

**EFFECT OF INCLUSIVE EDUCATION ON  
LANGUAGE AND SOCIAL DEVELOPMENT OF  
CHILDREN WITH AUTISM**

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**ABSTRACT**

*A total of 80 schoolteachers and administrators participated in this survey research conducted in the USA. The study investigated the effect of inclusive educational placement, on development of elementary school age children with autism. The subjects were randomly selected from general schools, schools with resource rooms, schools with special classes, and special classes located in Kansas, Missouri and Nebraska. Whereas the teachers (N=44) were required to respond on development of language and social behaviour in children with autism, their teaching strategies and available support system, the administrators (N=36) reported on the existing instructional practices, physical environment and related services in their schools. The results indicated that development of language and social behaviours in autistic children did not differ significantly across the educational settings. A positive correlation existed between teaching strategies and support services and development of language and social behaviour.*

**INTRODUCTION**

During the last quarter of the twentieth century, a number of events have contributed to dramatic changes in the course of public education. A major force in creating a change in school education was the enactment of Education for All Handicapped Children Act (1975), in the USA.

This landmark piece of legislation influenced the course of education and training of children with special needs, world over. The main provision of this Public Law included the mandate for (a) all children, regardless of the nature and severity of their disabilities (b) each child with disabilities to have an Individualized Education Programme based on his/her social needs and (c) all children with disabilities to be educated in the least restrictive environment (LRE).

The Individuals with Disabilities Education Act (IDEA) which was passed in 1990, as reauthorisation of PL 94-142 states a strong preference for educating students with disabilities in general classes with appropriate aids and supports. The Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act passed by the Govt. of India in 1995, provides for equal educational opportunities to all children with disabilities and mandates that a child cannot be denied education on grounds of disability. The National Trust Act 1999, another disability specific legislation in India, aims to enable and empower persons with disability, to live independently and within the community to which they belong. Autism is listed as a disability under IDEA and the National Trust Act. Autism is a rare disorder that affects multiple areas including thought, communication and behaviour.

Autism has been defined as a developmental disability affecting verbal and non-verbal communication and social interaction, usually evident before the age 3, which adversely affects a child's educational performance. Other characteristics often associated with autism are engagement in repetitive activities and stereotype movements, resistance to environmental change or change in daily routines, and unusual sensory experiences. A pervasive aspect of autism is the individual's social or interpersonal detachment to others in his/her environment. These children usually have impaired or delayed speech and language (1). Some people with autism are over or under responsive to sensory stimulation such as light, noise, and touch (2).

Key symptoms of autism include failing to develop normal socialisation patterns; disturbances in speech, language, and communication; unusual relationships to objects and events; unusual responses to sensory stimulations; developmental delays; onset during early years of life (3).

Autism is a disorder that is present from birth or very early in development that affects essential behaviors such as social interaction, the ability to communicate ideas and feelings, imagination and the establishment of relationships with others. It generally has life long effects on how children learn to be social beings, to take care of themselves, and to participate in the community (4).

The primary goals of education for children with autism, include fostering normal development, promoting learning, eliminating problem behaviours and reducing family stress (5). Essential components of effective programmes for such children lay emphasis on functional activities and skills needed to be successful in the real world, chronologically age appropriate activities, instructions, in both, school and non school environments and social integration to the maximum possible degree (6). For children with autism, education must foster acquisition of, not only academic skills but also socialisation, adaptive skills, language and communication, and reduction of problem behaviour.

Students with autism have seriously impaired social relationships. Many students with autism resist human contact and social interactions from a very early age, and they have difficulty learning the subtleties of social interactions. They also experience problems in both verbal and non-verbal communication. They often have significantly delayed language development, and struggle to maintain a conversation with another person. Inclusion is a process by which children with special needs receive remedial services in the least restrictive environment (LRE) especially in the regular classroom. It refers to the practice of placing students who are disabled in a general education classroom, to the extent appropriate to the needs (7).

Inclusion represents the belief or philosophy that students with disabilities should be integrated into general education classrooms, whether or not they can meet traditional curricular standards (8).

Many studies reviewed by Kirk et al (9) indicate that integration influences positive changes in the attitude of the non disabled persons towards their peers with severe and multiple disabilities, shows improvement on social and communication skills of such children, improves positive interaction among all students, and facilitates adjustment to community settings as adults.

While few professionals would question the appropriateness of including students with disabilities, there is a debate about which students should be part of general education classes and how much time they should spend there. Many educators agree that students with disabilities too often have been educated in isolated setting that minimise instead of maximising their potentials, but they recognize that general education setting is occasionally but not always the least restrictive environment (10, 11).

This observation has validity in case of children with autism. The lack of communication abilities and motivation for social interactions in autistic children, make integration of such children more difficult than others with disabilities because the latter are socially motivated whereas children with autism are instrumentally motivated (12). In fact, according to Morris (13), given the deficits in attending, observing, understanding and sustaining engagement in constructive activities that typifies many children with autism, instructions should take place in settings that are quiet and as free of distractions as possible.

The objective of the study was to compare the effect of inclusive educational placements on language and social development of children with autism. Four levels of inclusion (as per IDEA) were used for this purpose.

## **METHOD**

The research was conducted in the USA. Administrators and teachers of schools in the mid-west States of America participated in the study.

The study design was a survey research following a causal comparative approach that attempts to determine the reasons or causes for the status of a phenomenon.

### **Subjects**

Surveys were sent to a random selection of school-teachers (N=70) and administrators (N=50) from the States of Kansas, Missouri and Nebraska. The subjects belonged to (a) general schools (b) general schools with resource rooms (c) general schools with special class and (d) special schools. Since the study required information on children with autism of elementary school level (age 6-12 years), a total of 44 teachers and 36 administrators responded to the surveys.

The subjects were asked to provide information with reference to language and social development of a child with autism in their class/school.

### **Materials**

Two surveys were developed for the study.

#### **(1) Teacher's rating scale for language and social behaviors in children with autism.**

The survey had three parts: (a) general information about the teacher, type of school and the selected child with autism (b) a checklist of language and social behaviors as seen in typical children and those with autism and (c) a checklist of teaching strategies, support systems, and professional updating needed for effective development of language and social behaviours in children with autism. The subjects were asked to respond to the questions in part (b) and (c) on a 3-point scale.

**(2) Questionnaire for Administrators.** This survey asked for information from administrators on (a) educational planning (b) learning environment (c) instruction and (d) support services. Each of these sections included practices that are acknowledged as effective for educational intervention of autism. This instrument also followed a 3-point scale for response.

### **Procedure**

After pilot testing, the surveys were sent to a random selection of teachers (N=70) and administrators (N=50) of elementary schools from States of Kansas, Missouri and Nebraska in USA.

A total of 77 surveys were received, out of which 70 (44 teachers, 36 administrators) were considered valid. A survey was considered valid if subjects responded to all items therein.

## **RESULTS**

### **Language Development**

The first objective of the study was to determine the effect of inclusive educational placement on development of language behaviour in children with autism. The survey included a wide range of communicative behaviours that operationally denoted language development. The items were constructed with respect to linguistic deficits manifested by children with autism, and included such behaviours as indication of personal needs, use of manual and pictorial communication, and initiation and maintenance of conversation etc.

Mean score (based on ratings by teachers) obtained by children in regular schools was compared with that by children in resource rooms, special classes, and special schools. The outcome showed there was no significant difference ( $F=1.089$ ,  $p>0.05$ ) in language development of children from the four educational settings. This indicates that each educational setting provided the instructional, environmental and infrastructural support needed for development of language skills in children with autism.

### **Social Development**

The effect of inclusive educational placement on social development of children with autism was determined by comparing the mean scores of children in each of the four types of educational setting. The scores were based on the teacher's ratings on a variety of behaviors essential for social skills such as eye contact, social attention, toy play, interactive play, sharing, and group interaction.

Statistical analysis showed no significant difference ( $F=0.556$ ,  $p>0.05$ ) in development of social skills among children across the four groups. This finding could be attributed to the uniformity in planning, teaching methods and availability of educational environment required for development of social skills in children with autism.

### **Instructional Method and Administrative Support**

The survey for teachers asked them to rate themselves on use of programme planning, classroom organisation and teaching strategies found effective, for developing language and social behaviours in children with autism. They also rated the administrative support and infrastructure (e.g. provision for paraprofessional teachers, therapists, adaptation of physical environment, staff development programs) available in their schools.

Comparison of means of self-rating score found no statistical difference within the four groups ( $F=1.147$ ,  $p>0.05$ ). This suggests that teachers in all settings used appropriate teaching methods and were given the required administrative support for educating children with autism. Similar findings were presented, when mean scores of administrators across four educational settings were compared. The obtained F-ratio (0.543) was not significant ( $p>0.05$ )

statistically. This indicates that schools provided the instructional environment and support suitable for autistic children.

The findings were corroborated by correlating the mean composite score (on language and social development) of children, with mean score of teacher on use of effective teaching methods. The coefficient of correlation ( $r=0.543$ ) was highly significant ( $p<0.01$ ) statistically. The children's mean composite score also correlated positively ( $r=0.478$ ) with the mean composite score of teachers and administrators, and was found significant statistically ( $p<0.01$ ). These results suggest that appropriate teaching methods, learning environment and administrative support, contribute to positive outcomes for language and social development in children with autism. Any school that provides the same, could be a good educational setting for such children.

## **DISCUSSION**

Research studies have documented the importance of enhancing communication and social skills in children with autism. Use of applied behavioral analysis (ABA) and discrete trial method show improvement in communication domain (14). Similarly, there is a large body of empirical support based on developmental approach (15, 16). Benefits from use of alternative and augmentative communication (AAC) have been documented too.

Mirenda (17) found AAC to be effective in development of functional communication in Autistic children. With such children, AAC may involve non-speech symbol system, signlanguage, visual schedules, communication boards etc. (4).

The teachers and administrators, who participated in the research study, reported the use of instructional methods based on ABA, developmental approach and AAC strategies. The non-significant difference in language development of children from the four educational settings, may be attributed to this factor.

Social development is an important aspect of education for children with autism. A child's social behaviour with both, adults and peers, should be targeted for intervention. Goals for specific social behaviours identified in interaction with adults, may focus on development of such behaviours as joint attention, turn taking, imitation, responding to adult initiations and initiating social interaction with adults (16).

Interaction with peers, is another dimension of children's social development that becomes increasingly important for a school-going child with autism. Strain (18) found play organisers (e.g. initiating play idea, sharing, affection, helping others etc.) and response to peer social bids as skills that influence development of peer interaction.

Use of visual schedules (19), social stories (20), social games (21), and peer-tutoring and cooperative learning (22), have been found to be effective in teaching social skills to children with autism.

Teachers and administrators from the four educational settings reported use of these strategies. The non-significant difference in mean scores on language development of children may be due to this practice.

## CONCLUSION

Educational placement of children with autism has been a topic of debate for a long time. While advocates of placement in a general classroom believe that students receive more appropriate instruction in such a setting, those in favour of placement in a special class, are convinced that children with autism need the highly individualised and structured instruction, that can be available only in a special education classroom.

Results of this study do not subscribe to either standpoint. Development of language and social skills in children with autism in general education classes, was similar to that of those in resource rooms, special classes and special schools. From these findings, it may be reasonable to conclude that if appropriate instructional methods, physical and administrative support and related services are available; any educational placement is suitable for development of language and social behaviour in children with autism.

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## Acknowledgement

The study was conducted on a Fulbright Post-Doctoral Research Fellowship. The author wishes to thank the Council for International Exchange of Scholars, Washington DC, Department of Special Education, Kansas State University, Kansas, and the United States Educational Foundation in India, New Delhi, for their support.

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