

Sibling or No Sibling: A Comparison of Social Skills in ASD Children

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Abstract: Before 3 years of age, children with Autism Spectrum Disorder present with impairments in social interaction, language, communication, and imaginative play with restricted range of interests and activities. Such children may benefit from the presence of a sibling as it provides a continuous source of social development. 16 such children were divided into 2 groups (8 each in with and without sibling group) and social skills assessed on Social Skills Checklist-Elementary keeping the confounding factors as constant as possible. Children with siblings were found to have better social play and emotional regulation ($p < 0.01$) as compared to those without siblings. This study emphasized the role of a sibling in the social domain and participation of a sibling in social skills training may improve the behavior of a child with autism spectrum disorder.

Keywords: Autism Spectrum Disorder, Behavior, Sibling effect, Social Development

I. INTRODUCTION

The term 'autism spectrum disorder' (ASD) refers to a class of neuro developmental disorders characterized by qualitative impairments in the development of social and communication skills, often accompanied by stereotyped and restricted patterns of interests and behavior, with onset of impairment before 3 years of age [1].

Parental concerns that a child has an ASD can arise as early as the first year of life, but they are most likely to arise when a child, who is later diagnosed with an

ASD, is at a mean age of 18 months [2]. Approximately 80% of parents of children with ASDs notice abnormalities in their child by 24 months of age, which usually involve delays in speech and language development [3] and, less often, social, play, sensory, motor, [4] or medical problems, or regulatory problems related to sleep, eating and attention [3]. The evidence to date indicates that genetics have a major role in the etiology of ASDs, with an additional role for environmental influences that are yet to be defined [5]-[6].

In some children, multiple signs of ASD, particularly impairments in social functioning and communication, are present by 14 months of age to such a degree that an expert in early child development and autism might consider a diagnosis of ASD. Development in these children is slow, at least in the social domain [7]. They cannot interpret the thoughts and feelings of others, or predict social events. They have difficulties initiating interactions, responding to others, and maintaining conversation; they show deficits in listening and responding to others' requests', and in cooperating in games and other activities [8]

Within the family unit siblings share a unique relationship with one another [9]. Typical sibling relationships provide siblings with experiences that foster the development of emotional understanding, self-regulation, and a sense of belonging and comfort

[10]. Smith and Hart (2002) stated that sibling relationships play a significant role in the development of children's understandings of others' emotions and thoughts [11]. Kaminsky and Dewey (2001) reported that positive sibling relationships can be an important source of social development and self-worth and are associated with lower levels of conduct disorders and loneliness in children [12]. Howe, Petrakos, and Rinaldi (1998) similarly found that siblings who engage in frequent pretend play demonstrate a greater understanding of others' emotions, are more likely to construct shared meanings in play, and are more likely to develop conflict management strategies [13]. El-Ghoroury and Romanczky (1999) reported that siblings are important social agents for children with autism spectrum disorders (ASD), who often have severe deficits in social competence [14].

A lack of intuitive social ability is a hallmark of ASD. The external signs of social impairment are observed as poor eye contact, lack of interest in initiating social interactions, lack of understanding of emotions and how they are expressed. As siblings form an integral part of the social development in a child, the effect of sibling on children with ASD also needs to be explored. Therefore, the current study was outlined to compare the effect of the presence or absence of a sibling on the social skills of children with autism spectrum disorder.

II.METHODOLOGY

The study was conducted at a paediatric rehabilitation clinic where children were diagnosed as having autism spectrum disorder based on Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) and Childhood Autism Rating Scale (CARS) criteria. Children diagnosed with only mild ASD were included in the study. 16 children were included and divided into the two groups based on the presence or absence of a sibling (older or younger, male or female). 8 children became part of each group. These

children were diagnosed as part of the early intervention group between 2 and 2.5 years. They were undergoing standard occupational therapy, speech therapy and special education for 30 minutes each 5 days a week. All the children had been receiving the therapy program from 6 months to a year. The families were recognized as nuclear with fathers working while the mothers were either working or non-working. None of the sibling group children had more than one sibling. Also, children in both the groups were given standard social skills training.

The assessment was performed using Social Skills Checklist- Elementary (SSC-E). It assesses 3 social skill domains viz. Social play and emotional development (3 sub-domains), Emotional regulation (4 sub-domains), and Communication skills (3 sub-domains). Each behavior is assessed on a 4-point ordinal scale – almost always, often, sometimes and almost never. For the purpose of statistics, a number was assigned to each behavior. So, almost always rated 4 and almost never was marked 1.

III.RESULTS

The 3 domains of SSC-E were compared between groups with or without siblings. The comparison was done using unpaired t-test using the level of significance as $p < 0.01$ (owing to the extent of confounding factors that may interfere with results). The statistics was performed using SPSS software version 13.0.

Table I: Mean, Standard Deviation (SD) and N in the two groups in all 3 domains of SSC-E

	With sibling			Without sibling		
	Domain 1	Domain 2	Domain 3	Domain 1	Domain 2	Domain 3
Mean	39	73.36	36.5	30.88	58.5	30.86
SD	24.04	4.78	5.21	2.17	4.18	3.04
N	8	8	8	8	8	8

The mean values were higher in all 3 domains of SSC-E in the group with siblings compared to the group without siblings. This difference was observed more in the 2nd domain viz. emotional regulation.

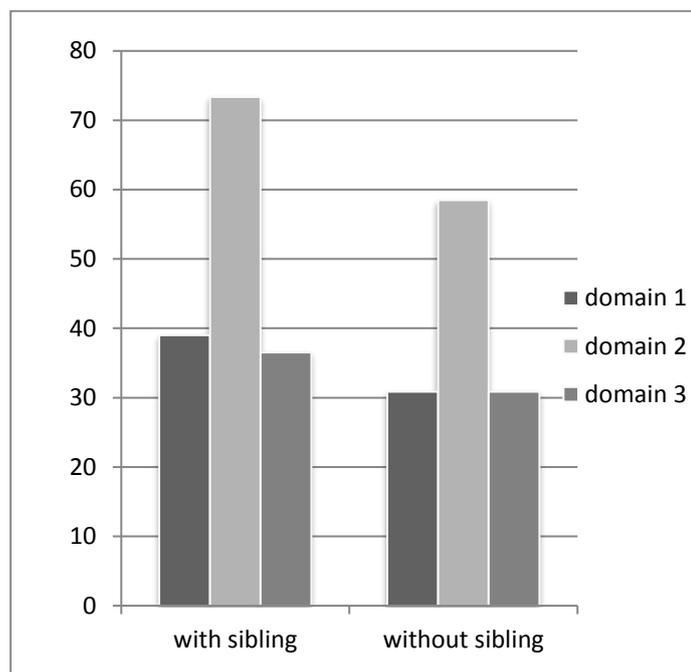
Table II: Comparison of means of the 2 groups in the 3 domains of SSC-E

	t-value	p-value
Domain 1	5.0081	0.0004*
Domain 2	6.6191	0.0002*
Domain 3	2.6446	0.0284

*- statistically significant

A statistically significant value of $p < 0.01$ was observed in the 2 domains of social play and emotional development and emotional regulation. The mean score of the domain of communication skills was higher in the 1st (with sibling) group but the results were not found to be statistically significant.

Fig. 1 : Comparison of mean scores of the 3 domains of SSC-E in the 2 groups



IV.DISCUSSION

Among the most difficult problems that parents mention in children with ASD are poor language skills, inappropriate and embarrassing public behaviour, disruption and destruction in the home, violence and aggression, inappropriate sexual expressions and obsessions with eating and toileting [15]. These are directly related to social skills of a child and result in rejection and non-acceptance by friends, peers, adults, and loneliness and isolation.

Social skills training have been observed to improve social skills with peers. Similar results have been observed with siblings [16]. As assessed on SSC-E, the children with ASD who had a sibling were found to have better social skills esp. social play and emotional development, and emotional regulation ($p < 0.01$). Presence of siblings not only enhances basic play behaviors but also constructs like imaginative play along with turn taking and sharing behavior as observed in social play domain.

Sibling of a child with ASD also influences communication skills in terms of basic conversation and non-verbal language but a significant difference ($p>0.01$) was not found which could be attributed to small sample size which was compared and an early age at which the children were assessed. None of the children in the study had basic conversation skills at the time they were diagnosed with ASD.

Fielder and Simpson (2006) reported that culture, traditions, interests, and environmental contexts all have an effect on sibling relationships [17]. Positive relationships [18] and less conflict [12] have been reported by siblings of a brother or sister with ASD.

Beyer [19] reviewed the literature related to siblings' relationships when one sibling has an ASD. Beyer reported that researchers found both positive and negative factors in these siblings' relationships. Siblings claimed that they had minimal conflicts and warm relationships with their siblings with ASDs [12]. They also stated that they had fun with their siblings with ASDs [20] and were proud of teaching their siblings with ASDs [18]. In contrast, some siblings of children with ASDs reported that their relationships with their brothers or sisters with ASDs were less close and warm compared to relationships with other siblings [21]. In addition, a few siblings reported greater feelings of embarrassment than siblings of typically developing children or children with other disabilities [22].

Different research methods and comparison groups, in addition to variations in other factors (e.g., family environment or severity of the ASD) could explain the mixed results related to the siblings' relationships.

V. CONCLUSION

Children with ASD tend to become stuck while learning a skill such as social skills. These have been evidenced in the literature to be improved by social skills training. Also, the presence of a sibling

provides the child with ASD an opportunity for social development in a continuous manner. The program for such a child may incorporate social skill training with the sibling in order to augment the social behavior and learning.

VI. LIMITATIONS

The study was conducted on a very small sample of subjects (8 in each group), therefore, the results cannot be generalized on a large sample. Also, the effect of presence of an older or younger sibling was not considered as well as the gender of the sibling. The children were assessed on only social skills. However, other aspects like behavior, various play skills, and learning behaviors can also be assessed. Siblings can be made a part of the rehabilitation program and sessions with social skills training pertaining to siblings and peers can be incorporated as an intervention program.

REFERENCES

1. American Psychiatric Association, Diagnostic and Statistical Manual of Mental Disorders, Edn. 4, text revision, Washington, DC, American Psychiatric Press, 2000.
2. Howlin P and Asgharian A, "The diagnosis of autism and Asperger syndrome: findings from a survey of 770 families" *Dev Med Child Neurol*, Vol. 41, pp. 834–839, 1999.
3. De Giacomo A and Fombonne E, "Parental recognition of developmental abnormalities in autism" *Eur Child Adolesc Psychiatry*, Vol. 7, pp. 131–136, 1998.
4. Charman T, Baron-Cohen S, Swettenham J and Drew A, "Testing joint attention, imitation, and play as infancy precursors to language and theory of mind" *Cogn Dev*, Vol. 15, pp. 481–498, 2000.
5. Jones M and Szatmari P, "A risk-factor model of epistatic interaction, focusing on autism" *Am J Med Genet*, Vol. 114, pp. 558–565, 2002.
6. Newschaffer CJ, Croen LA, Daniels J, Giarelli E, Grether JK, Levy SE, Mandell DS, Miller LA, Pinto-Martin J, Reaven J, Reynolds AM, Rice CE,

- Schendel D, and Windham GC, "The epidemiology of autism spectrum disorders" *Annu Rev Public Health*, Vol. 28, pp. 235–258, 2007.
7. Landa RJ, Holman KC, and Garrett-Mayer E, "Early social and communication development associated with early and later onset of autism" *Arch Gen Psychiatry*, Vol. 64, pp. 853–864, 2007.
 8. Sansosti FJ and Powell-Smith KA, "Using computer –presented social stories and video models to increase the social communication skills of children with high-functioning autism spectrum disorders" *J behavioural interventions*, Vol. 10, pp. 162-178, 2008.
 9. Knott, F. Lewis, C., & Williams, T, "Sibling interactions of children with learning disabilities: A comparison of autism and Down's syndrome" *Journal of Child Psychology and Psychiatry*, Vol. 6, pp. 965– 976, 1995.
 10. Orsmond, I., & Seltzer, M, "Siblings of individuals with autism spectrum disorders across the life course" *Mental Retardation and Developmental Disabilities Research Reviews*, Vol. 13, pp. 313–320, 2007.
 11. Smith K., & Hart, H. *Blackwell handbook of childhood social development*. Malden,MA, Blackwell Publishing, 2002.
 12. Kaminsky, L., & Dewey, D, "Siblings relationships of children with autism" *Journal of Autism and Developmental Disorders*, Vol. 31, pp. 399–410, 2001.
 13. Howe N., Petrakos, H., & Rinaldi, M, "All the sheep are dead. He murdered them: Sibling pretense, negotiation, internal state language, and relationship quality" *Child Development*, Vol. 69, pp. 182– 191, 1998.
 14. El-Ghoroury, H., & Romanczyk, G, "Play interactions of family members towards children with autism" *Journal of Autism and Developmental Disorders*, Vol. 28, pp. 249–258, 1999.
 15. McGrath P, "Psychosocial issues in childhood autism rehabilitation: A review" *International Journal of Psychosocial Rehabilitation*. Vol. 11, Issue 1, pp. 29-36, 2006.
 16. Matson JL, Matson ML, and Rivet TT, "Social skills treatments for children with autism spectrum disorders: An overview" *Behavior Modification*, Vol. 31, Issue 5, pp. 682-707, 2007.
 17. Fiedler, R., Simpson, L. & Clark, M, "Parents and families of children with disabilities" Englewood Cliffs, NJ, Pearson Prentice Hall, 2005.
 18. Foden, J, "Sibling studies: The good, the bad, and the contradictory" *Interactive Autism Network Community*, 2007.
 19. Beyer J F, "Autism spectrum disorders and sibling relationships: research and strategies" *Education and Training in Developmental Disabilities*, Vol. 44, Issue 4, pp. 444–452, 2009.
 20. Rivers J W and Stoneman Z, "Sibling relationships when a child has autism: marital stress and support coping" *Journal of Autism and Developmental Disorders*, Vol. 33, Issue 4, pp. 383– 394, 2003.
 21. Hodapp RM and Urbano R C, "Adult siblings of individuals with Down syndrome versus with autism: findings from a large-scale US survey" *Journal of Intellectual Disability Research*, Vol. 51, Issue 12, pp. 1018–1029, 2007.
 22. Mascha K and Boucher J, "Preliminary investigation of a qualitative method of examining siblings' experiences of living with a child with ASD" *British Journal of Developmental Disabilities*, Vol. 52, Issue 1, pp. 19–28, 2006.



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