

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 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 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 psychological adjustment of typical siblings. Maternal depression and stress also had 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 in order to provide quality care to child with autism and improve their own psychological wellbeing.

Keywords: *Psychological implications, Maternal distress, Typical siblings, Autism, Psychological adjustment*

1. 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 and leads to disturbed family life with 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 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 the needs of other children, 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 not only affect their own mental and physical health but also has 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 psychological adjustment of siblings of children with autism.

2. METHODOLOGY

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 of the children. 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 in special schools, from Autism Meet up group on internet and from parents attending training workshops. 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 4-point Likert scale. Higher score depicts a higher level of impairment. The Cronbach alpha of the CARS was .93 for present study. Siblings were tested for their psychological adjustment and the four domains of adjustment (emotional problems, conduct problems, hyperactivity, and peer problems) with Strengths and Difficulties Questionnaire (SDQ) (Goodman, 1997). This questionnaire includes 20 problem items and five-item pro-social behaviour 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, 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 objectives of the study, ethical issues, required time for their involvement and confidentiality were discussed to ensure informed decision making on the part of participants. 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 prior to start of 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 and in the last stage the counterparts' information was collected. The Depression, Anxiety and Stress Scale were applied on 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 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 1). Mothers of children with Autism showed significantly $<.01$ greater stress $M=19.22(8.24)$ than mothers of “Children without Autism” $15.32(6.02)$ but there was no difference in depression and anxiety in mothers of both groups (Table 2). Hierarchical regression analysis pertaining to 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 3). In hierarchical regression analysis with pro-social behavior of siblings' maternal depression and stress emerged as significant predictors explaining 16% of the variance (Table 4).

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	-7.72	-3.49	.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	<i>Mothers 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>					
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		
	<i>B</i>	<i>SE B</i>	<i>B</i>	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	<i>B</i>
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	-	.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	-	-6.14	1.06	-
Mother's Depression*Autism									.48***			.47***
Mother's Anxiety*Autism										-.20	.28	-.17
Mother's Stress*Autism										.07	.26	.05
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	0.04	-.05	-.01	.04	-.01	-	.04	-.01
Mothers’ Education	-	.10	-	-.02	0.09	-.02	-.02	.09	-.02	.01	.10	.01
Mother’s Occupation	-.29	.51	-.05	-.43	0.48	-.08	-.27	.48	-.05	-.37	.50	-.07
No. of Children	.11	.21	.05	.03	0.20	.02	-.07	.20	-.03	-.06	.20	-.03
Maternal Depression				-.11	0.04	-.34*	-.10	.04	-	-.06	.09	-.18
Maternal Anxiety				-.06	0.05	-.17	-.06	.04	-.16	-.12	.08	-.32
Maternal Stress				.10	.03	0.33**	.07	.03	.26*	.11	.05	.40*
Presence of child with Autism							.80	.40	.19	.80	.41	.19
Mother’s Depression*Autism										-.04	.11	-.11
Mother’s Anxiety*Autism										.10	.10	.21
Mother’s Stress*Autism										-.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.

3. 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, presence of a sibling with autism did not appear as a strong risk factor for poor adjustment among typically developing children (Tomeny, Barry, & Bader, 2014). Rather siblings of children with autism were found to be functioning well (Goudie, Havercamp, 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 siblings’ relationship to be directly related to severity of symptoms in the child with autism and was explicitly evident in family emotions (Barlow & Ellard, 2006). The incongruity of taxing nature of autism was confirmed to make it harder for the family to make rational predictions about the prospective behavior and capability of the children. The risk of adjustment problems significantly increased with the intensity of behavioral problems in the child with autism (Orsmond & Seltzer, 2007). Contrary to all these findings no relationship between symptoms severity of children with autism and the behavior and adjustment problems of their siblings 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, & Schmiege, 2012). The rate of maladjustment in siblings of children with autism was higher in comparison to children in the normative sample; however, the severity of symptoms in the child with autism moderated it to some extent (Tomeny et al., 2014). Younger siblings of a child with autism had higher chances of atypical

development. In contrast to these and concurrent with Zehra and Inam (2012); Vermaes, van Susante, and 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). Present research found mothers of children with autism more stressed than mothers of typical children. Previous researches in Pakistan and Kuwait have also found mothers of children with autism more stressed than mothers of children with other clinical condition (Estes et al., 2009; Tabassum & Mohsin, 2013). Psychological adjustment of siblings of children with autism was found to be positively related with 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, mother's stress and tiredness level also increased which in turn 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 in comparison mothers of "Children without Autism" and they do need professional help in order to provide quality care to child with autism and improve their own psychological wellbeing.

4. CONCLUSION

The study concludes that 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 in order to provide quality care to child with autism and improve their own psychological wellbeing.

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CONFLICT OF INTEREST

The authors declare that they have no competing interests.

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