School Readiness program for preparing Children with Autism Spectrum Disorder (ASD) for Mainstream School: A case study

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Abstract

School is a social environment where there are many unwritten rules. All students are expected to abide by those rules and regulations. But for children with autism, it becomes quite difficult to navigate the social environment in a mainstream school. Often it leads to students dropping out. Autism Spectrum Disorder (ASD) is a neuro-developmental disability in which the core impairments are in the language, communication, and reciprocal social interaction. Recent research has shown that the neuroplasticity of the human brain is quite high during the first five years of life. So with intense intervention, it is possible to change the trajectories of development in a child. The child is taught how to behave in different social situations found in a mainstream school. Autism Society West Bengal ASWB runs a School Readiness program that provides intervention for young children where they are taught in a way that they understand. This program often leads to the child being accepted into a mainstream school. They need not start their education in a special school. In this case study different aspects and outcomes of the School Readiness program will be discussed.

Introduction

School is a social environment where there are many unwritten rules. All students are expected to abide by those rules and regulations. This is the 'Hidden Curriculum' for the social environment outside of the classrooms *viz.* the playground, canteen, library, corridors etc. But for children with autism, it becomes quite difficult to navigate these social environments in a mainstream school. Often it leads to students dropping out. But children with autism can learn only if the teachers teach them in a way that they understand. Their neural circuits within the brain of an autistic person is different and hence they most often have a different perspective.

Current trends in education are moving toward more inclusive educational experiences for children with disabilities, alternative learning styles, and differentiated instructional practices to support all students to succeed (Yell & Katsiyannis, 2003). Inclusive education is not simply catering for the needs of students with disabilities instead it is reframing the teaching role that encourages teachers to respond to individual differences, including cultural, linguistic, cognition, physicality, emotional or social needs of students (Voltz *et al,* 2010). According to Grima-Farrell *et al* (2011), "Inclusive

education represents a whole-school concern and works to align special education with general education in a manner that most effectively and efficiently imparts quality education to all students". The United Nations Educational, Scientific and Cultural Organization (UNESCO; 2005) characterizes as 'Inclusion is a process. It is not a single goal but an ongoing effort to find ever better ways to address the needs of children in a classroom. Inclusion acknowledges that human differences are normal and that not all children learn in the same manner. Tailoring instruction to meet individual student needs is at the heart of inclusive education, and it has become the foundation of most current pedagogical approaches'.

So early intervention is the best way to support the development and wellbeing of children with disability, autism or other special needs including developmental delay. It can help children develop the skills they need to take part in everyday activities.

Autism

Children and youth with ASD characteristically demonstrate significant deficits in basic areas of functioning, including social interaction, communication, learning, and behaviour, thus contributing to the challenge of educators and related services professionals effectively serving them (Happe, 1998; Quill, 1995.) Autism Spectrum Disorder (ASD) is a neuro-developmental disability in which the core impairments are in language, communication and reciprocal social interaction. Recent research has shown that the neuro-plasticity of the human brain is quite high during the first five years of life. So, with intense intervention it is possible to change the trajectories of development in a child.

One of the defining diagnostic criteria according to the DSM-V for Autism Spectrum Disorder (ASD) is a "persistent deficit in social communication and social interactions across multiple contexts" (APA 2013). Impairments in language and social communication are included in the primary diagnostic criteria for Autism spectrum disorder (ASD). The term "spectrum" refers to the wide range of symptoms, skills, and levels of impairment that people with ASD can have. The severity of language deficits in individuals with ASD varies markedly.

Early intervention

Early intervention can make a significant difference in improving cognitive, language and social development for children with ASD. The primary focus should be on the child's acquisition of communication, social, play, and academic skills. Research studies have shown that neuroplasticity of the human brain is highest when the individual is very young. New neural circuits maybe developed as the child learns new rules and concepts.

Need for School Readiness Programs

Given the complexity of the disorder, it is obvious that the educational needs of persons with autism remain largely unmet (De and Basu, 2017). Lal (2005) asserts that education for children with autism must foster the acquisition of not academic skills alone, but also socialization, adaptive skills, language and communication and reduction of problem behaviour. For this, she recommends among other things, an emphasis on functional activities and skills needed to be successful in the real world and social integration to the maximum possible extent. It is widely recognized that students with ASD require attitudinal and social support to be truly integrated into a general education classroom (Sasso *et al* 1985). In the west where there is awareness regarding ASD in school, in contrast in India disability is often linked to the visible disabilities. Few facilities existed which were usually run by NGO's and parent support organizations (Narayan *et al*, 2005).

In the school Readiness program the young children go through activities that simulate the social environment in a mainstream school. Individuals with autism often pick up and learn from the social cues that a neuro-typical person picks up effortlessly. They need to beer taught every activity viz. greeting teachers and fellow students, following the teachers' instructions. Playing in the playground. Eating from their own Tiffin boxes, asking for permission to go to the washroom etc. Students who

enter kindergarten without school readiness skills are more likely to demonstrate academic, behavioral, and social struggles during school (Izuno-Garcia *et al,* 2021)

Material and Methods

This project was conducted in Autism Society West Bengal (ASWB), Kolkata, a non-profit organization in Kolkata, India that seeks to spread awareness about autism, advocate for the rights of individuals with autism and their families, and support these individuals and families by providing various services such as consultations and training programs. Autism Society West Bengal (ASWB's) runs 3 (three) month a School Readiness program that provides intervention for young children where they are taught in a way that they understand.

Objectives of the present case study:

1. To determine whether the participants learnt any skills under the 'hidden curriculum' that could help them navigate the school environment beyond the classrooms. A pre and post intervention analysis was used.

Duration of the case study:
The duration of the program was 4 hours per day, five days a week.

Research Methodology

Sample and Sampling Technique:
In the case study sample there were a total of 10 students, 3 were female and 7 were male. The lowest age of the participant was 2 years 5 months, and the highest age of the participant was 6 years 1 months. Systematic random sampling technique was used to assess the participants to avoid any bias.

Research Instrument:
ABLLS (Assessment of Basic Language and Learning Skills) was used. This assessment process is a test designed to determine language and critical learner skills in those individuals who had autism and other developmental disabilities.

Data Collection
This school Readiness Program was a 3-month program from 14th June to 14th September 2022. Rehabilitation Council of India (RCI) certified special educators of ASWB were in involved in this school Readiness program. Total number of special educators involved was four including one psychologist. The skills that students were taught could be divided into Curricular and Co-curricular. Example. Sitting and Attending (both in a small and large group), Communication (Social/ Functional, Need based), Following Instructions, Activity of daily living skills and play, 1:1 Intervention, Fine Motor Skills, Classroom Behaviours etc. The skill sets are summarized in Table 1. Each skill area was assessed by each special educators on a random basis in order to eliminate bias.

Curricular	Co-Curricular
Sitting & paying Attention	Play
Language and communication (Social & Functional)	Activities of Daily Living Skills (ADLs)
Reading	Art & Craft
Writing	Dance & Music
Science (Math and Environmental Science)	Story Time
Academic	Library
Computer	Waiting Skill

**Table 1.** Curricular and Co-curricular areas in the ASWB School Readiness program

Locale of the Study:
Early Intervention unit of Autism Society West Bengal (ASWB), 29/1 Stadium Colony, Mukundapur, Kolkata 700099.

Result

Findings of this case study showed that 8 students among 10 students learnt these skills very well. Total 9 students out of the 10 were ready to go to mainstream school after completion of this three-month intensive School Readiness program. All participants acquired some skills in different areas e.g, sitting and attending, social Communication, Activity of Daily Living, Following instruction, Toilet training and Communication for toilet. These skills resulted in overall improvement in Classroom Behaviour.

Figure 1 is the graphical representation shows pre and post intervention of some skills areas. From the graph it was clear that there was a vast improvement among the young participants in different areas viz. Motor skills, Group Participation, Following Instruction, Overall skill Development, Mainstreaming, Activities of Daily Living skills (ADLs) and Communication (both Social & Functional). There was an overall improved among all participants within 3 months. The intensive therapy in Early Intervention improved child group participation.
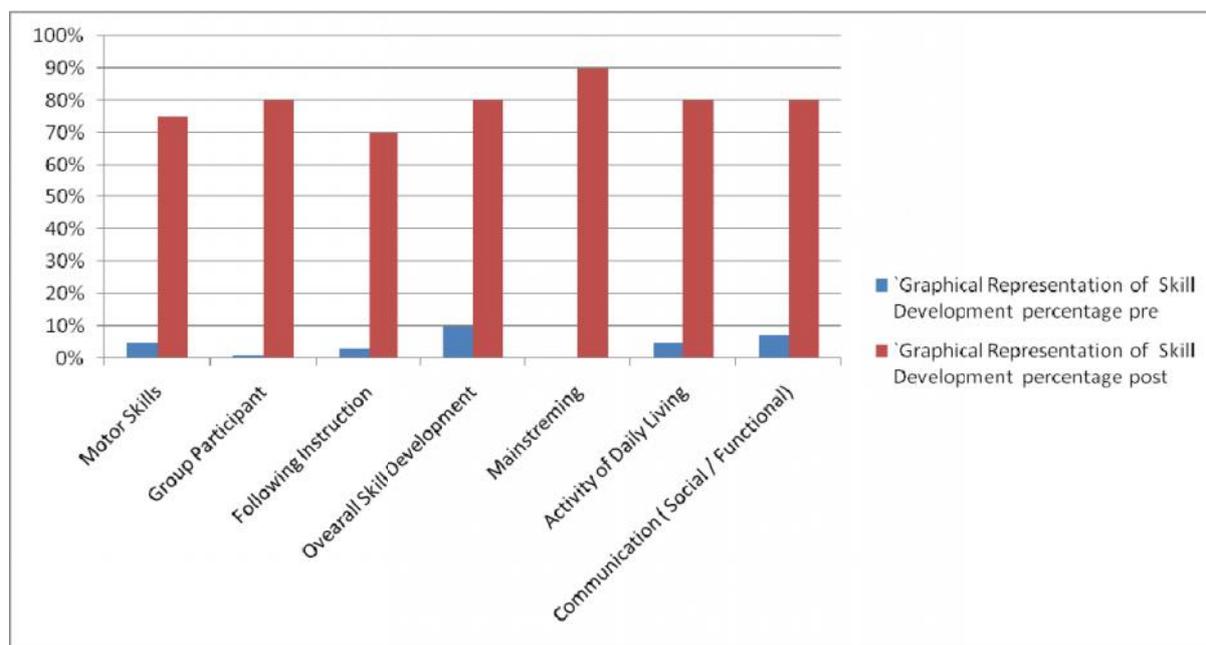
Fig. 1 Pre and post skill development following the three month school Readiness program at ASWB.

Discussion

The right of children with special needs to attend a regular school has its genesis in many international statements, the most recent being the United Nations Convention for the Rights of Persons with Disabilities (UNCRPD 2006). However, children with disabilities are one of the most excluded groups in education. Universal school *design,* adapted learning materials, and better data are all crucial. However, the key to effective learning lies *especially* with teachers. Accommodating diverse learning needs lies at the heart of inclusive education. Inclusive education has been internationally recognized as a philosophy for attaining equity, justice and quality education for all children, especially those who have been traditionally excluded from mainstream education for reasons of disability, ethnicity, gender or other characteristics. Programs like these School Readiness programs may bridge the gap between special schools and mainstream school. At a very young age when neuroplasticity of the brain is highest early intervention that is intense and addresses the diverse needs of the students may help the young child learn the social rules in a mainstream school.

Students with autism spectrum disorders (ASD) often demonstrate unusual and challenging behaviours, and they do not always respond to methods of discipline employed in the inclusive classroom environment. We know that individuals with autism spectrum disorder (ASD) have difficulty

to perform in group settings but a school has so many group activities and the intervention helps children to overcome this difficulty. The child is taught how to behave in different social situations found in a mainstream school. After this intense early intervention almost all the students became more skilled in different areas as reflected in the post intervention graphical representation in Fig. 1.

In this study 90% of the students improved their ADL skills like eating, toilet training, and dressing. They gradually became ready for mainstream school, So with intense intervention it is possible to change the trajectories of development in children with autism. From Fig 1.it is evident that these young children with autism learnt about group participation from scratch. In this intensive early intervention mainstream classroom group activities are simulated for the participants along with reasonable accommodations on how to address these situations. Visuals are used frequently. Prior information using schedules, before and after cards prepare these students for any upcoming situations, This lessens their anxiety and can prevent behaviour issues and meltdowns.

Conclusion
This program often leads to the child being accepted in a mainstream school. They need not start their education in a special school.

Limitation of the study
The three-month training period was an intensive intervention program where the young children picked up the skills needed in a mainstream school. Without practice there is always a risk that these students will forget these skills. A mainstream school environment especially outside the classroom is very challenging for those with special needs. There are instances of bullying and discrimination that often scar marginalised people, often for life. Discrimination arises not as a result of the intrinsic nature of children's disability, but rather, as a consequence of lack of understanding and knowledge of its causes and implications, fear of difference or negative cultural views of disability.

Future Research
Additional research is needed in the assessing how these children are doing in mainstream school. Future research may enrich the diversity of the sample by including more participants from diverse socio-economic groups.

Conflicts of Interest
The authors declare that there are no conflicts of interest regarding the publication of this work.

Acknowledgement

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