

**A STUDY ON THE EDUCATIONAL NEEDS OF CHILDREN WITH AUTISM
SPECTRUM DISORDER**

A Synopsis

Submitted to

The Maharaja Sayajirao University of Baroda

For the Degree of

Doctor of Philosophy

In

Education

Prof. Ashutosh Biswal

Guide

Prithwi Raj

Researcher



CENTER OF ADVANCED STUDY IN EDUCATION (CASE)

DEPARTMENT OF EDUCATION

FACULTY OF EDUCATION AND PSYCHOLOGY

THE MAHARAJA SAYAJIRAO UNIVERSITY OF BARODA

VADODARA - 390002

June, 2022

INTRODUCTION

Education is an integral part of developmental process of an individual. The aim of education is to help one from the childhood to develop his/ her individuality, inborn potentialities and innate capabilities. Hence, education plays a vital role for the holistic development of child's personality and it is of immense need for each and every child irrespective of their physical and mental health. The clarion call of Education for all (1990) and Right to Education (2002) has attracted the attention of every common person and it has been discussed at every forum of educational planning and development, in pursuit of universalisation of Elementary education and fulfilment of Constitutional mandate for quality elementary education to all children up to the age of 14 years. Various projects and programmes have been undertaken by agencies of state and central governments, voluntary agencies, individuals and groups at different levels including remote, rural and urban areas for different types of children including special children. Like others, government has also created provisions for the special children in different forms like special schools, special provisions and inclusion in the general schools through inclusive education. Even education of special children has been a part of National Policy on Education (1986) and the Programme of Action (1992). The same mission of providing quality elementary education for all including special children is done through Sarva Shiksha Abhiyan (SSA), a programme launch in 2000. The recent NEP (2020) also have a similar line "the Policy also recognizes the importance of creating enabling mechanisms for providing Children With Special Needs (CWSN) the same opportunities of obtaining quality education as any other child". In this ways, India has come a long way and made a good progress in the education of special children including physical and mental disability. It has also made some remarkable progress in the field of disability rehabilitation through different institutions and programmes. In spite of it, there are some areas of mental disabilities where the progress is not so distinct and significant. One of such area of mental disability is Autism Spectrum Disorder (ASD). It is one of the gray area in the mental disability where much research work has not been done. ASD also called as autism is a pervasive developmental disorder which is characterized by impairments in communication and social interaction, and restricted, repetitive and stereotypic pattern of behaviour, interests,

and activities (American Psychiatric Association, 1994). Previously, it was not considered as a form of mental disability in India and was treated as mental retardation though it is significantly different from other forms of mental disability. It is one of the most ignorant areas in medical as well as educational field due to the lack of knowledge in this area. Recently, Autism was considered as one of the disabilities among the 21 disabilities stated by in the Rights of Persons with Disabilities (RPWD) Act, 2016 of the government of India. Autism is not a single disorder, but rather a spectrum of closely related disorders with a shared core of symptoms for which it is also called as ASD. The perception of medical and psychological practitioners about autism is changing from time to time with the progress in this area. But unfortunately the progress in this area is not so significant to give a clear cut direction about the treatment and rehabilitation of the children with ASD. Even the causes of ASD are not exactly known to scientists and medical practitioners. There are likely many causes for multiple types of ASD. There may be many factors responsible to make a child ASD, including environmental, biologic and genetic factors. Likewise, there is no sight of any treatment for the people with ASD. However, there are many schools of thoughts for the treatment of autism, which is/are not found so effective in the holistic and scientific treatment of children with ASD. Obviously, as the causes for ASD are not clear, there is nothing to prevent ASD among newly born children. There are few exact tests (developmental tests) for the diagnosis of autism mostly found in developed countries and now used in India but mainly in big cities only where there are centres for autism. In other parts of the country, it is very difficult to diagnose ASD in an early stage and in many cases it is considered as mental disorder even in the educated circles. Hence, in many cases the children with ASD get the similar treatment (medicine and therapy) and similar education which are common for children with mental disorder. The number of children with ASD in India and worldwide is increasing in an alarming speed. It was found that the prevalence rates of ASD have increased nearly 17% annually worldwide (CDC, 2014) and there are more than 13 million children in India suffer from this developmental disorder. (HINDUSTAN TIMES APRIL 3, 2017; CENSUS, 2011). Present study is an attempt in this area where an attempt is made to study the educational need of the students with ASD which may facilitate special educators to prepare suitable curriculum for the education of the children with ASD.

HISTORICAL BACKGROUND

In 1906, Eugene Bleuler, a Swiss psychiatrist used autism as an adjective. Initially childhood

schizophrenia was used to refer to this condition. Later, after several researches Leo Kanner (1943) used autism as a noun and differentiated autism from schizophrenia. In 1964, Bernard Rimland proved that autism was a biological condition and not related to the parent child bond. He founded the Autism Society of America. In 1971, Eric Schopler and Robert Reichler studied the effects of parent involvement in the treatment of children with Autism. In 1972, Schopler started the Treatment and Education of Autistic and Related Communication Handicapped Children (TEACCH) program to provide training for individuals with Autism.

In 1977, Susan Folstein and Michael Rutter published first autism twin study which revealed evidence of a genetic basis for autism. In 1980, Autism was added to the *Diagnostic and Statistical Manual of Mental Disorders- Third Edition (DSM-III)* as "infantile autism". In 1991, Schools begin to identify and serve students with Autism to make Autism a special education category. In 2005- *Autism speaks* was found by Bob and Suzanne Wright to fund research, increases awareness, and advocates for the needs of individuals on the spectrum. The films like 'The Boy Who Could Fly' (1986), *Rainman* (1988), *What's Eating Gilbert Grape?* (1993) and *Temple Grandin* (2010) created a great awareness about autism.

Statistics from the U.S. Centre for Disease Control and prevention (CDC) in March 2016 showed that one in 68 American children is autistic. It also showed that autism is four to five times more common among boys (age 8) than girls, an estimated 1 out of 54 boys and 1 in 216 girls are diagnosed with autism. ASD affects over 2 million individuals in the U.S. and tens of millions worldwide. Moreover, government autism statistics suggest that prevalence rates have increased 10% to 18.5% annually in recent years.

First time the term "autism" appeared in the Indian literature was in 1959 and before that there was limited knowledge about autism in the medical community. By the early 1980s there began a slow growth of 'awareness' of autism among some professionals. The overseas release of the film 'Rain Man' in 1988 based on autism attracted attention of all the people of the world. In 1991, few like-minded parents of autistic children formed Action For Autism (AFA) in New Delhi, to advocate for children and adults with autism and their families. In 1994, a school, Open Door, a specialist school for autism was started and AFA started a full time one-year teacher training course in Delhi. In 1998, AFA conducted a massive awareness campaign among more than 1,000 paediatricians and parents of newly diagnosed children with autism. Referrals from paediatricians skyrocketed following this campaign. By the late nineties a few autism specific

organisations and few schools started off in different parts of the country. Between 1998 and 1999 a series of articles on autism were released to the media to create awareness. In 2000, a boy with autism from Bangalore, Tito, published his first book, *Beyond the Silence: my life, the world and autism* highlighting his mother's methods for teaching him. It was the beginning of the education of the autism children and RCI introducing a Diploma in Special Education (Autism Spectrum Disorders) in 2003. By this time few more Parent organisations for autism had come into being in West Bengal, Bombay, Goa, Bhubaneswar and Pune. Recently, internet has expanded the diasporas of Indian families with autistic children to dozens of countries around the world. Based on the census (2011), 1 in 89 children between the ages of two to nine years in India suffer from ASD. If extrapolated, this means at least 13 million children in India suffer from autism. It is also found that there are about 1 to 1.5 percent autistic children between age two and nine in India. Ultimately, In 2016, due to the pressure from different forums and the struggle of different organisations, autism get a place in the list of disorders among 21, in the Right to Persons with Disability (RPWD) Act of the Government of India.

MEANING AND DEFINITIONS OF AUTISM

Autism word derived from the Greek word autos which mean with a self, self, isolation. Its involve capabilities of individuals to retreat into the private, inner world.

The Autism Society of America (2011) defines an autism spectrum disorder as a complex developmental disorder that impacts children and adults in a variety of ways in their ability to be social and communicate with others. The essential features of the autism typically appear prior to 30 month of age and consist disturbance of (i) developmental rates and/or sequences, (ii) responses to sensory stimuli, (iii) speech language and cognitive capacities and (iv) capacities to tolerate to people events and objects.

According to **Rights of Persons with Disability Act (RPWD,2016)** "Autism Spectrum Disorder" means a neurodevelopment condition typically appearing in the first three years of life that significantly affects a person's ability to communicate, understand relationships and relate to others, and is frequently associated with unusual or stereotypical rituals or behaviours".

According to **Individuals with Disabilities Education Act (IDEA,2017)**, "(i) Autism means a developmental disability significantly affecting verbal and nonverbal communication and social interaction, generally evident before age three, that adversely affects a child's educational

performance. Other characteristics often associated with autism are engagement in repetitive activities and stereotyped movements, resistance to environmental change or change in daily routines, and unusual responses to sensory experiences. (ii) Autism does not apply if a child's educational performance is adversely affected primarily because the child has an emotional disturbance, as defined in paragraph (c)(4) of this section. (iii) A child who manifests the characteristics of autism after age three could be identified as having autism if the criteria in paragraph (c) (1) (i) of this section are satisfied.”

According to **National Institute of Mental Health (NIMH, 2018)**, “Autism spectrum disorder (ASD) is a developmental disorder that affects communication and behaviour. Although autism can be diagnosed at any age, it is described as a “developmental disorder” because symptoms generally appear in the first two years of life.”

Hence, on the basis of these definitions, autism or Autism Spectrum Disorder (ASD) can be defined as a poorly understood complex neurological condition or brain disorder or Pervasive Developmental Disorder (PDD), having developmental and performance deficiencies in verbal and non-verbal communication, social and cognitive behaviours those appear prior to the age of around 3years. It adversely affects the child in terms of the educational performance and day to day adjustment with the abnormal behaviours like, (a) engagement in repetitive activities and stereotyped moments due to rigid pattern of thinking, (b) resistance to environmental change or change in daily routine and (c) unusual responses to sensory experiences.

CAUSES OF AUTISM

Scientists do not know all of the causes of Autism Spectrum Disorders. However, they have learned that there are likely many causes for multiple types of ASD. There may be many different factors that make a child more likely to have ASD, including environmental, biological and genetic factors.

- Most scientists agree that genes are one of the risk factors that can make a person more likely to develop an ASD.
- Children who have a sibling or parent with an ASD are at a higher risk of also having an ASD.
- ASD tend to occur more often in people who have certain other medical conditions. About 10% of children with an ASD have an identifiable genetic disorder, such as Fragile X syndrome, tuberous sclerosis, Down syndrome and other chromosomal disorders.

- Some harmful drugs taken during pregnancy have been linked with a higher risk of ASD, for example, the prescription drugs thalidomide.
- There is some evidence that the critical period for developing ASD occurs before birth. However, concerns about vaccines and infections have led researchers to consider risk factors before and after birth. (Boyle,2015)
- In the most cases no single cause and no genetic, metabolic, or radiographic markers help in the diagnosis or predict the severity of symptoms (Bauman & Kemper, 2005; Rogers & Dawson, 2010). (Barnhil, et al, 2015).

SIGNS AND SYMPTOMS

ASD begin before the age of 3 and last throughout a person's life, although symptoms may improve over time. Some children with an ASD show hints of future problems within the first few months of life. In others, symptoms might not show up until 24 months or later. Some children with an ASD seem to develop normally until around 18 to 24 months of age and then they stop gaining new skills, or they lose the skills they once had. A person with an ASD might:

- Not respond to their name by 12 months.
- Not point at objects to show interest (point at an airplane flying over) by 14 months.
- Not play "pretend" games (pretend to "feed" a doll) by 18 months.
- Avoid eye contact and want to be alone.
- Have trouble understanding other people's feelings or talking about their own feelings.
- Have delayed speech and language skills.
- Repeat words or phrases over and over (echolalia).
- Give unrelated answers to questions.
- Get upset by minor changes.
- Have obsessive interests.
- Flap their hands, rock their body, or spin in circles.
- Have unusual reactions to the way things sound, smell, taste, look, or feel.

(Sources: Centre for disease Control and Prevention (CDC),2015)

TYPES OF AUTISM SPECTRUM DISORDER

Autism: Autism is one type in the five type of PDD. It is known as childhood autism or classical autism. It is featured by significant social and communication impairment and severely restricted interests highly repetitive behaviour.

Asperger Syndrome: Asperger syndrome has shown characteristics of impairment in social interactions and restricted interests. While there is not much intensive delay in language development. Some of the common characteristics are normal or borderlines intellectual functioning.

Rett Syndrome: Rett syndrome mostly appear in the girls. Common characteristics of the rett syndrome are impairment in motor functioning. The motor impairment interferes in all body moment, which is included eye contact and speech also. Some of the characteristics are that stereotypic moment, the problem in gait moment, epileptic seizures, weak social skill, loss of bowel and bladder control, impairment in expressive and receptive language, poor motor skill.

Childhood Disintegrative Disorder

It affects on age 3 or 4 years children, those children develop two years quite normally. After that gradually decreases the social and language functioning and intellectual development of the children. Usually have been seen these children develop normally in the early stage, but later on, deterioration is observed in attaining developmental milestones.

Pervasive Developmental Disorder (NOS)

PDD (NOS) is diagnosed when symptoms of ASD do not match the diagnostic criteria of any of the other four types of PDD or the symptoms do not have the impairment level described in any of the four types of PDD (Paul,2016).

CHARACTERISTICS OF AUTISM

There are some of the commonly seen characteristics found in all the children with ASD. No one with ASD will exhibit all of these characteristics, as each case of autism has its own unique gifts and struggles.

Impairments in communication- Difficulties in language and communication are characteristics common to all individuals with autism. The extent of difficulties ranges from non verbal to those who have extensive vocabulary but may have deficits in the social use of language. (DSM-IV,1994; Indian resource Centre,1997).

Impairment in social interaction - “One must separate the variable of social interaction problems from emotions. People with autism desire emotional contact with other people but they

are stymied by complex social interaction” (Temple Grandin, 1995). There is impairment in the ability to read and understand social situations, and to respond appropriately (Gray & Garand, 1993).

Unusual Behaviour and Interests - Individuals with autism often present with unusual and distinctive behaviours, including stereotypic and repetitive motor mannerisms, such as hand flapping, finger flicking, rocking, spinning, walking on tiptoes, spinning objects and a preoccupation with parts of objects. (Berument, Rutter, Lord, Pickles; 1999)

Attention Difficulties - Individuals with autism may present with a range of difficulties with attention. Specific deficits in attention have major implications for development in other areas such as communication and social development. Individuals with autism often have difficulty attending to relevant cues and /or information in their environment, and may attend to an overly restricted portion. This is referred to as stimulus over selectivity (Rosenblatt, Bloom & Koegel, 1995)

Cognitive Deficits and cognitive learning - Individual with autism present with a psycho educational profile that is different from normally developing individuals. Studies reveal deficits in multiple cognitive functions, yet not all are affected. In addition within one domain, there may be deficits in complex abilities, yet the simpler abilities may be intact. (Bristol, et al., 1996)

Unusual Responses to Sensory stimuli – These unpleasant or painful experiences may contribute to some of the behaviours that are displayed by individuals with autism (Gillingham, 1995). For example, people with severe sensory processing problems may go into total shutdown when they become over stimulated (Gardin, 1995).

Anxiety – Parents and teacher of autism children identify the anxiety as a characteristics associated with autism- not being able to express oneself, difficulties with processing sensory information, possibly fearing some sources of sensory stimulation, difficulty understanding social expectation.

PROBLEMS OF CHILDREN WITH AUTISM

According to My Child without limits.org (2017) followings are the frequent problems with the children with autism.

Sensory problems- Most of the children with autism are highly painfully sensitive to certain sounds, textures, tastes, and smells.

Mental retardation- Many children with autism have some mental dysfunction. When tested, some areas of ability may be normal, while others may be especially weak.

Seizures- One in four children with autism will develop seizures, which often start either in early childhood or when they become teenagers. It is caused by abnormal electrical activity in the brain.

Fragile X syndrome-Fragile X syndrome is the most common inherited form of mental retardation. It was because one part of the X chromosome has a defective piece that appears pinched and fragile when viewed under a microscope.

Tuberous Sclerosis- Tuberous sclerosis is a rare genetic problem that causes being (not cancerous) tumors to grow in the brain as well as in other important organs. One to four percent of people with autism also have tuberous sclerosis.

TREATMENT OF AUTISM

Till date there is no such specific treatment available for the people with autism for partial or full cure. Even, there is no prevention recommended to avoid the child from being autism. However, few researchers, medical practitioners and psychologists claim some sorts of treatments that may help to reduce some of the symptoms to some extent.

Some of the earliest articles on autism in India recommended play therapy (Batliwalla, 1959; Bassa, 1962; Chacko, 1964) while others mentioned the used of electroconvulsive therapy (Dutta Ray & Mathur, 1965; Gamat, 1968), and parental counselling and family therapy (Chacko, 1964; Hoch, 1967; Gamat, 1968). None of these early recommendations were ever supported by research. While there is not currently and has never been a drug to treat autism, drugs have been widely recommended and prescribed for autism dating back to the 1960s (Dutta Ray & Mathur, 1965; Gamat, 1968).Some of the researchers suggest yoga is useful for autistic children ([Radhakrishna, Nagarathna,](#) and [Nagendra,](#) 2010; Kenny, 2002; Ehleringer, 2010; Serwacki, & Cook, 2012 N. Jayaram, Varambally & Behere 2013. Some researchers suggest music (Nandi, 2010) is useful for autistic children, dance, (Sengupta 2010) training, can help the children with ASD.

Over the years, assistive and augmentative modes of communication have evolved greatly as techniques to bring about sensory integration. Intensively and early implementation of such educational strategies have proved major improvement in terms of skill development among the children with ASD. Few organisations like Karnataka Parents' Association for Mentally

Retarded Citizens (KPAMRC) in Bangalore, Ummeed Child Development Centre in Mumbai, Action for Autism in Delhi and Autism Society West Bengal, Kolkata focus on training parents to educate and empower them to be able to provide training to their children in a range of areas, including functional academics, self-help, socialization and language, and to make use of the valuable hours spent out of school.

PROVISIONS FOR AUTISM

Government of India has attempted to align the **Sarva Shiksha Abhiyan (SSA)** norms with the provisions of RTE Act, 2009. SSA aims to adopt a 'zero rejection' policy so that no child is left out of the education system. SSA's emphasis is on providing integrated and inclusive education to all children with special needs in common schools. It aims to support a wide range of approaches, options and strategies for the education of children with special needs. According to the SSA, parents of children with disabilities should receive counseling and training on how to raise their children and teach them basic survival skills.

The National Trust for Welfare of Persons with Autism, Cerebral Palsy, Mental Retardation and Multiple Disabilities (Amendment) Act, 2018, amends the National Trust for the Welfare of Persons with Autism, Cerebral Palsy, Mental Retardation and Multiple Disabilities Act, 1999 included autism as a disability after the proposed amendment to the Disability Act (PWD), 1995 (India Disability Law, 2009). It provides **scholarships for Persons with Autism, Cerebral Palsy, Mental Retardation & Multiple Disabilities** to encourage them for pursuing post schooling any vocational training / professional courses for enhancement of their skills. The trust also sponsors disability Health Insurance Scheme and has the schemes such as- disha, vikas, Samarath, Gharunda, Sahyogi, Gyan Prabha, Prerana, Sambhav, Badhate Kadam.

In May 2014, the Sixty-seventh World Health Assembly adopted a resolution entitled "*Comprehensive and coordinated efforts for the management of ASD,*" which was supported by more than 60 countries to recognize the need to strengthen countries' abilities to promote optimal health and well-being of all persons with ASD. Efforts are focusing on:

- Contributing to enhancing commitment of governments and international advocacy on autism.
- Providing guidance on creating policies and action plans that address ASD within the broader framework of mental health and disabilities.
- Contributing to the development of evidence on effective and scalable strategies for the

assessment and treatment of ASD and other developmental disorders.

NEP (2020) also endorses the provisions for ASD. It said “this Policy is in complete consonance with the provisions of the RPWD Act 2016 and endorses all its recommendations with regard to school education. While preparing the National Curriculum Framework, NCERT will ensure that consultations are held with expert bodies such as National Institutes of DEPWD.”

EDUCATION FOR AUTISM

Education for autistic children is equally important and should pay attention. In researches it is found that individualized strategies are best for the autistic children although it is clear from the characteristics that besides being so wide in range the basic problems of these children are same. Most professionals agree that school-age children with autism respond well to highly structured, specialized education programs designed to meet individual needs. Based on the major characteristics associated with autism, it is important to consider Social skill development, Communication, Behaviour and Sensory integration.

Programs sometimes include several treatment components coordinated to assist a person with autism. For example, one child’s plan may consist of speech therapy, social skill development and medication, all within a structured behaviour program. Another student may be working on social skill development, sensory integration and dietary changes. **No one program or diet is perfect for every person with autism.** it is important to try several approaches and find the ones that work best. **Need based individualise strategy may be quite useful for the education of the children with ASD.**

Keeping this in mind, some of the educational needs and planning can be made or derived to solve the problems faced by them which will eventually help them in survival in later period of life. In USA, American society for autism is working in this area through a programme called Ability path. Various suggestions have been given by them which are listed below.

1. Educational need of such children should addresses a wide range of skill development, including academics, communication and language, social skills, self-help skills, behavioural issues, self-advocacy and leisure-related skills. It is important to consult with professionals trained specifically in autism to help a child benefit from his/her school program. Obtaining a range of opinions is also useful.
2. **The person with autism must be involved in planning his/her future by Person-centred planning and self-advocacy skills.**

3. **Parents and professionals need to work together.** Open communication between school staff and parents can lead to better goal-setting and evaluation of a student's progress.
4. **Community goals** like purchasing meals and grocery shopping and **leisure goals**, such as taking time to engage in a hobby each day, can also be practiced at school.
5. **Academic goals need to be tailored according to the student's intellectual ability and functioning level.**
6. The curriculum should have inbuilt flexibility to try different methods of teaching, opportunities for generalization and treads toward independent functioning.

METHOD FOR BEHAVIOUR MODIFICATION FOR CHILDREN WITH AUTISM

There are few methods used for the education of the children with ASD. These are the methods developed mostly in the developed countries where most of the activities are sponsored by the public funded machineries.

Applied Behaviour Analysis (ABA) - ABA, is a method of teaching children with ASD based on the premise that appropriate behaviour including speech, academics and life skills can be taught using scientific principles mainly using stimulus-response theory. The most well-known form of ABA is discrete trial training (DTT). Skills are broken down into the smallest tasks and taught individually.

Relationship Development Intervention (RDI)-RDI is a parent-based clinical treatment that tries to fix the social problems at the heart of autism, such as friendship skills, empathy and the desire to share personal experiences with others. RDI tries to help children interact positively with other people, even without language. When children learn the value and joy of personal relationships they will find it easier to learn language and social skills. RDI is based on the idea that children with autism missed some or many of the typical social development milestones as infants and toddlers. They can be given a "second chance" to learn these skills through play, "guided participation" and other activities.

Sensory Integration Therapy- Children learn through senses. Children with ASD, however, often have unusual responses to the senses of hearing, sight, touch, smell and/or movement. These responses can interfere with learning and affect behaviour. Children with autism spectrum disorders may over-react or under-react to things they hear, see, taste and touch. Through

sensory integration therapy, they are acquainted with different senses in a gradually manner enhancing their learning.

Treatment and Education of Autistic and Related Communication-Handicapped Children (TEACCH)- A TEACCH classroom is structured, with separate, defined areas for each task, such as individual work, group activities, and play. It relies heavily on visual learning, strength for many children with autism and PDD. The children use schedules made up of pictures and/or words to order their day and to help them move smoothly between activities. TEACCH respects “the culture of autism” and embraces a philosophy that people with autism have “characteristics that are different, but not necessarily inferior, to the rest of us.” It says, “The person is the priority, rather than any philosophical notion like inclusion, discrete trial training, facilitated communication, etc.”

Centres dealing with the children with ASD in India use a variety of methods for their education mainly relying on combination of Sensory therapy, Language therapy, Physical therapy, yoga therapy, and communities based rehabilitation like, dance, music and art.

EDUCATIONAL NEED OF CHILDREN WITH ASD

The educational need of the children with ASD includes all the skill and activities which would help them in the survival by modifying their behaviour with the help of training, teaching and behaviour modelling. These educational need may be related to the survival needs like, feeding practice including eating and drinking, toilet training, brushing and cleaning, wearing dress, walking of the road, taking own safety, purchasing needed material, taking bath, cleanliness skills, doing simplest works in the house, understand difference between eatable and non eatable things, differentiating drinking liquid from other liquids which could be harmful to health; social needs like, way of greeting people, using manners while being with the group in the family and outside the family; communication needs including both verbal and non-verbal communication, language and mathematical needs like, learning of language and numbers etc. Though these are the need seems for every child, it is very difficult to fulfil these needs for a child with ASD. Even for many children and parents with severe ASD, it is like dream to fulfil few of these needs. These needs may even vary from children to children according to the intensity and severity of the ASD. Fulfilling these needs may enable these students to work independently all the routine

task so that they can work without helpers as well. These are the needs which can be fulfilled with the help of education through teaching, training, practicing etc.

CENTRES WORKING FOR AUTISTIC CHILDREN IN VADODARA

In Vadodara city of Gujarat State, there are few centres mostly run by non-government organisations working for the children with mental disabilities. Some of these centres also admit and take care of the education of the children with ASD. Some of these schools/centres are Disha special school and autism centre, Kalarav special school, Arpan-school for mental retarded and autism, Spandan, Ashtitva, Reach- Centre for autism, Asha School, Karishma school for mental retarded, Balbhavan, Sai Residence School, Vermi ect. These are the centers doing some useful for children with ASD. Most of the centres follow the guidelines of Rehabilitation Council of India (RCI) and have different types of curriculum for autism. Most of the centres treating autism follow the tested curriculums from most of the western developed countries. The focus of some of the curriculum is given as follow.

CURRICULUM FOR THE CHILDREN WITH ASD

The curriculum for the children with ASD is divided into Early Intervention, Transition- 1 (T1), Transition- 2 (T2), Transition- 3 (T3), Pre-Vocational and vocational according to the age and the level of the students. Details about some of the curriculum of some of the stages are given as follow.

Early Intervention

Activity for daily living like toilet training, Bathing, Brushing teeth, taking drinking water, shoe lasing, buttoning, unbuttoning, dressing. Using communication diary to convey intention, identification of things and animals, birds, van, utensil, body part, writing, arithmetic, non-verbal activity, puzzle fitting, colour identification. Fine motor activity, Gross motor activity, training through ipaid/laptop Action song, social story based training. Sensory therapy, speech therapy, physio-therapy, playing some game meaningfully.

Curriculum for T-1 (Transaction 1)

Gross Motor Activities- These activities includes training on lifting object from the floor, kicking and rolling the ball, jumping /hopping, Tossing ball in the basket.

Fine Motor Activities- These activities includes training on Peg board, manipulating clay, can pick small objects like pins, thread etc.

Academic skills- These activities includes training on Picture description, Body part identification, recognizes self-script, photograph, roll call etc.

Language & Communication Skills- These activities includes training on Sorting words by category, attempts to his /her intention, select and bring familiar object, uses toilet, break, water, wait etc.

Sensory Intervention- These activities includes training on Spot jumping, Joint compression, Smells-Pungent, pleasant Bean bags etc.

Curriculum for T-2 (Transaction 2)

Gross Motor Activity- These activities includes training on Raises head & shoulder from face down position, shifting object one hand to another, Participates in bat /ball game, kicking & rolling the ball, filling containers with difference liquid/ dry items (diff measure), stands on one foot with no support and eye closed, Rides a bicycle.

Fine motor activities- These activities includes training on Unbuttoning /Buttoning, Folding Paper, Turns one Page at a time, Uses scissors.

Academic skill- These activities includes training on Money concept / Time / Measurement, Finding hidden objects, Jumble sentences, object by association etc.

Language & Communication – These activities includes training on Sorting words by category, using gesture to indicate ‘no’, Uses vocal expression of pleasure when played, uses communication chart, book, independently etc.

Sensory Intervention- These activities includes training on spot jumping, joint compression, concept of depth, down-up the slope, clay/sand etc.

Social skill- These activities includes training on Adult concerns, waits for turn, interaction using gesture, asks for help, facilitating parallel play.

Curriculum for T-3 (Transaction 3)

Envelope making, Jewellery Making, Raksha badhan making, Pot painting, paper filling, Paper cutting, cutting picture, picture of piece joint on paper with fevicol, identification of inside

game and outside game, identifying words then making small sentences structure i.e. this is a pen. Reading book of General Child (LKG), writing small letter, counting numbers and writing also its. Number adding and subtraction throw I paid and through paper pencil also with the help of calculator, picture drawing and painting, typing on I paid, game playing in I paid, few modifying behaviour of children in also in classroom i.e. spitting, pee and poop in pain, developing seating tolerance also.

Likewise, they have the curriculum for early interventions, transaction-3, pre-vocational and vocational. But, it was perceived that most of these curriculum for different stages are not designed as per the need of the children with ASD.

REVIEW OF RELATED LITERATURE

Total 62 studies have been reviewed for the present study. Out of these total 62 studies, 40 studies were from India and 22 studies from Abroad.

Studies Conducted in India

The studies conducted in India related to autism and mental retarded were done by Bhargava (1997), Jena (2000), Chaliha (2001), Dutt (2001), Shaymsundar (2002), Sharma (2004), Ray (2008), Bineesh (2008), Ray (2009), Nandi (2010), Santha (2010), Alli (2011), Bali (2012), Patil (2012), Reddy (2013), Shetty (2014), Prabha (2014), Maheshwari (2014), Sunayan (2014), Chaturvedy (2014), Rathore (2015), Naniwadekar (2015), Chacko (2015), Sasikumar (2016), Khan and Humtsoe (2016), Parmar (2016), Khan (2016), Sharma (2016), Paul (2016), Kumar (2017), Singh (2017), Mishra and Sreedevi (2017), Jegan (2018), Kalaivnai and kalimo (2018), Arun and Chavan (2018), Dey (2018), Hussain and Balaramulu (2019), Moneta and Anthi (2019), Duggal and Dua et all (2020), Mayur and Suhas et all (2021).

Studies Conducted in abroad

Studies conducted in abroad related to autism and mental retarded were done by Rincover et al. (1978), Gilliam and Coleman (1982), Sigman et al. (1992), Konstantareas and Homatidis (1992), Knott et al. (1995), Micheli (1999), Sullivan and Caterino (2008), Gaitonde (2010), Rahman et al. (2011), Walsh and Hall (2012), Brown (2012), Bark and fearon (2012), Allen et al. (2013), Janes (2015), Kahane and El-Tahir (2015), Johansson (2015), Pearce and Berney (2016),

Mandhar et al. (2017), Tarek et al. (2018), Katsarou (2018), Kocabryik et al. (2018), Roman and Allison et al. (2020).

Studies were found conducted in the discipline of medicine (twelve), bio science and technology (three), psychology (thirteen), social science (four), social work (one) education (twenty two) and home science (four), yoga (two), linguistic (one)

Twenty studies were found in of experimental nature (Sigmanetall,1992; Konstantareas and Homatidis,1992; Micheli,1999; Jena, 2000; Sharma,2004; Ray,2008; Ray,2009; Nandi,2010; Santha,2010; Alli,2011; Rahman et al.,2011, Bali,2012; Reddy,2013; Chaturvedy,2014; Naniwadekar,2015; Sasikumar,2016; Sharma,2016; Paul,2016; Kumar,2017; Dey, 2018), twenty three studies were found descriptive survey type (Gilliam and Coleman, 1982; Knott et al.,1995; Gaitonde,2010; Dutt,2001; Chaliha,2001, Shyamsundar, 2002; Bineesh, 2008; Patil, 2012; Beark and Fearon, 2012; Allen et al., 2013; Maheshwary, 2014; Sunayan,2014; Chacko, 2015; Rathore, 2015; Parmar, 2015; khan, 2016; Khan and Humatse,2016; Manandhar,2017; Arun & Chavan,2018; Tarek et al.,2018; Kalaivnai and Kalimo,2018, Hussain and Balarmula,2019, Mayur et al., 2021), Seven studies were found qualitative type (Bhargva, 1997; Shetty, 2014; Singh,2017; Jegan, 2018; Kocabiyik, 2018; Katsarou,2018; Duggal and Dua et al., 2020), One study was found Case study (Moneta & Anthi, 2019), One study was found of ethnographic type (Johansson, 2015), One study was found case control prevalence cohort type (Roman and Allison et al., 2020) two studies were found Mixed method type (Brown, 2012; Prabha, 2014) Six studies were found narrative analysis of review (Rincover et all, 1978; Sullivan and Caterino, 2008; Walsh and Hall, 2012; Kahane and El- Tahir, 2015; Jenes, 2015; Pearce and Barney, 2016) and one was ex-post facto research type (Mishra and Sreedevi, 2017).

Intervention programme enabled parents in identifying needs of their children in various area. (Sharma; 2004) Intervention programme was found effective in the development of perceptual cognitive and behavioural pattern in skill of children with autism (Rincover et al, 1978; Jena, 2000; Dutt, 2001; Sharma, 2004; Ray 2008; Santha,2010; Bali,2012; Reddy,2013; Naniwadekar, 2015; Sasikumar, 2016, Kumar, 2017). (Kahane and –E- tahir ,2015) showed the security and organisation of attachment behaviour are affected by the severity of the diagnosis of autism and the co-morbidities associated. Intervention programme bring more positive changes if the parents continue to do so and create a conductive and pleasant environment for learning (Sharma, 2010;

Bali, 2012). Parenting stress was higher among parents of children with autism compare to both parents of children with mental retardation and parents of normal children (Gaitonde, 2010; Patil, 2012; Sunayan, 2014; khan, 2016) while (Gaitonde, 2010) found that parents experienced stress in the parenting role, their general stress was similar to people who do not have children with disabilities. (Chaturvedy, 2014) There was significant parental stress among mothers of children with autism. (Gilliam and coleman,1982) indicate that three areas emerge for further in-service training of caregivers (a) incidence and sex ratio, (b) etiology and (c) attitudes toward public education of autistic children. (Allen et all 2013) showed that deficits in social skill and behaviour problems caused higher stress in mothers whereas not significantly associated with parental stress.(Shyamsundar,2002) parents could hardly think of anything to choose, as far as the schooling of their children, due to the non-availability of different services in such schools. (Chturvedy, 2014) mothers of children with autism have parental distress and high parent child dysfunctional interaction, they feel their child difficult to manage. Yoga intervention related studies showed positive improvement in abnormal behaviour of children with autism spectrum disore (Santha, 2010; Kumar, 2017). Mental concentration highly developed through the yogic activity (Sharma, 2016). (Ray, 2008) Problem behaviour could not be reduced completely even after the interventions but a trend of improvement in this sphere was noticed. (Bineesh, 2008) Parental training intervention is effective for improving the cognitive and behavioural skills of children with autism. (Santha, 2010) Improvement in autistic behaviour of ASD children after the practice of yoga resulting in better quality of life for parents. There was a significance difference between institutionalized and non institunalised mentally retarded children (Chaliha, 2001).The exposure to classical music reduced problem behaviour in the children with autism (Nandi, 2010).

Sex education as a comprehensive curriculum was very much effective to change odd sexual behaviour and problem behaviour significantly (Ray, 2009 & Sullivan and caterino, 2008). Mothers' families were found more cohesive and adaptable than fathers' family; mothers experience more social support from friends and family than fathers (Konstantareas and Homatidis, 1992 & Sunayan, 2014). Negotiating access to schools still remains a concern for autistic children even in urban areas (Johansson, 2015). Computer Games were found effective in improving the communication among autistic children. Further it was suggested for individualised games as per the nature of individual autistic child for better result. (Rahman et al,

2011; Walsh and Hall, 2012). Majority of the parents observed sign and symptoms in their autistic children like unable to follow inability to communicate needs and requirements, poor eye contact, and delay in language, social and moral skills (Bhargava, 1997; Sharma, 2004; Khane and El-tahir, 2015; Mishra and Sreedevi, 2017, Jagan, 2018). (Parmar, 2016) showed that good education emphasis on good parenting system. (Rincover et al, 1978) educating autistic children is viewed as an ever-changing process, rather than a single circumscribed program, educational techniques evolved the result of research and will continue to be revised as a function of new research findings. (Chacko, 2015) showed that there were no significant differences among the three groups of teachers in their satisfaction in planning the teaching procedures this reveals that these three groups of teachers have similar satisfaction in planning the teaching procedures. The ethnographic study on autistic children in the metropolitan city of Kolkata conducted by Johansson (2015) showed the poor condition and the concern of the schooling, education, coordination between the policy makers and the practitioners. (Shetty, 2014) showed that the verbal autistic subjects produced statistically significant lower number of sentence per turn and mean sentence length. (Singh, 2017) studies also showed that overall language skills of mild CWA were better than moderate CWA. Chacko (2015) Special teachers were found to have only moderate level satisfaction in teaching children with autism. (Rehman et al, 2011) suggested that if we can encourage vocalization at the age of 3 a pivotal age for children with ASD this could be increased communicative ability. (Bineesh, 2008) Expressive language and overall communication ability significantly differ in children with average and above average children with autism. (Paul, 2016) studies showed that The PALM 'software used as ipad mediated Instructional stratesy (iPMIS) induced self-directed learning among the children with autism. (Micheli, 1999) studies showed observing evaluating the child behaviour and learning how best to manage that behaviour and to give appropriate rewards. (Sasikumar, 2016) studies showed web based systems will provide better learning and monitoring mechanism for autistic children. (Prabha,2014) the training has helped them to express their needs meaningfully through gesture for nonverbal children, intervention given is found to be effective as results showed that the behaviour technology applied was statistically significant.(Sullivan and caterino, 2008) studies showed that the specific content should be individualized according to the needs of the individual and their families. (Janes 2015) studies showed that Montessori philosophy also allows for the flexibilities of curriculum to assist children with autism and accommodation of individual needs.

Studies were conducted in the disciplines of psychology, education, special education, sociology, yoga, home science, bio-science and technology and medicine. Most of the Indian intervention studies were based on the needs identified for the foreign children with autism mostly in American and European countries. No studies were reported in India related to the identification of educational needs of the autistic children in India perceived by the experts, counsellors, teachers, parents and the caretakers. Most of the studies reviewed in developed countries were on interventions for the improvement of the autistic children (five studies) and many studies were found effective. As autism is a comparatively new area of research in India, inclusion of autism in the RPWD act 2016 and National Education policy 2020, for the success of RTE (2009) and increasing in the number of children with autism (more than 10 million), there is a need to conduct more research on the children with autism. Even, there is a need to conduct more studies in the area of the education of the autistic children. It is also needed to identify the educational need of autistic children on the basis of which researches on the intervention programmes could be conducted for the improvement of these children and no study was found in this area. Hence the present study is an attempt in this direction to identify educational needs of the autistic children.

RATIONALE OF THE STUDY

Autism or ASD refers to a range of conditions characterised by challenges with social skills, speech and nonverbal communication with repetitive behaviours (IDEA, 2000). It is one of the worst types of mental disorder for which no medication and prevention have been approved because the exact causes of disease are unknown and less research work in this area. The only thing, one can do is the use of intervention programme through education to bring some sort of changes in their behaviour and to make them much capable so that they can atleast fulfil their daily needs.

ASD is not like other mental disorders. In fact, the need, strength and challenges of ASD are quite different from other mental disorders. Children with ASD may find difficult to adjust in deferent settings. So controlling these problems become the priority for each and every person concerned with these children. Generally it has been found that all children with autism have behaviour problems (Inclean, 2013). These problem arise because of impairment in communication and social interaction, and restricted, repetitive and stereotypic patterns of

behaviour as a result of which they have difficulty in expressing themselves so in order to express them and to reach out to other people they develop certain kind of behaviour which cause hindrance in their daily living activities (Naniwadekar, 2015).

These challenges make parents suffer a lot because of having less knowledge to tackle the problem facing by them as well as by their autistic children. Through study also it was found that parenting stress was higher among parents of children with autism in comparison to other parents. (Gaitonde, 2010; Patil, 2012). Considering all these things in mind, some efforts need to be made for the children with ASD not only for their basic needs but also to take care of their educational needs. Various education committees from time to time have suggested the need of educating children with special needs which is implemented through inclusive education. NCF, 2005 & 2009 also have suggested curriculum for the special children. But in these all efforts, no separate attention is given to the children with ASD and their needs. Johansson (2015) in his study also found that the prevailing poor condition and the concern of the schooling, education, coordination between the policy makers and the practitioners had made ASD untreatable in terms of educational and behavioural aspects.

In this way it can be conclude that the educational needs of these children with ASD need to be focused differently focussing on each individual's needs and some efforts to be made to develop education needs especially for these children. Although various NGOs and institutions are working all over the country for the children with ASD, there is no efforts done from the government side. So it can be said that it is one of the most neglected area of consideration. If we see other developed countries, children with ASD are taken care very efficiently by their parents through the help of government machinery. Even the government takes the responsibility of these children and assures the proper training for them not only in basic day to day needs but also in educational needs by giving them training for basic calculation like addition, subtraction, letter recognition etc. Even in India educational centres working especially for children with ASD provide education to the children with ASD in the subjects like mathematics, reading, writing, drawing, dancing, music etc. But the question arises, whether they need all these education provided by these centres? Whether, this education is as per their mental level? Will this education help them for their future survival and can make them independent? There are endless questions related to the existing system of education of the children with ASD. Sometimes all these efforts (education practices) seem to be meaningless for these children as it

does not bring much change in the behaviour of these children as it is reported by Sasikumar (2016) that mental task performance was poor for the children with ASD in comparison to the children with other mental disorder. It is felt that there is a mismatch in the educational need and the educational practice of the children with ASD. Mode of Education for these children should be based on practical and skills because many children with autism have special challenges like impairment in communication, social interaction, unusual behaviours and interest, attention difficulty, cognitive deficits, anxiety so their teaching should based on the skills (Bondy,1994).

Rehabilitation Council of India (2017) emphasises on the Universal Design for Learning (UDL) which is an educational framework based on research in the learning sciences, including cognitive neuroscience, that guides the development of flexible learning environments that can accommodate individual learning differences. UDL will be applicable for all type of learners including all types of disabilities. It also states the learning of children with ASD using UDL through multi-sensory learning approaches considering the strength and interest of the learners. It seems like an excellent approach for the learning of students with and without any types of disability. It talks about imparting the needed education of the children. But the question arises, what are the needed education for the children with ASD? Whether the needed education for them would be in the areas of their impairments like, lack of social skills, repetitive behaviours and lack of communication or they need education in the survival skills like, training for their day to day behaviours, for their survival without direct help from others. It is one of the very big questions for the children with ASD. Apart from the discussed impairments, they have a spectrum of other impairments differing from child to child for which autism is also called as ASD. Hence, it is the time to identify their educational needs on the basis of which need based individualised strategy can be designed using UDL which may be effective for the children with ASD.

The researcher want to conduct the study in vadodara city as here various centres are there who are working for the ASD children like, Disha Autism centre, Arpan, Reach-Centre for autism, Sai centre, Aarambh etc. continuously making efforts to make their life more smooth and better through education and training. But it has been observed that all these centres are to some extent working only with the basic trainings and education following some foreign models. Researcher felt that the children with ASD need education more on their survival and basic needs to be independent and to survive in the future which can be possible through education and behaviour

modification techniques. So in the present study an attempt has been taken to study the actual educational need of the children with ASD perceived by their parents, teachers, and experts, medical practitioners, helping hands and observed from the children with ASD.

Only one study was found on autism in education in India. Other studies were conducted in other allied disciplines related to interventions. Most of the Indian intervention studies were based on the needs identified for the children with ASD mostly in developed countries. No studies were reported in India related to the identification of educational needs of the children with ASD in India perceived by the immediate helping hand to them. Hence, there is a need to conduct more studies in the area of the education of the children with ASD on the basis of which researches on the intervention programmes could be conducted. Hence, the present study is an attempt in this direction to identify educational needs of the children with ASD.

STATEMENT OF THE PROBLEM

A Study on the Educational Needs of Children with Autism Spectrum Disorder

OBJECTIVE OF THE STUDY

The present study was conducted to achieve the following objectives.

- 1.To study the education provided to the children with ASD in terms of types of education, purpose, and approach in the centres providing education to the children with ASD in Vadodara.
- 2.To study the educational needs of the children with ASD perceived by parents, helpers, Special Educators, doctors and experts.
- 3.To study the educational needs of the autistic children conveyed by themselves.
- 4.To design an educational curriculum for the children with ASD on the basis of their educational needs.

EXPLANATION OF THE TERM

ASD: Autism Spectrum Disorder is a spectrum of brain disorders having developmental and performance deficiencies in verbal and non-verbal communication, social and cognitive behaviours those appear prior to the age of around 3years.

EDUCATIONAL NEEDS: Needs those can be fulfilled with the help of education through the modification of behaviour.

DELIMITATION OF THE STUDY

The present study is delimited to the children diagnosed as ASD within the age group of 3-18 years of age enrolled in different centres in Vadodara.

METHODOLOGY OF THE STUDY

Present study was qualitative in nature. Detailed methodological procedure including population, sample, tools for data collection, procedure of data collection and data analysis are given as follow.

POPULATION FOR THE STUDY

The population of the present study was consisted of all the children with ASD, their parents, their teachers (special educators), their helpers, experts, doctors treating the children with ASD from Vadodara city.

SAMPLING TECHNIQUE USED

Sample for the present study were selected purposively. Five centers working for the children with ASD were selected purposively and six children with ASD were selected from each center. Hence, 30 students were selected for the present study. These 30 students, their parents, their helper, their teachers/ special educators were considered as the sample. 10 experts working in the area of autism in different organizations in Vadodara and 5 doctors working for autism also were selected purposively from Vadodara city as the sample of the present study.

TOOLS AND TECHNIQUES FOR DATA COLLECTION

The following tools and techniques were used for the data collection to achieve objectives of the present study.

Researcher prepared five structure interview schedules for different stake holders like Parents, Teachers, Experts, Doctors, Helper. These tools were validated by the subject experts and then modified the interview schedules on basis of suggestion provided by the experts. Participant Observation was also used to collect the data from Autism children.

DATA ANALYSIS

Collected data were transcribed by the researcher from the interview recorder. Content analysis and triangulation were done to arrive at the findings of the study. Researcher has done participant observation and noted down data in the dairy from different school/ centres / hospital which were taking care of children with autism spectrum disorder.

MAJOR FINDINGS

Following major findings were drawn from the analysis of data dimension wise. Following point were told by teachers, parents, doctors, expert, and helper, which was also observe by the researcher

Daily Routine Work

- Some children urinate in the pant and use to go to bathroom, throw wipers, buckets and mugs, drop hand wash, etc. They have toilet related problems.
- Some students urinated in their pants, and they were send to the bathroom by the teacher along with the lady helper and there they got her clothes changed. That day he was not given food at lunch time and it was explained to him that because his behaviour, food will not be available to him today.
- A child went to the bathroom and started taking bath.
- They were taught all the children to have food on their own after chanting the Bhojan Mantra. For this, all the students take their bags, plates and spoons in a row and sit at the food place. Tiffin also takes out the bag itself by opening it. The teacher helps them to break the bread and hold the spoon. At the time of meal, children were being taught similar activities.

- To enable children to learn to wear T-shirts, a competition to wear T-shirts was organized.
- Toilet related training was given by **showing pictures and videos on tablets and computers**. Then when the children feeling go to the toilet, they send them to the toilet by asking the **communication book** and give training.

COMMUNICATION

- These children did not talk to each other. To know their wishes, teacher used to **show them the communication book and take their response** in it. A child was talking about vegetables cooked in his house today. While talking, Madam was repeatedly speaking straight to her side to look here but that boy was turning his face, **he was not giving eye contact and was not expressing himself (responding) any way**.
- A child repeats over and over again what is said by another person (**echolalia**)
- Some told that the children was taken to the therapy room for language therapy so that these **children could speak**.
- He was later taken to the therapy room for speech therapy.

SOCIALISATION

- After the Morning Prayer, on the occasion of 15th August 1947, small activities were done for these children. **So that they will mingle with each other and become social**.
- Teachers do national anthem, prayer, and songs for all the children and one or two children who speak in broken language also keep them with them and make them pronounce with them.
- After the launch all the children sit together in a group.
- Hi, hello, morning and evening wishes, and good manners used to be practiced among the children with autism spectrum disorder by the school teacher as well as staff to make them social.
- These children used to be **orientated through written or oral** two days before going to any place outside, and precaution measures are also told to them about that place, so that

these children would be mentally ready to go to that place and do not disturb others. To handle the students, the caretakers, parents are also asked to join them.

COGNITIVE ACTIVITY

- Removal and installation of color bits are done for color identification and to make grip of their fingers.
- A printout of the picture was brought from the Internet along with the subject-based content of Shopping Goods and it was shown to all the children of Class Transition 3 and **explained by speaking and writing.**
- **A story** based on a new shopping mall was being told to the children
- Half-cut and full-sized fruits, vegetables were being identified in the **TABLET** as well as **on card board**. Children were taught to read some letters in **TABLET** based on linear programming.
- Children were taught how to tell their name, father's name, name of the school name and doing addition, subtraction, puzzles on the **TABLETS**. The story was also being told about socialization. Children were asked to write their name by mixing plastic letters.
- A little boy was **reciting** the mantra following the manner followed by his madam during the lunch. Some children pronounce whole sentence. The **word Om, was also being chanting at the time of yoga.**
- Madam was planning a solution for the children's problems.
- A child was being taught to write simple name of the place, name of the person through A to Z **plastic letter cards**. A B C DZ was told to write.
- Teacher teach children sentence formation through card like-This is a pen, Name of the prime minister of India is Narndrabhai Modi, our National flower is lotus etc.
- Counting was being taught through the **tablet.**
- Question were asked with **two options** - True and False or yes and no, out of which the child chooses any one. This was the way the child is taught to response some questions.
- Drawing and Coloring were also being taught through the **tablet.**
- Painting was being done according to schedules.
- Typing on computer is also taught in independent work through shaping.

- For the language development of the children is done. After showing some wild life picture on the computer, they get the words pronounced in it.
- The vocabulary game is also taught them through internet.
- Mothers were being asked to do the same thing at home as what was being taught in school. Activity materials were also given to them for their practice at home.
- A pair match of cards was being done.
- Children were also asked to fit shapes, size on the colorful wooden board.
- Children were asked to identify, and removing the body parts, animals, and vegetables, fruits made on the peg board and re-fitting them in the same place.

Apart from the given point the following points were observed by the researcher.

- **The word Om, was also being chanting by the students at the time of yoga.**
- Drawing and Colouring were also being taught through the **tablets.**
- The vocabulary game was taught to them through internet.
- Children were also taught how to fit the objects of different shape, size and colour in wooden boards.

RECREATIONAL BEHAVIOUR

Following point were told by teachers, parents, doctors, expert, helper which were also observed by the researcher.

- Children were made practice of spoon walk, keeping a spoon in the mouth and walking with a small ball on that spoon. They were also taught how to make different races, how to hit a ball with colourful small bats. **Teachers used to play by holding them, but they used to run here and there. None of the kids played well. They are not able to understand the game.**
- On the occasion of festivals and ceremonies, teacher used to arrange the programs for the children with autism spectrum disorder like- dancing, painting, making rangoli, poem recitation, making speech, fashion show etc.

VOCATIONAL ACTIVITY

Following point were told by teachers, parents, doctors, expert, and helper which were also observe by the researcher.

- In the pre-vocational classes, the activities like, making paper bag, envelop, getting printed, making jewelry garland, Pot painting, making rakhi etc. were taught to the students.
- After showing the entire process of paper cutting and other activities by the teachers on the tablets, the children were allowed to practice the same on hand.
- Bidding and simple stitching were also taught to them.
- Teachers provide score as reinforcement to those children doing well.

MODIFICATION OF THE BEHAVIOR

Following point were told by teachers, parents, doctors, expert, and helper related to their behaviour modifications which were also observe by the researcher.

- Physiotherapy and physical exercises were done.
- At the time of the a race, a girl (15 years) was doing bhagam-bhaag (running here and there). So two teachers caught her and brought her to the race.
- A child had an injury on the nail and he was recovering and a new nail was coming out, then that child was deforming the new nail with the other hand. From which blood was coming out of it, the teacher was explaining by writing that do not **spoil the new nail, blood** is coming, then later he agreed.
- If a boy dropped some stuff, he was also asked to picked it up and it was explained that **do not drop the goods again**, otherwise you will only picked them so that they should improve their behaviour.
- A girl was banging her teeth with a piece of hard plastic and scissors.
- Madam was pressing a soft ball with the hand of a girl and a thick lumpy wooden ball was putting and rolling over her hand. And at the same time, a little pressure was applied on his elbow, wrist, and shoulder to make them calm and relaxed. Use to make practices of holding pen in the finger and to make a **grip** on it.
- One problem was seen in all the children like **breaking and throwing** something, **finger dancing, continuously looking at something.**

- A child was **pushing his nails** in the teacher's hand and was trying to **bite** teachers hand with his teeth, when the madam shouted at him and left.
- A girl was **twitching her fingers**.
- A boy had **mutilated his hand** by biting it with his tooth.
- A boy was playing with both fingers by **tearing a piece of paper (Repetitive Behavior)**.
- A child got angry and **spit on face** of helper and teacher.
- A child kept **screaming and shouting** in the class whole day.
- Bites hands **repeatedly** and gnashes teeth.
- If a girl could not use her finger well for lifting something, then **her finger was being practiced** by putting her finger in a mesh and pulling it with her finger.
- A boy runs away and goes to the sensory room again and again.
- Moving round at the same place.
- Taking off and putting on pants frequently.
- Keep moving hands up and down again and again.
- Keep making sounds like Aaya, Aaya, Di, Di, E, E.
- Slamming head on the table in anger.
- Tie the fist of the hand and press it on the forehead.
- Sometimes stifling both ears in anger.
- Angry biting the tongue.

Apart from the given points the following points were also observe by the researcher.

- When a child was hyper, he was kept **tied with a belt on the chair**.
- A child sat with his feet tied to the chair with a weight belt.
- A boy **ran away** into the playground by cross the boundary wall.
- All the students were given yoga practice together - Surya Namaskar, Halasana, butterfly, cycling, Vajrasana, eye exercises were done up-down, right-left, in the center. The subtle action of the neck Subtle Kriya, Severe children were not able to do yoga.

These are few of the findings and the researcher is trying to condense these findings in a specific pattern and the present it as the need of the children with ASD.

CONCLUSION

From the findings of the present study, it is understood the real meaning of education from the angel of a special child.. All special educational institutions are not working in proper ways. Most of the parents do not need any high standard education for their children, but they need only the education which can make their children survive in this world in their absence. But our system seems to be helpless in providing such minimum required education when education is our fundamental right. It is very high time to work in this area. It is also one of the duties of the government agencies at least to safeguard these children through different measures.

REFERENCES

Abhiyan, S. S. (2009). Appraisal Report of Annual Work Plan and Budget 2009-10 Sarva Shiksha Abhiyan (SSA) NPEGEL and KGBV Manipur.

Altieri, M. J., & Von Kluge, S. (2009). Family functioning and coping behaviors in parents of children with autism. *Journal of child and Family Studies*, 18(1), 83-92.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders (DSM-5®)*. American Psychiatric Pub.

Autism and health, Retrieved November 17, 2017 from <https://www.autismspeaks.org/>

Autism of Status of India, Retrieved August 23, 2017, from www.google.co.in/status of India

Autism, Retrieved November 16, 2017, from <http://www.rehabcouncil.nic.in/writereaddata/autism>.

Bacquer, A., & Sharma, A. (1997). Disability: challenges versus responses. *New Delhi, India: Concerned Action Now (CAN)*.

Baker-Ericzén, M. J., Brookman-Fraze, L., & Stahmer, A. (2005). Stress levels and adaptability in parents of toddlers with and without autism spectrum disorders. *Research and practice for persons with severe disabilities*, 30(4), 194-204.

- Bali, M. (2012). *Effectiveness of HANDLE & Skill intervention techniques perceptual cognitive & behavioural skill children with autism spectrum disorder*. Ph.D. Theses, Mumbai University, Mumbai.
- Bhargva, C. (1997). *Autistic process a study of its individual and social characteristics*. Ph.D. Theses, Panjab University.
- Cardoza, I. (2000). The National Trust for Welfare of Persons with Autism, Cerebral Palsy. *Mental Retardation and Multiple Disabilities Act. Update on Legal Issues: Autism in India*. Retrieved May, 7, 2001.
- Chaliha, (2001). Conducted a comparative study on the institutionalized and Non institutionalized Mentally Retarded, children with special to personality and adaptive behaviour, *Indian Educational Abstracts*, 2(2), 73.
- CISF to train staff in dealing with autistic flyers. (2017, August 30). *Times of India*, p.9
- Coleridge, P. (2000). Disability and culture. *Asia Pacific Disability Rehabilitation Journal, Special issue: CBR in Transition*. (pp. 14-27)
- Dalal, A. K. (2002). Disability rehabilitation in a traditional Indian society. *Asia Pacific Disability Rehabilitation Journal*, 15(2), 96-105.
- Dalal, A. K., & Singh, A. K. (1992). Role of causal and recovery beliefs in the psychological adjustment to a chronic disease. *Psychology and Health*, 6(3), 193-203.
- Daley, T. C., & Sigman, M. D. (2002). Diagnostic conceptualization of autism among Indian psychiatrists, psychologists, and pediatricians. *Journal of Autism and Developmental disorders*, 32(1), 13-23.
- DeGrace, B. W. (2004). The everyday occupation of families with children with autism. *American Journal of Occupational Therapy*, 58(5), 543-550.
- Delano, M.E.(2007). Video Modeling Interventions for Individuals with Autism. *Remedial and Special Education*. 28 (1), 33-42.
- Dhar, R. L. (2009). Living with a developmentally disabled child: attitude of family members in India. *The Social Science Journal*, 46(4), 738-755.
- Dominick, K. C., Davis, N. O., Lainhart, J., Tager-Flusberg, H., & Folstein, S. (2007). Atypical behaviors in children with autism and children with a history of language impairment. *Research in developmental disabilities*, 28(2), 145-162. *atrics*, 7(1), 9. *ch*, 52(10), 819-829.

Durban, J. M., Rodriguez-Pabayos, A. M., Alontaga, J. V., Dolorfino-Arreza, G., & Salazar, C. (2012). Coping strategies of parents of children with developmental delay: a quantitative analysis. *Asian journal of social sciences & humanities*, 1(4), 177-195.

Dutt, G. (2001). Conducted a study on social acceptance a problem as-associated with Mental retardation, *Indian Educational Abstracts*, 7(1&2), 49.

Education for autism, Retrieved December9, 2017, from

<http://vikaspedia.in/education/education-best-practices/teaching-methods-childrens-with-autism#section-5>

Ennis-Cole, D., Durodoye, B. A., & Harris, H. L. (2013). The impact of culture on autism diagnosis and treatment: Considerations for counsellors and other professionals. *The Family Journal*, 21(3), 279-287.

Flores, M. M., & Ganz, J. B. (2007). Effectiveness of Direct Instruction for Teaching Statement Inference, Use of Facts, and Analogies to Students with Developmental Disabilities and Reading Delays. *Focus on Autism and Other Developmental Disabilities*, 22, 244-251. Retrieved from <http://www.sagepub.com>.

Gaitonde, S. P. (2010). *factors related to stress in parents of children with autism spectrum disorders*. Ph.D. thesis, Oklahoma State University.

Garcia, S. B., Perez, A. M., & Ortiz, A. A. (2000). Interpreting Mexican-American Mothers' Beliefs about Language Disabilities from a Sociocultural Perspective: Implications for Early Childhood Intervention. *Remedial and Special Education*, 21(2), 90.

Gena, P.B. et al. (2015). *Teaching students with special needs in inclusive settings*,(6). Noida, UP, India: Pearson Education India.

Gilliam, J. E., & Coleman, M. (1982). A Survey of Knowledge about Autism Among Experts and Caregivers, *Behavioral Disorders*, Vol. 7, No. 3, pp. 189-196. Retrieved from <http://www.jstor.org/stable/pdf/23881763.pdf> dated: 31-07-2017

Girimaji, S., Zaman, S. S., Wijetunga, P. M., & Pejarsangharn, U. (2001). Mental retardation: from knowledge to action. In *Mental retardation: from knowledge to action*.

Groce, N. E. (1999). Health beliefs and behavior towards individuals with disability cross-culturally. *Cross-cultural rehabilitation, An international perspective*, 37-47.

Grynszpan, O., Weiss, P. L., Perez-Diaz, F., and Gal, E. (2013). Technology-Based Interventions for Autism Spectrum Disorders: A Meta-analysis. *Autism* 136236131347676.

Gurung, R.A. (2009). *Health psychology: A cultural approach*. San Francisco: Wadsworth Publishing Company

Gyan prabha scheme (2011). <https://enabled.in/wp/author/sathasivam/> retrieved dated 25.04.2021

Hartley, S. L., Sikora, D. M., & McCoy, R. (2008). Prevalence and risk factors of maladaptive behaviour in young children with autistic disorder. *Journal of Intellectual Disability Resear*

Harvey,S., and Goudis. A. (2000). *Strategies That Work. Teaching Comprehension to Enhance Understanding*. Portland: Stenhouse Publishers.

Hedrick, W. B., Katims, D. S., & Carr, N. J. (1999). Implementing a multimethod, multilevel literacy program for students with mental retardation. *Focus on Autism and Other Developmental Disabilities*, 14(4), 231-239.

Heer, K., Rose, J., Larkin, M., & Singhal, N. (2015). The experiences of mothers caring for a child with developmental disabilities: a cross cultural perspective. *International Journal of Human Rights in Healthcare*, 8(4), 218-232.

Helms, J. E., & Cook, D. A. (1999). *Using race and culture in counselling and psychotherapy: Theory and process*. Allyn & Bacon.

Hindustan times3,2017, Retrieved November 15, 2017,from www.pressreader.com

Hindustan times3,2017, Retrieved November 15, 2017,from www.pressreader.com

History (AFA), Retrieved August 23, 2017, from <http://www.autism-india.org/history>.

History of Autism, Retrieved November 16, 2017, from <http://projectautism.org/history-of-autism>

Hitchcock, C. (2001). Balanced Instructional Support and Challenge in Universally Designed Learning Environments. *Journal of Special Education Technology*,16(4), 23-30.

<https://sites.ed.gov/idea/s-Statuteregulations/> dated:3.2.2021

<https://www.cdc.gov/ncbddd/autism/>dated:3.2.2021

JAGAN, V. (2018). *Experiences of raising children with autism: fathers' perspectives*, Ph.D thesis, centre for research christ (deemed to be university), Bengaluru,13.

- Jagan, V. (2018). *Experiences of raising children with autism: Fathers' perspectives* (Doctoral Dissertation). Centre for Research, Christ (Deemed to be University), Bengaluru, Karnataka, India.
- Janes, R. (2015). *Autism in Early Childhood Education Montessori Environments: Parents and Teachers Perspectives*. M.Ed. thesis Auckland University of Technology.
- Jena, (2000). Priorities of Training and attitude of special educators towards people with Mental Handicaps, *Indian Educational Abstracts*, 2(1), 71.
- Johansson, S. T. (2015). *Autism-in-context An investigation of schooling of children with a diagnosis of autism in urban India*. Ph.D. Thesis, University of Gothenburg.
- John, A. (2012). Stress among mothers of children with intellectual disabilities in urban India: role of gender and maternal coping. *Journal of Applied Research in Intellectual Disabilities*, 25(4), 372-382.
- Kahane, L. & El-tahir. (2015). Attachment behavior in children with Autistic Spectrum Disorders. *Advances in Mental Health and Intellectual Disabilities*, Vol. 9 Issue: 2, pp.79-89, Retrieved from <http://www.jstor.org/stable/pdf/353283.pdf> dated: 31-07-2017.
- Khan, M. F., & Alam, M. A. (2016). Coping Trends of Parents Having Children With Developmental Disabilities: a Literature Review. *European Journal of Special Education Research*, 39-49.
- Kirwan, B. and Ainsworth, L. (Eds.) (1992). *A guide to task analysis*. London, Taylor and Francis.
- Kluth, P., Chandler-Olcott, K. (2008). *A Land we can Share: Teaching literacy to students with autism*. Baltimore: Paul H. Brooks Publishing Co.
- Knott, F. L. C., & Williams, T.I. (1995). Sibling interaction of children with learning disabilities: A comparison of autism and down syndrome. *Journal of child psychology and Psychiatry and Allied Disciplines*. 36, Sep. 965-976.
- Konstantareas, M. M. & Homatidis, S. (1992). Mothers' and Fathers' Self-Report of Involvement with Autistic, Mentally Delayed, and Normal Children, *Journal of Marriage and Family*, Vol. 54, No. 1), pp. 153-164 . Retrieved from <http://www.jstor.org/stable/pdf/353283.pdf> dated:31-07-2017
- Kroth, R., & Edge, D. (2007). Assistive Technology and Devices. *Counseling and Human Development*, 39(9), 1-8.

- Lang, R. (2000). The role of NGOs in the process of empowerment and social transformation of people with disabilities. *Asia pacific disability Rehabilitation journal*, 1(1), 1-19.
- Larson, E. (2006). Caregiving and autism: How does children's propensity for routinization influence participation in family activities?. *OTJR: Occupation, participation and health*, 26(2), 69-79.
- Legislation on and Policies, Retrieved August 23, 2017, from <http://www.autism-india.org/legislation-and-policies>.
- Leslie, J. C., & Tierney, K. J. (2013). Behaviour Analysis in Ireland. *Irish Journal of Psychology*, 34, 156-162.
- Luiselli, J. K., & Slocumb, P. R. (1983). Management of multiple aggressive behaviors by differential reinforcement. *Journal of Behavior Therapy and Experimental Psychiatry*, 14(4), 343-347.
- Mangal, S.k. (2009). *Educational exceptional children: An Introduction to special education*. Phi publication Pvt. Ltd. New Delhi, Pp (310-311).
- Mangal, S.k. (2009). *Educational exceptional children: An Introduction to special education*. Phi publication Pvt. Ltd. New Delhi, Pp (310-311).
- Marcus, L. M., Kunce, L. J., & Schopler, E. (2005). Working with Families.
- Marquenie, K., Rodger, S., Mangohig, K., & Cronin, A. (2011). Dinnertime and bedtime routines and rituals in families with a young child with an autism spectrum disorder. *Australian Occupational Therapy Journal*, 58(3), 145-154.
- Math, S. B., & Nirmala, M. C. (2011). Stigma haunts persons with mental illness who seek relief as per Disability Act 1995. *The Indian journal of medical research*, 134(1), 128.
- Matsumoto, D. (Ed). (2001). *Handbook of culture and psychology*. Oxford: Oxford University Press.
- Mazzotti, V.L., Wood, C.L. ,David W., Test, D.V., Catherine H., & Fowler, C. H. (2012). Effects of Computer-Assisted Instruction on Students' Knowledge of the Self-Determined Learning Model of Instruction and Disruptive Behavior. *Journal of Special Education*. 45 (4) 216-226.
- McCarthy, M. J. (1990). *Vocabulary*. Oxford: Oxford University Press.

McCormick, L., & Shane, H. (1990). *Communication System Options for Students who are Non Speaking*. In McCormick & Schiefelbusch *Early Language intervention: An Introduction*, Columbus, OH: Merrill Pp427-472.

Micheli, E. (1999). A Training Group for Parents of Autistic. *International Journal of Mental Health*, Vol. 28, No. 3, pp. 100-105. Retrieved from <http://www.jstor.org/stable/pdf/41344908.pdf> dated: 31-07-2017

Miles, M. (1995). Disability in an Eastern religious context: Historical perspectives. *Disability & Society*, 10(1), 49-70.

Ministry of Communications-Department of Posts – (GDS Section)

Reservation for Handicapped (Persons with Disability) in engagement of Gramin Dak Sevaks –GDS (2019)

Ministry of law and Justice, The Rights of Persons with Disabilities Act (2016). *The Gazette of India extra ordinary part two no. 59*, Government of India. New Delhi.

Mishra, R., & S, P. (2017). *Journal of community guidance & Research*, vol.34 no.1 pp. 105-108.

Mudford, O. C., Arnold-Saritepe, A. M., Phillips, K. J., Locke, J. M., Ho, I. C. S., & Taylor, S. A. (2008). Challenging behaviors. In *Clinical assessment and intervention for autism spectrum disorders* (pp. 26

Mudford, O. C., Arnold-Saritepe, A. M., Phillips, K. J., Locke, J. M., Ho, I. C. S., & Taylor, S. A. (2008). Challenging behaviors. *Clinical assessment and intervention for autism spectrum disorders*, 267-297.

Myles, B. (2009). *Target: Texas Guide for Effective Teaching Assistive Technology*. Retrieved from <http://www.txautism.net>.

Nandi, S. (2010). *Music: As an intervention procedure in autism*. Ph.D. Theses, Kolkatta University.

Naniwadekar, K. (2015). *Effect of customised behavioural intervention on problem behaviours as distinguished from skill deficits in children with Autism*. Ph.D. Theses, Maysur University, Maysur.

Naniwadekar, K. (2015). *Effect of customised behavioural intervention on problem behaviours as distinguished from skill deficits in children with Autism*. Ph.D. Theses,

- Narayan, N. (2014). *Interplay between cultural beliefs and attitudes in raising child with Intellectual Disability-An Asian Indian Study*. Alliant International University.
- Nation, K., Clarke, P., Wright, B., & Williams, C. (2006). Patterns of Reading Ability in Children with Autism Spectrum Disorder. *Journal of Autism and Developmental Disorders*, 36(7), 911-919.
- National trust Scheme (2011) [https://enabled.in/wp/niramaya-disability-health-insurance-scheme/retrived dated 25.04.2021](https://enabled.in/wp/niramaya-disability-health-insurance-scheme/retrived%20dated%2025.04.2021)
- NCERT (2005) National Curriculum Framework for Primary Education. MHRD, New Delhi.
- NCTE (2009) National Curriculum Framework for Teacher Education Towards Preparing Professional and Human Teacher. MHRD, New Delhi.
- Neely, L., Rispoli, M., Camargo, S., Davis, H., & Boles, M. (2013). The Effect of Instructional Use Of an Ipad (R) on Challenging Behavior and Academic Engagement for Two Students with Autism. *Research in Autism Spectrum Disorders*, 7(4), 509-516.
- NICE. (2015). *Challenging behaviour and learning disabilities*. May. <http://guidance.nice.org.uk/CG/Wave0/654>
- Ogundele, M. O. (2018). Behavioural and emotional disorders in childhood: A brief overview for paediatricians. *World journal of clinical paediatrics*, 7(1), 9.
- Patil, K. (2012). *Comparative study of stress coping mechanism and psychological wellbeing among parents of children with autism, mental retardation and normal children*. Ph.D. Theses, Pune University, Pune.
- Paul, A. (2016). *Effectiveness of ipad mediated instructional strategy (ipmis) for enhancing reading skills in children with autism* (Doctoral Dissertation). Avinashilingam institute (Deemed to be University), Coimbatore, Tamil Nadu, India.
- Paul, A. (2016). *Effectiveness of ipad mediated instructional strategy (ipmis) for enhancing reading skills in children with autism* (Doctoral Dissertation). Avinashilingam institute (Deemed to be University), Coimbatore, Tamil Nadu, India.
- Pearce, H. & Berney, T. (2016). Autism and offending behaviour: needs and services, *Advances in Autism*, Vol. 2 Issue: 4, pp.172-178, Retrieved from <http://www.emeraldinsight.com/doi/pdfplus/10.1108/AIA-06-2016-0016> dated:31-07-2017.
- Pisula, E., & Kossakowska, Z. (2010). Sense of coherence and coping with stress among

mothers and fathers of children with autism. *Journal of Autism and Developmental Disorders*, 40(12), 1485–1494. <https://doi.org/10.1007/s10803-010-1001-3>

Possible "Red Flags, Retrieved November 20, 2017 from <https://www.cdc.gov/ncbddd/autism/signs.html>

[Radhakrishna](#), et al. (2010). *Integrated approach to yoga therapy and autism spectrum disorders*, *Journal of Ayurveda and Integrative Medicine* Volume 1(2); Apr-Jun 2010, retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3151379/> dated: 20.11.2017

Rafajko, S. I. (2016). *The relationship between cultural orientation and attitudes towards intellectual disability*. Illinois Institute of Technology.

Ray, P. (2009). *The role of sex education on autism a psycho-bio-social approach*. Ph.D. Theses, Kolkatta University, Kolkatta.

Reddy, T. A. (2013). *Psychological intervention for children having mental retardation with autism spectrum disorder*. Ph.D. Thesis, Venketeshwar University, Tirupati.

Rehman, M. M., Ferdous, S.M., & Ishtiaque, S., Ahmed, A. A., (2011). Speech development of autistic children by interactive computer games. *Interactive Technology and Smart Education*, Vol. 8 Issue: 4, pp.208-223. Retrieved from **Error! Hyperlink reference not valid.** dated:31-07-2017

Rincover, A., Rovert, L.K., & Dennis, C.R. (1978). Some recent behavioural research on the education of autistic children, *Education and Treatment of Children*, Vol. 1, No. 4 pp. 31-45. Retrieved from <http://www.jstor.org/stable/pdf/42900245.pdf> dated: 31-07-2017

Sasikumar, K. (2016). *Analysing the effect of psychological signals repose in children with autism*. Ph.D. Theses, VIT University.

Saskatchewan, Education (1999). *Teaching students with autism*, Guide for educators

Schieve, L. A., Blumberg, S. J., Rice, C., Visser, S. N., & Boyle, C. (2007). The relationship between autism and parenting stress. *Pediatrics*, 119(Supplement 1), S114-S121.

Sengupta, M. (2010). *The Effect Of Dance Movement Therapy On Autism*, Ph.D. Thesis Of University Of Calcutta, Kolkatta, India.

Sharma, A., & Dunay, A. (2016). " DISABILITY IS NOT CONTAGIOUS, IGNORANCE IS": A CRITICAL OVERVIEW ON THE VARIOUS SHADES OF DISABILITY. *Economic and Social Development: Book of Proceedings*, 256.

- Sharma, M. (2004). *Development and try out of an intervention programme for parentes of children with mental retardation*. Ph.D. theses, MSU, Vadodara.
- Siah, P. C., & Tan, S. H. (2016). Relationships between sense of coherence, coping strategies and quality of life of parents of children with autism in Malaysia: A case study among chinese parents. *Disability, CBR and Inclusive Development*, 27(1), 78–91. <https://doi.org/10.5463/DCID.v27i1.485>
- Sigman, M.D., Kasari, C. J.-H. K., & Yirmiya, N. (1992). Responses to the Negative Emotions of Others by Autistic, Mentally Retarded, and Normal Children. *Society for research in Child Development*, Vol.63, No.4, pp.796807, Retrieved from <http://www.jstor.org/stable/pdf/1131234.pdf> dated: 31-07-2017
- Simpson, R. L. (2005). Evidence-Based Practices and Students With Autism Spectrum Disorder. *Focus on Autism and Other Developmental Disabilities*, 20(3), 140-149.
- Singh, J. P. (2010). Changing Attitude, a paradigm shift in perception: Focus on Disability Studies. *Delhi Psychiatry Journal*, 13(1).
- Sparkes, A. C., & Smith, B. (2002). Sport, spinal cord injury, embodied masculinities, and the dilemmas of narrative identity. *Men and masculinities*, 4(3), 258-285.
- Sparks, R. L., Ganschow, L., Javorsky, J., Pohlman, J., & Patton, J. (1992). Identifying native language deficits in high-and low-risk foreign language learners in high school. *Foreign Language Annals*, 25(5), 403-418.
- Sullivan, A., & Caterino, L. C. (2012). Addressing the Sexuality and Sex Education of Individuals with Autism Spectrum Disorders. *Education and Treatment of Children*, Vol. 31, No. 3 (August 2008), pp. 381-394, West Virginia University Press. Retrieved from <http://www.jstor.org/stable/pdf/4289998> dated: 31-07-2017.
- Sunayan, (2014). *Families of children with Autism: Selected contextual variable*. Ph.D. Theses, Vanasthali University.
- Suppal, P. G., Roopnarine, J. L., Buesig, T., & Bennett, A. (1996). Ideological beliefs about family practices: Contemporary perspectives among north Indian families. *International Journal of Psychology*, 31(1), 29-37.
- Symon, J. B. (2001). Parent education for autism: Issues in providing services at a distance. *Journal of Positive Behavior Interventions*, 3(3), 160-174.

The National Trust Act, 1999,

http://disabilityaffairs.gov.in/upload/uploadfiles/files/National_Trust_act-englsih.pdf

The National Trust for Welfare of Persons with Autism, Cerebral Palsy, Mental Retardation and Multiple Disabilities (Amendment) Act, 2018

http://www.prsindia.org/sites/default/files/bill_files/The%20National%20Trust%20for%20the%20Welfare%20of%20Persons%20Bill%202018.pdf

Timmons, V., & Alur, M. (2004). Transformational Learning: A Description of How Inclusionary Practice Was Accepted in India. *International Journal of Special Education*, 19(1), 38-48.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES National Institutes of Health
NIH Publication 19-MH-8084 Revised 2018

Universal Design of learning ,Retrieved November 23, 2017 from
www.accessproject.colostate.edu/udl/documents/what_is_udl.

Unusual behaviour and interest in autism, Retrieved November 17, 2017, from
https://scholar.google.co.in/scholar?q=unusual+behaviours+and+interest+in+autism&hl=en&as_sdt=0&as_vis=1&oi=scholart&sa=X&ved=0ahUKEwjRlrK73sfXAhUJr48KHbdzDroQgQMIKDAA&safeforce=strict

Vedhanayagam, G.(2017). *A critical study on Inclusive Education for Disable programme in southern districts of TamilNadu*. Ph.D thesis Unpublised.Pp (1-3) Tamilnadu teachers Education University, Chennai.

Walsh , N., & Hall, I. (2012). The Autism Strategy: implications for people with autism and for service development, *Advances in Mental Health and Intellectual Disabilities*, Vol. 6 Issue: 3, pp.113-120. Retrieved from <http://www.emeraldinsight.com/doi/pdfplus/10.1108/20441281211227166> dated: 31-07-2017. Retrieved August 23, 2017, from
www.google.co.in/status of India

Wass,S.W., Porayska-Pomsta, K.(2013). The Uses of Cognitive Training Technologies in the Treatment of Autism Spectrum Disorders. *Autism* 1362361313499827.

What are the risk factors Autism spectrum disorders, Retrieved November 20, 2017 from
<https://www.sharecare.com/user/dr-coleen-boyle>

What Kinds of Health Problems Do Children With Autism Have? Retrieved December 9, 2017, from <http://www.mychildwithoutlimits.org/understand/autism/common-health-problems-in-autistic-children/>

WHO Resolution on autism spectrum disorders (WHA67.8), Retrieved November 20, 2017 from <http://www.who.int/mediacentre/factsheets/autism-spectrum-disorders/en/>