discussed to ensure informed decision-making on the part of participants. The option of withdrawing at any stage was kept open with the choice to refuse to answer any question. Permissions of the authors and translators of the various instruments used were taken before starting the study. Data collection consisted of three stages; demographic information of children with autism was collected from various institutions across Lahore; siblings that fulfilled the inclusion criteria were tested for their psychological adjustment. In the last stage, the counterparts' information was collected. The Depression, Anxiety, and Stress Scale were applied to the mothers of both the groups. Data for the two groups were analyzed through a series of statistical examination to indicate the variances in their behavior.

RESULTS

Independent-samples t-test analysis was conducted to compare the psychological adjustment of typical siblings of children with Autism and siblings of typical children. Typical siblings of children with autism were found to have significantly poorer $<.001$ psychological adjustment $M=20.59(4.16)$ than siblings of “Children without Autism” $M=14.98(7.3)$ and showed significantly $<.01$ poorer pro-social behaviors $M=6.77(1.98)$ in comparison to the siblings of “Children without Autism” $M=7.87(2.93)$ (Table I). Mothers of children with Autism showed significantly $<.01$ greater stress $M=19.22(8.24)$ than mothers of “Children without Autism” $M=15.32(6.02)$ but there was no difference in depression and anxiety in mothers of both groups (Table II). Hierarchical regression analysis of psychological adjustment indicated maternal age, maternal stress, and presence of a child with Autism as strong predictors of psychological adjustment of typical siblings explaining 40% of the variance (Table III). In hierarchical regression analysis with pro-social behavior of siblings' maternal depression and stress emerged as significant predictors explaining 16% of

the variance (Table IV).

Table 1: Difference in Psychological Adjustment between Siblings of Children with Autism and Typical Children (N=124, n=62, Siblings of Children with Autism, n=62 Siblings of “Children without Autism”

Domains	<i>Siblings of children</i>				<i>t</i> (122)	<i>P</i>	95% CI		Cohen's <i>d</i>
	<i>with Autism</i>		<i>Typical</i>				<i>LL</i>	<i>UL</i>	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>					
Psychological Adjustment	20.59	4.16	14.98	7.3	-5.25	<.001	-	-	.98
Pro-Social	6.77	1.98	7.87	2.17	2.93	<.01	0.35	1.83	.53

Table 2: Difference in Maternal Depression, Anxiety and Stress of Autistic and Typical Children (N=124, n=62 Mothers of Children with Autism, n=62 Mothers of “Children without Autism”

Domains	Mothers of Children				<i>t</i> (122)	<i>p</i>	95% CI		Cohen's <i>D</i>
	With Autism		Typical				<i>LL</i>	<i>UL</i>	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>					
Depression	12.59	7.78	12.48	5.33	.09	.93	-2.26	2.48	.02
Anxiety	11.46	6.18	11.48	5.60	-.01	.99	-2.11	2.08	.01
Stress	19.22	8.24	15.32	6.02	3.01	<.01	1.33	6.47	.55

Table 3: Summary of Hierarchical Regression Analysis Predicting Psychological Adjustment of Siblings (N=310, n=62 Children with Autism n=62, Siblings of Children with Autism, n=62, Mothers of Children with Autism, n=62, Siblings of “Children without Autism”, n=62, Mothers of “Children without Autism”

Predictors	Model 1			Model 2			Model 3			Model 4		
	B	SE	B	B	SE	B	B	SE	B	B	SE	B
	B			B			B			B		
Constant	9.23	6.31		8.963	5.85		13.36	5.20		15.18	5.40	
Mothers' Age	.22	.11	.19*	.15	.10	.13	.06	.09	.05	.02	.10	.02
Mothers' Education	.18	.29	.06	.32	.27	.11	.31	.24	.11	.27	.25	.09
Mothers' Occupation	2.04	1.51	.13	2.71	1.41	.17	1.45	1.26	.09	1.85	1.30	.11
No. of Children	-.73	.63	-.12	-.48	.59	-.08	.31	.53	.05	.29	.53	.05
Maternal Depression				.18	.13	.18	.08	.11	.08	.21	.24	.22
Maternal Anxiety				.23	.13	.20	.21	.12	.19	.13	.20	.12
Maternal Stress				.07	.09	.08	.23	.09	.27**	.05	.13	.06
Presence of Autism							-6.25	1.06	-.48***	-6.14	1.06	-
												.47***
Mother's Depression*Autism										-.20	.28	-.17
Mother's Anxiety*Autism										.07	.26	.05
Mother's Stress*Autism										.32	.19	.29
R ²	.06			.22***			.40***			.42		
F for change in R ²	1.94			7.64			34.83			1.10		

Note. **p* < .05, ***p* < .01, ****p* < .001.

Table 4: Summary of Hierarchical Regression Analysis Predicting Pro-Social Behavior of Siblings (N=310, , n=62 Children with Autism n=62, Siblings of Children with Autism, n=62, Mothers of Children with Autism, n=62, Siblings of “Children without Autism”, n=62, Mothers of “Children without Autism” n=62)

Predictors	Model 1			Model 2			Model 3			Model 4		
	B	SE B	β	B	SE B	B	B	SE B	B	B	SE B	B
Constant	7.86	2.13		8.17	1.99		7.60	1.99		7.22	2.07	
Mother's Age	-.02	.04	-.06	-.02	.04	-.05	-.01	.04	-.01	-	.04	-.01
										.003		
Mothers' Education	-	.10	-	-.02	.09	-.02	-.02	.09	-.02	.01	.10	.01
Mother's Occupation	.001		.001									
No. of Children	-.29	.51	-.05	-.43	.48	-.08	-.27	.48	-.05	-.37	.50	-.07
Maternal Depression				-.11	.04	-.34*	-.10	.04	-	-.06	.09	-.18
Maternal Anxiety									.30*			
Maternal Stress				-.06	.05	-.17	-.06	.04	-.16	-.12	.08	-.32
Presence of child with Autism				.10	.03	.33**	.07	.03	.26*	.11	.05	.40*
Mother's Depression*Autism							.80	.40	.19	.80	.41	.19
Mother's Anxiety*Autism										-.04	.11	-.11
Mother's Stress*Autism										.10	.10	.21
										-.08	.07	-.22
R ²		.01			.16***			.18			.20	
F for change in R ²		.22			6.74			3.90			.88	

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

DISCUSSION

Current research found significantly poorer psychological adjustment among the typical siblings of children with autism. These findings concur with previous researches indicating emotional and behavioral difficulties (Petalas, Hastings, Nash, Lloyd, & Dowey, 2009) greater risk of developing internalizing behavior problems (Ross & Cuskelly, 2006), amplified risk of undesirable psychosomatic effects (Jones, Welsh, Glassmire, & Tavegia, 2006) risk of communicative and emotive problems (Lefkowitz, Crawford, & Dewey, 2007) as well as less social competence for siblings of disabled children. Conversely, in some previous research, the presence of a sibling with autism did not appear as a strong risk factor for poor adjustment among typically developing children (Tomeny, Barry, & Bader, 2012). Rather siblings of children with autism were found to be functioning well (Goudie, Haverkamp, Jamieson, & Sahr, 2013) reported a higher level of social competence in comparison to controls (Stoneman, 2005) and such a disability was not a cause of poor adjustment or any other pathology among their siblings (Petalas et al., 2012). Previous research found that siblings' relationship to be directly related to the severity of symptoms in the child with autism and was explicitly evident in family emotions (Barlow & Ellard, 2006). The incongruity of the taxing nature of autism was confirmed to make it harder for the family to make rational predictions about the children's prospective behavior and capability. The risk of adjustment problems significantly increased with the intensity of behavioral problems in the child with autism (Orsmond, & Seltzer; Plant, & Sanders, 2007). Contrary to all these findings, no relationship between symptoms severity of children with autism and their siblings' behavior and adjustment problems was found in the current research. Similarly, no relationship between gender and age of the child with Autism and psychological

adjustment of siblings was established in the current research. This finding is similar to the previous research concluding siblings of children with mental disabilities more susceptible to adjustment problems but index child's diagnoses, as well as the severity of impairment, were not the determining factor for the adjustment level of their siblings (Mellor, 2005). The birth order of the child with autism along with other demographics was reported to be moderating the connection between externalizing behaviors in children with autism and typically developing siblings (Tsao, Davenport, & Schmiede, 2012). The rate of maladjustment in siblings of children with autism was higher than children in the normative sample; however, the severity of symptoms in the child with autism moderated it to some extent (Tomeny, Barry, & Bader, 2014). Younger siblings of a child with autism had higher chances of atypical development. In contrast to these and concurrent with (Inam, & Zehra, 2012; Vermaes, Van Susante, & Van Bakel, 2012) the link between siblings' adjustment, birth order, and gender is not established in the current research. The current research did not find any difference in levels of depression and anxiety between mothers of children with autism and mothers of "Children without Autism". These results are contradictory to previous research (Quintero & McIntyre, 2010) findings higher levels of depression in the mothers of children with autism when compared with the mothers of children with intellectual disability and in mothers of developmentally challenged children (DeSousa & Sangoi, 2010; Meyer, Ingersoll, & Hambrick, 2011). The present research found mothers of children with autism more stressed than mothers of typical children. Previous research in Pakistan and Kuwait has also found that mothers of children with autism are more stressed than mothers of children with other clinical conditions (Estes et al., 2009; Tabassum & Mohsin, 2013). Psychological adjustment of siblings of children with autism was found to be positively related to maternal depression, anxiety, and stress. The current research revealed maternal age and stress as well as a child with autism in the family as predicting factors for psychological adjustment in the siblings. As the age increased, the mother's stress and tiredness level also increased, which kept the siblings tense and this tension was fairly evident in the form of heightened emotional and psychosomatic symptoms. The age, gender as well as birth order of the autistic child did not matter much (Fido, & Al Saad, 2013). His mere presence in the family was the most significant cause of psychological problems in typical siblings. Further studies are needed to confirm the findings of the current research. The study institutes that the child with autism has serious psychological implications for his typical siblings. The mothers of children with autism also displayed higher stress and therefore found to be at a heightened risk of developing mental health problems compared to mothers of "Children without Autism", and they do need professional help to provide quality care to a child with autism and improve their psychological wellbeing.

CONCLUSION

The study concludes that a child with autism has serious psychological implications for his typical siblings and mothers compared to siblings and mothers of "Children without Autism" and they do need professional help to provide quality care to a child with autism and improve their psychological wellbeing.

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