

EFFECT OF SOCIAL AGE AND SOCIAL QUOTIENT ON AUTISM SPECTRUM DISORDERS

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ABSTRACT

The current paper attempted to find out the adaptive behaviour and its correspondence with social age (SA) and social quotient (SQ), among the domains of adaptive behaviour in the case of the children with Autism Spectrum Disorders. Altogether 30 children's in the age-group 1-15 years, (Mean age= 8.2 yrs) were involved in the study as participants. All the children's were taken from Bhopal Manovikas Rehabilitation and Research Center. The Vineland Social Maturity Scale (VSMS), Indian adaptation by A.J. Malin, was used to assess Social Age (SA), Social Quotient (SQ). The test was conducted twice at an interval of six months (Time One and Time Two) to examine whether there was any change in the adaptive behaviour of the children. The results of the study indicated that the higher the social Age (SA) higher the adaptive functioning as well higher the Social Quotient higher the adaptive functioning.

KEYWORDS: *Adaptive behaviour, Autism Spectrum Disorders, social age, social quotient, skill.*

INTRODUCTION:- The adaptive behaviours are the everyday living skills, such as walking, eating, talking, getting dressed, going to school, going to work, preparing a meal, cleaning, etc. They are skills that a person learns in the process of adapting to his or her surroundings. It is the functional ability of the individual to acquire personal independence and social responsibility. The social responsibility refers to effective coping with the natural and social demands of the environment by an individual. Autism Spectrum Disorder (ASD) is a group of Developmental disabilities that can cause significant social, Communication and behavioral challenges. American Psychiatric Association (APA) indicated that Children's with ASD have always suppressed adaptive skills and composite intervention has prominent role to enhanced adaptive ability. APA came up with a specific definition for autism - three key areas of developmental problems in children diagnosed with autism spectrum disorders: (a) impairment in social interaction (such as impaired nonverbal behaviors, poor peer relationships, difficulty sharing enjoyment and interests with others) and a lack of social or emotional reciprocity; (b) severe delays or lack of language communication skills, impaired ability to initiate or sustain conversation with others, repetitive use of language, and lack of appropriate social imitative play; and (c) repetitive and stereotyped patterns of behavior, interest, and activities including, inflexible adherence to routines or rituals, stereotyped and repetitive motor mannerisms, and persistent preoccupation with parts of objects (Phetrasuwan, Miles, and Mesibov, 2009). About the domains of adaptive behaviour, ten adaptive skill areas were identified by the American Association on (1992), such as communication, self-care, home living, social skills, community use, self-direction, health and safety, functional academics, leisure, and work. Deficit in these behaviours means any failure to accomplish standards of independency and social tasks (Hallan and Kauffman, 1994). Multi disciplinary exposure and intervention in early stage reciprocate children's brain plasticity while young. By implementing new behaviors through early intervention programs, children with autism will have significant improvement in developmental delays (Landa, 2007). Wetherby and Woods, 2006 stated "researchers have suggested that the age of entry into intervention is predictive of outcome. Children with ASD who participated in intensive interventions by 3.5 years of age had significantly better outcomes than their peers with ASD who received such interventions after age 5yrs. Results indicated success with "children

with autism improving in language/communication, reciprocal social interaction, and symbolic play. Parents also noted success in improvement of their children’s language, social interaction, and their own stress level” (Wong & Kwan, 2010). Merdtoti et al. Kumar et al. (2009) found out the effect of severity of mental retardation on social development along with possible correlation between social quotient (SQ) and IQ on the one hand and age and social development on the other.

This scale has been adapted for Indian population by Malin in 1965 as Vineland Social Maturity Scale (VSMS). The Indian adaptation of VSMS gives a profile on development in eight domains, as given in the following pages. Using the Vineland Social Maturity Scale (VSMS) and Vineland Adaptive Behaviour Scale (VABS), a number of studies have been conducted in India and aboard on adaptive behaviour of the children with or without ASD.

AIM:-The current study aims at finding out the effect of social age (SA) and social quotient (SQ), on adaptive functioning of ASD.

METHOD PARTICIPANT: _ Altogether 30 children in the age-group 1-15 years (Mean age=8.2 months) were selected through the purposive sampling from amongst the institutionalized children. **EXCLUSION CRITERIA** Children above the age of 15 years were excluded from the purview of the study as the Vineland Social Maturity Scale (VSMS), the Indian adaptation, was meant for children in the age-group 0- 15 years. **MATERIALS** The Vineland Social Maturity Scale (VSMS), the Indian (Nagpur) adaptation by A.J. Malin (1965) was used. It measures the differential social capacities of an individual and provides an estimate of social age and social quotient, and shows high correlation (0.80) with intelligence. It is designed to assess social maturation in eight social domains as given below tentatively: Self-Help General (SHG) Activities like grooming, skills like washing, brushing, hair combing, toileting, personal hygiene, food preparation, budgeting, home safety, daily living skills, etc. Self-Help Eating (SHE) Self-eating and self-drinking. Self-Help Dressing (SHD), Dressing and undressing. Self-Direction (SD) Ability to complete day-to-day tasks without guidance. Occupation (OCC) Ability to maintain gainful employment and learning vocational skills. Communication (COM) Ability to comprehend and express information through spoken words, written words, graphic symbols, sign language, and manually coded English or non-symbolic behaviours such as facial expressions, body movements, and gestures. Locomotion (LOC) Controlled movement of muscle groups, such as buttoning a shirt, walking or throwing a ball. Socialization (SOC) Ability to interact with others.

PROCEDURE: _ Rapport was established with the parents and caregivers. Explained them the nature and purpose of the study. . The Vineland Social Maturity Scale (VSMS) was administrated to the same informant in two sessions as **Time One and Time Two** separated by an interval of twenty for weeks. The data were collected during January – June 2016.

RESULTS:-

Table 1.0
Result of t-test on Social Age in Children with Autism Spectrum Disorder

Outcome	Pre-intervention		Post-intervention		n	r	95% CI	t
	M	SD	M	SD				
Social Age (SA)	7.7	2.56	8.07	2.59	30	0.98*	[0.22, 0.52]	5.16*

Note. CI = Confidence Interval
df = 29, *p < 0.05

To test the hypothesis (SA) that Test 1 mean ($M = 7.7, SD = 2.56$) and Test 2 mean ($M = 8.07, SD = 2.59$) of SA scores significantly high at 0.05; a paired samples t-test was conducted. Prior to conducting the analysis, the assumption of normality for distributed difference scores was examined. The assumption was considered satisfied, as the skew and kurtosis levels were estimated at 0.06 and 0.93 respectively which is less than the maximum allowable values for a t-test (i.e., skew < |2.0| and kurtosis < |9.0|; Posten, 1984). It was also noted that the correlation between two conditions was estimated at $r = 0.98, p < 0.05$, suggesting that the paired samples t-test is appropriate in this case. $t = 5.16, p < 0.05$. The Test 2 mean was statistically significant higher than Test 1 mean. So, it can be concluded that social age play significant role in adaptive skills.

Table 2.0
Result of t-test on Social Quotient in Children with Autism Spectrum Disorder

Outcome	Pre-intervention		Post-intervention		n	r	95% CI	t
	M	SD	M	SD				
Social Quotient (SQ)	78.2	9.94	78.64	10.37	30	0.99*	[0.11, 0.77]	2.74*

Note. CI = Confidence Interval
df = 29, *p < 0.05

To test the hypothesis (SQ) that Test 1 mean ($M = 78.2$, $SD = 9.94$) and Test 2 mean ($M = 78.64$, $SD = 10.37$) of Sq scores significantly high at 0.05; a paired samples t-test was conducted. Prior to conducting the analysis, the assumption of normality for distributed difference scores was examined. The assumption was considered satisfied, as the skew and kurtosis levels were estimated at 0.06 and 0.93 respectively which is less than the maximum allowable values for a t-test (i.e., skew < |2.0| and kurtosis < |9.0|; Posten, 1984). It was also noted that the correlation between two conditions was estimated at $r = 0.99$, $p < 0.05$, suggesting that the paired samples t-test is appropriate in this case. $t = 2.74$, $p < 0.05$. The Test 2 mean was statistically significant higher than Test 1 mean. So, it can be concluded that social quotient play significant role in adaptive skills.

DISCUSSION:- The study finds a positive correlation between social age and adaptive functioning and the higher the social quotient, the higher the adaptive behaviour skills. Peters (2004) also found a similar finding that the adaptive behaviour skills of children were strongly correlated with their cognitive abilities. Such a correlation between the cognitive abilities and adaptive behaviour skills was found in other studies conducted on children with ASD. The results of the current study also suggest that age is not a determining factor of cognitive development since chronological age has nothing to do with increase or decrease in social quotient scores. The present study finds a positive correlation between social age and social quotient on adaptive functioning. The higher the social age and higher social quotient and adaptive behaviour scores on ASD.

CONCLUSION:- The social age and social quotient has impact on adaptive abilities. The chronological age may not be a determining variable of adaptive abilities. Each domain of adaptive behaviour seems to be inter-correlated and interdependent. We may find it difficult to generalize the results of the study because of limited sample size. Further research on a larger sample is called for.

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