

CHAPTER V

FINDINGS AND DISCUSSION

5.1.0 INTRODUCTION

The objectives of the present study were to study the educational needs of children with autism spectrum disorder. Dimension of the study was Daily routine, communication, socialization, outside of the behaviour, cognitive, sensory, recreational and vocational, effectiveness, and unusual behaviour. For this data were collected and analysis and interpretation of the data were presented in chapter IV. This chapter presents findings and an elaborate discussion of the results obtained by analysis and interpretation of the data

5.2.0 FINDINGS

Children with autism show communication, social and behaviour problem in day to day life. They often face difficulty in combining words into meaningful sentences. Most of the researches on intervention based on their behavioural capabilities. The studies on educational needs of children with autism spectrum disorder. The present study aimed are 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, to study the educational needs of the children with ASD perceived by parents, helpers, Special Educators, doctors and experts, to study the educational needs of the autistic children conveyed by themselves.

The study has analysed the opinion of all stock holder about educational needs of all the selected children purposively find the educational needs in ten dimension such as Daily routine work, Communication, Outside behaviour, Socialization, Cognitive behaviour, Sensory behaviour, Affective behaviour, Independent behaviour for survival, Recreational and Vocational behaviour, Undesirable behaviour. Most of the activity is effective to improve the behaviour of children with ASD if consistently practicing with the children it's showed by all stake holders as well as convey through children in observation. The study also focuses on the type of education, purpose and approach of the school.

In the first chapter, provides a theoretical overview to autism. The meaning, definition, history, characteristics, causes, present status, legislative provision, the prevalence rate of autism in world and the condition of autism in India are also discussed, objectives along with the relevance of the study are discussed. The study is important in order to bring a focus on the educational

needs of children with autism spectrum disorder to enable the children with autism spectrum disorder for surviving independently in their life. The second chapter, review of the literature concludes that the most of the study conducted in experimental nature, some of the study conducted on the survey and qualitative in nature and other study in the other method. It also agrees that the comprehension of these children is deficient. It agrees that the comprehension is delayed than production in the development of the children with autism spectrum disorder. In the third chapter, methodology used in the present study is discussed. The study is a qualitative study and the sampling techniques are purposive and methods of data collection are clearly mentioned in the chapter. The chapter also analyses the educational needs of children with autism spectrum disorder concludes that the activity are very effective to enable the children with autism spectrum disorder as well as type of education, purpose of education and approach are find from the school and centre through the observation. In the fourth chapter the data are analysed of different stake holder and intrpreated the data of observation which is conveyed by the children with autism spectrum disorder. The study is based on three major research objectives. As an answer to the first research objective, the results of the study agree to the fact that the activity is most effective task to improve the behaviour of the children with autism spectrum disorder.

The first objectives of the study was 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. Researcher found such type of education, purpose of education and approach:

There are special schools and centres providing Special Education to the children with autism spectrum disorder. These children have specific needs in all area of their life as well as they have specific ability also. Thus on the basis of children's ability, classes are divided into four stages such as (i) early intervention (ii) transaction-I (iii) transaction-II (iv) transaction-III (a) pre-vocational (b) vocational. Education is provided in special schools and centres through integrated approach like (Psychologist, Physio-therapy, Sensory-therapy, Special teacher, Doctor).

Details about education which is provided in special school and centres.

Early Intervention

Activity for daily living include toilet training, bathing, brushing teeth, taking drinking water, shoe lasing, buttoning and unbuttoning, dressing. The teachers use communication diary to convey intention, identification of things, animals, birds, van, utensil, body part, writing,

arithmetic, non-verbal activity, puzzle fitting, colour identification, fine motor activity, gross motor activity, training through iPad/ laptop action song, social story based training, sensory therapy, speech therapy, physio-therapy and playing some game meaningfully.

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 include 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.

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 (different measure), stands on one foot with no support and eye closed, Riding a bicycle.

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

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

Language & Communication-These activities include 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, and asks for help, facilitating parallel play.

Transaction-3

Envelope making, jewellery making, rakhee 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, addition and subtraction number with iPad, paper pencil and with the help of calculator, picture drawing and painting, typing on iPad, game plays on iPad. Identifying behaviour i.e. spitting, pee and poop in pain, developing seating and tolerance.

The purpose of education provided in schools for children with autism spectrum disorder (ASD) is to make them independent. All special schools and centers nurturing children with ASD aim to achieve this goal. The purposes are further divided into the following objectives:

- To train children with ASD in activities of daily living.
- To enhance communication skills among children with ASD.
- To enable socialization for children with ASD.
- To teach appropriate behaviour outside of school.
- To develop cognitive abilities in children with ASD.
- To fulfil the sensory needs of children with ASD.
- To modify affective behaviour in children with ASD.
- To improve recreational behaviour in children with ASD.
- To prepare children with ASD for vocational activities.
- To teach survival skills to help children with ASD live independently at home.
- To transform undesirable behaviour in children with ASD into desirable behaviour.

The following approaches have emerged from the collected data

Psychoanalytic approach

Psycho-educational approach

Humanistic approach

Ecological approach

Behavioural approach

The second objective of the study was to study of the educational needs of the children with ASD perceived by parents, helpers, Special Educators, doctors and experts. Educational needs of the children with autism

Education and training is needed for the children with autism for the daily activities like- using toilet, taking bath, wearing the dress, brushing teeth, changing diaper, eating food etc. to make them independent in their regular life. Parents of the autistic children need training to educate and help them in these activities.

Children with autism require education and training for communication activities using pictures, practical demonstrations, communication cards, charts, computer-assisted communication, written communication, scripts, and daily scheduled conversations. Speech therapy, vocabulary building, and social practice drills are also essential to help them communicate their basic needs. Parents should spend 5 to 10 minutes each day calmly telling stories and talking to their children, speaking clearly and slowly, and then waiting for the child's response, as these children may not respond immediately.

Children with autism need education and training for outdoor living activities, such as using the washroom, sitting peacefully, living together, dressing and changing diapers, eating properly, and choosing items like toys and food. They should also be taught to recognize socially useful symbols, such as gender-specific restrooms and traffic signals (green, red, yellow). It's important to familiarize them with new places before visiting to help them understand the situations and manage transition difficulties, which can help maintain consistent behavior.

Children with autism require education and training for socialization activities such as practicing greetings like "hi," "hello," "good morning," and "namaste," celebrating birthdays, sharing tiffin with others, shaking hands, welcoming guests, and developing good manners. They should also learn to sit quietly, engage in group activities, and interact with peers and new people. Parents should speak to them lovingly and avoid shouting, encourage one-on-one activities, play games like volleyball, use playground equipment, and tell social stories to prepare them for social situations.

These children should be enrolled in general schools with a shadow teacher. Parents can create artificial social groups for practice and raise awareness about autism to foster acceptance in society. By involving autistic children in social settings, their interest in socialization will increase, allowing them to seek help and express themselves, ultimately enhancing their social skills and integration.

Children with autism need education and training for mathematics learning activities, such as counting from 1 to 100 using a tablet, pictures with numbers, calculators, iPads, and typing

numbers on a computer. They should also learn counting with concrete objects and shapes, practice with worksheets, use coins and notes to understand the concept of money, and perform calculations using pictures and verbal instructions. Regular practice with the help of special educators is essential to develop mathematical abilities in autistic children.

Children with autism need education and training for language learning activities, such as using pictures to teach the English alphabet (A-Z) and forming words and sentences. They should practice writing their names and signing with the help of paper and pencil by joining dots and tracing them. Teaching in their mother tongue, using computer apps for questions and answers, and introducing new words with pictures in the early morning can help develop their vocabulary. This will enhance their language abilities and help them solve problems.

Children with autism need education and training to learn color concepts through activities like using colorful cards and beads for color identification, painting, filling in shapes with color, making palm prints and finger prints, painting flower shapes with brushes, and drawing with colorful pencils. These children may benefit from extra coloring classes, and parents should support painting activities at home. Art therapy can help calm them and address gripping and sensory issues.

Children with autism need education and training for general knowledge activities, such as using charts to learn about plants, pictures to learn about animals, and social stories to understand places, addresses, states, and countries. Teaching methods should include holding their attention and using visual aids. These children should receive integrated therapy involving an Occupational Therapist, Physiotherapist, Speech Therapist, Sensory Therapist, and Psychologist. All professionals, along with a special education teacher, should work together in a team spirit using a multidisciplinary approach.

Children with autism need education and training for co-scholastic activities such as playing the harmonium, playing the drum to slow music, dancing with a shadow teacher, singing songs slowly, and practicing yoga at a slow pace. To improve cognitive functions, which include attending, processing, and reacting to important stimuli, these children require therapy for fourteen hours a week. With one-on-one instruction from special teachers, autistic children can engage in these activities properly.

For hyperactive children, education, training, and activities include climbing, jumping, wearing a weighted bag or jacket to channel energy, and gradually reducing weight and time. Activities like

vestibular sensory stimulation and using vibrating brushes can improve sensory integration. Children benefit from wearing loose cotton clothing and receiving visual cues as needed. They may also benefit from gentle pressure on their bodies and joints, and redirection from obsessive objects to others, like observing a moving wheel or fan.

Autistic children should be shielded from loud noises, avoid excessive physical contact, and use mild cleaning agents and room fresheners to minimize strong odors like sweat. Minimizing overwhelming stimuli by not exposing them to too many objects and providing options on communication charts includes what to express emotions like pain and sorrow, can also be helpful. Allowing them to listen to music or songs with earphones can reduce hypersensitivity.

Education, training, and activities for hypoactive children include training in auditory perception, using lighting, exposure to textures and colors, applying body pressure, and encouraging chewing food. Sensory-motor behavior is crucial for these children to recognize senses such as temperature (hot/cold), texture (rough), smell, sound, and light. Modifying room environments, such as adjusting TV or radio volume, room color, and bed texture, and taking them to playgrounds to experience textures like grass and sand, are essential. Autistic children benefit from sensory integration therapy and may also use homeopathic remedies to address sensory issues. Following therapy, their sensory systems become more responsive, enhancing their ability to understand their surroundings.

Education and training are crucial for children with autism to improve their social and affective behaviour. Activities such as sharing, celebrating birthdays, going on outings, making handprint stars, offering choices, interacting with other caregivers, and participating in group lunches help develop empathy and social skills. It's important for all family members to accept these children, interact with smiles, greet them warmly, and teach them about appropriate physical contact through visual aids. Teaching good and bad habits, using charts to illustrate happy and sad moments, praising positive behaviour, and adjusting routines to foster attachment are essential. Techniques like shaping and Applied Behavior Analysis (ABA) therapy are used to enhance affective behavior, encouraging reciprocal interactions that stabilize emotions in children with autism spectrum disorder.

Education and training are essential for children with autism to learn survival skills such as cooking, feeding themselves, shopping independently, greeting guests, and connecting with nature. They also need instruction in daily living activities like tying shoes and buttoning shirts.

Providing opportunities for hands-on practice, using videos as guides, and reinforcing learning with rewards like chocolate are effective methods. Parents can establish support groups and shelters where autistic children can live independently when separated from their parents. It's crucial to prepare them for self-sufficiency in basic needs such as shelter, food, healthcare, clothing, education, and employment. Governments should create low-skilled job opportunities and insurance policies to secure their future. Autistic children require intensive training and support to achieve independence and self-reliance.

Education and training are necessary for children with autism to engage in recreational activities such as watching TV, using a laptop or mobile device, playing with toys and musical instruments, participating in ball games, creating colorful arts and crafts, listening to songs and poems, watching dance performances or movies, playing with sensory items like colorful liquid bottles, and enjoying activities like football, volleyball, swings, indoor games, visiting places like temples, drawing, painting, using scissors, and walking in gardens. Children with ASD require significant parental support and dedicated time to engage fully in these activities.

Education and training are crucial for children with autism to engage in vocational activities such as making paper bags, pottery painting, file making, candle and jewelry crafting, creating Raksha Bandhan items, block painting, acquiring computer skills, learning about financial transactions, flower arranging, and basic carpentry. Vocational opportunities should be identified based on individual capabilities and tailored accordingly. Additionally, children require rehabilitation support to meet their basic needs for food, clothing, and shelter. The specific vocational requirements for these children vary based on their abilities and the severity of their condition. Some parents suggest focusing less on academic studies and instead opening small shops with assistance for their children.

Education and training are essential for children with autism to address and improve undesirable behaviour. This includes sensory therapy, establishing a structured teaching schedule, Applied Behavior Analysis (ABA) therapy, providing orientation through written scripts and social stories, using reinforcement and consequences, counseling by psychologists, medication as needed, engaging in physical exercise, redirecting attention to preferred activities, and employing calming techniques like counting backwards or offering water. Undesirable behaviors such as anger outbursts, incontinence, spitting, self-harm, shouting, crying, running, tantrums, hitting,

biting, jumping, head-banging, hand-banging, sudden laughter, staring, body shaking, throwing objects, and slamming things can be managed to help these children

The third objectives of the study were to study the educational needs of the autistic children conveyed by themselves. Researcher was found Students need to participate in prayer and chant the bhojan mantra for good health before lunch. They should also eat lunch and drink water properly during recess, with teachers assisting them in these activities.

Autistic students need to be trained to use the toilet. Teachers send them to the bathroom with a female helper who assists with changing clothes if needed. Some young children also require toilet training, but teachers only train the students and advise parents to use diapers for their young children. Teachers do not provide lunch to encourage proper bathroom use. Helpers guide the students in cleaning themselves to improve their bathroom habits.

There is an educational need for children with autism spectrum disorder to improve their finger grip. Activities such as fitting colourful pieces onto plastic meshes, holding a pen, fitting colourful wooden shapes, pressing soft balls, and rolling weighted balls on their hands can help.

Children with autism spectrum disorder need education and training to improve their behaviour outside. This includes explaining, speaking, writing, and showing printed materials about shopping at the mall, traffic rules, and other similar activities.

Children with autism spectrum disorder (ASD) need to learn basic reading and writing skills. Teachers use tablets with linear programming to teach letter recognition, have the children practice writing with pencils on paper, and use cards and charts to help them read the names of animals, places, and fruits. Colouring activities are also used to enhance eye-hand coordination.

Children with autism spectrum disorder (ASD) need education and training to improve their speaking skills. This includes practicing pronouncing whole sentences and chanting the word "Om" during yoga. They also need to identify body parts, animals, vegetables, and fruits using peg-boards, and practice fitting these items back in their places. Vocabulary games are taught online with the help of the internet, and speech therapy should also be provided.

Children with autism spectrum disorder (ASD) need help with language development. This includes showing wildlife pictures on a computer, using a communication book for word pronunciation, and doing jaw exercises to improve speech. Teachers use wildlife pictures and tablets for practice. Both teachers and parents should pay close attention to the children's needs

and provide immediate care, as lack of attention can lead to behavioural issues. Speech therapy is also necessary.

Autistic children need education and training to help them participate in group activities, such as playing in a group, joining sports, and understanding games. Activities that can help include keeping a spoon in their mouth, wearing a T-shirt, walking with a small ball, racing, hitting a ball with a colourful small bat, and playing video games. Teachers often assist by participating with them in these activities.

Children with autism need support for socialization and recreational activities. For festivals and ceremonies honouring legendary persons, teachers arrange events like dancing, painting, rangoli competitions, poetry readings, speeches, fashion shows, and social stories for the students.

Children with autism spectrum disorder (ASD) need education and training to develop vocational skills. This includes learning activities such as making jewellery, beading, creating envelopes and pouches, painting pots, making candles, making diyas, and colouring.

Children with autism need education and training to improve their ability to sit still during hyperactive activities. This includes using a CP chair, applying a weight belt, providing engaging tasks, and offering physiotherapy. Additionally, mothers also need training to work with their children effectively.

Children with autism need training to address unusual behaviours. Teachers explain to them, both in writing and verbally, not to damage their nails, push their nails into the teacher's hand, or drop things on the ground. They should also avoid banging their teeth with hard objects, pressing softballs and thick wooden balls, and applying too much pressure on their elbows, wrists, and shoulders. Activities like pressing paper with tweezers and following a behaviour modification schedule can help. Yoga practices, such as Surya Namaskar, Halasana, Butterfly, Cycling, Vajrasana, and eye exercises, are done together. Some children may struggle with yoga, so ABA therapy is used to address self-injurious behaviours. Sensory therapy and physiotherapy are also important for improving behaviour.

5.3.0 DISCUSSION

In the study of the educational needs of children with autism spectrum disorder, researchers developed the unstructured interview to get the interview from the stakeholders like teachers, parents, doctors, experts and helpers. After analysis of interviewee data about the educational needs of children with autism spectrum disorder, results came out are-sensory therapy is needed

for both hypo and hyper children with autism spectrum disorder, and communication skills are also needed for children with autism spectrum disorder to convey their needs and feeling to other, social skill also needed for the children with autism spectrum disorder. All these findings are supported by Ray (2009) and Nandi (2010), Sunayan (2014) revealed that social support to autism and Therapists helps to reduce the behavioural problems as well as Janes (2015) whose study was based on a study entitled Autism in Early Childhood Education Montessori Environments: Parents and Teachers Perspectives, however, it was found that children with autism spectrum disorder from learning their sensory need to touch, rub, and feels objects and people present another challenge in the classroom incorporating a balance between tolerating and strengthening a child's interests in an appropriate mode while respecting both the individual and others whom their behaviour may affect. There are many opportunities to develop communication skills, social competence and self-care despite learning difficulties or sensory issues as the Montessori program incorporates lessons on social graces and basic skills such as washing hands and dressing oneself. Bark and Fearon (2012) found that significant association between having autism spectrum disorders and being reported as having lower levels of communication skills so it is indirectly indicating and supporting for the present study. Mishra and Sreedevi (2017) found that children have poor attention spans, an inability to communicate needs and requirements and developmental delays in language, social and motor skills The study showed that communication and social aspects are educational needs for children with autism spectrum disorder directly support to present study.

The study by Sundar (2002) revealed autism spectrum disorder children had sleeping problems at some point in their lives. Besides that these children also exhibited a wide diversity of challenging behaviours like destructiveness, self-injurious behaviour, hyperactivity and problems in elimination. The findings of the present study also confirm that the educational needs of behavioural problems like sleeping disorders, hyperactivity, and self-injurious are needed to improve the problem of children with autism spectrum disorder.

The studies of Bhargava (1997), Sharma (2014), and Naniwadekar (2015) revealed that intervention and training programs were very effective in improving personality in terms of unusual behaviour, socialization, communication and cognitive skills and the present study is in this direction to intervention, training is considered as educational needs of children with autism spectrum disorder. The findings of the present study also confirm that integrated training and

therapy are very effective tools for mild-level children with autism spectrum disorder. The severe level of children needs more intensive training but they do not come into the mainstream easily. Kumar (2017), that yoga was an effective Dey (2018) and Kaur (2023) supported to findings of present intervention and mind game very effectively improve social skills in the children with autism spectrum disorder.

Findings of the present study on social awareness, social support and attitude towards public education show people are uneducated about children with autism spectrum disorder these findings are also supported by Manandar et al. (2018), Gilliam and Coleman (1982), Knott et al (1995) whereas the study of Rathore (2015) found that negative support in the society due lack of knowledge that showed education play major role into the develop a healthy society. Without the support of society parents get more disturbed and fall into stress.

Gaitonde's (2010) study revealed that parental stress affects parenting so ultimately children could not care properly where whereas Sharma (2004), Kalaiavnai & Kalimo (2018) found that parental training and counselling can change their emotions as well as counselling can remove parental stress positively that finding also confirm the findings of present study. The present study shows parental counselling and training is one of the most educational needs with is indirectly related to children with autism spectrum disorder. Allen et al. (2013) it was found that deficits in social skills and behaviour problems caused higher stress in mothers whereas it was not significantly associated with parental stress

The findings of the present study on reading writing and arithmetic as well as special education for survival appear to meet the educational needs of children with autism spectrum disorder these findings confirm the study of Singh (2017), Parmer (2016), Sasikumar (2016) whereas the study of Micheli (1999) showed reinforcement play a major role into the strong bonding content things and learning.

In Indian culture, most people hesitate to talk about sex education but in the present study, it appeared that major parents responded that children should know what good touch and bad touch so the findings of Sulivian and Caterino (2008) supported the present study with their findings. Their finding was that adolescents with ASD are to develop healthy behaviour and gain some understanding of the physical and emotional changes they encounter in adolescence and adulthood, so specialized sexuality education is needed. This study also supported the findings of the present study.

Sigman et al (1992) found the fact Autistic Children were as hesitant in approaching and playing with a robot as normal children raised the possibility that their behaviour may have been influenced by the demonstration of fear even if they did not attend visually to this demonstration which is support to the present study.

5.4.0. IMPLICATIONS OF THE RESEARCH

Research institution, special school and policy maker, government and non-government organization can use this study to implement educational needs of children with autism spectrum disorder in special school for better education, present study also give insight to special teacher to train children with autism spectrum disorder according to their needs. Educational needs of children with autism spectrum disorder can be implemented in special schools as support of curriculum based study. Different special institution can be used study to impart proper education to children with autism spectrum disorder. This research study can be used to check out policies and strategies for special education governing body rehabilitation council of India.

5.5.0 SUGGESTION FOR FURTHER RESEARCH

The study should be conducted to expand on the educational needs of children with autism spectrum disorder with specific age limits of the children with autism spectrum disorder.

Similar studies can be conducted with specific cultures in another state in India.

For an in-depth understanding of the children with autism spectrum disorder behaviour of the child and institutions, a case can be conducted.

A comparative study can be conducted on the educational needs of children with autism spectrum disorder abroad and in India.

A study integrated approach of children with autism spectrum disorder can be matched with 21st-century skills.

A study can be conducted on the educational needs of children with autism spectrum disorder in an inclusive schooling environment.

A comparative study can be conducted on the educational needs of children with autism spectrum disorder in rural and urban India.

The study can be done on a special (which is teaching Children with autism spectrum disorder) institutional survey in India regarding experience with children with autism spectrum disorder.

5.6.0 CONCLUSION

Education of children with autism spectrum disorder came out after the discussion activity for daily living should be, communication, socialization, social support in society, cognitive and sensory therapy, recreational, and vocational needs, survival behaviour, unusual behaviour, sex education, and parental stress. It was perceived from the findings of the present study the real meaning of education. Most parents do not need any high standard of education for their children; 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.
