

CHAPTER

2

**EDUCATION AND CONTEMPORARY MANAGEMENT
OF AUTISTIC CHILDREN IN NIGERIA**

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Introduction

Advancement of man, which produces positive development to his /her environment, is called education. Education is meant for man and to develop the society. Bello (1991) asserted that the process of learning to live as a useful and acceptable member of the community to which one belongs and any other community that one may find himself. This goes down to the importance of education to any society, since education is meant to be the responsibility of any citizen to develop the nation he/she belongs. But for each citizen to fully contribute to his/her nation, the individual must be adequately educated; hence education is taken to be the most important means of developing human resources for national development. Wikipedia (2006) defined education as a social science that encompasses teaching and learning specific knowledge, belief, skills, which gives the individual a foundation for the achievement of personal fulfillment. In essence the continuous existence of a country depends largely on the quality of education provided by such a country.

It is imperative that an autistic child has a lot to contribute to the development of the nation and herself. Consequently, the expected contribution will be marred if an autistic child is not educated. Therefore, there is the need for quality of access to qualitative education for an autistic learner both in the school and

other medical or clinical settings, since education is man oriented and it is meant for man. Autistic children requires comprehensive education after their diagnosis and it is better done early in life with good management and appropriate treatment, in order to acquire skills, that will empower the autistic learner for life, to live as a self fulfilled person in the society, irrespective of their various backgrounds. This accounts for the reason why the Nigeria government made it clear in the National Policy on Education (2013), (1998) (NPE); that education is an instrument per excellence for effective development. The Nigeria Government perceives education as a means of giving the citizens tools for effective functioning as individuals and social beings. There is no need to forget the autistic children in this perspective, hence the need for a comprehensive management and education, as to integrate them fully into their society.

Essentially, education is a vital tool that is needed for the formation of minds from childhood to adulthood, in a well designed environment, whether classroom or clinical situation where adequate learning and acquisition of skills can take place for the actualization of the individual, the society and the nation at large (Bello, 1991). Autistic learners require accessibility and accommodation in our schools and society and demanded adequate management.

Management is a plan of action, meant to assist the individuals to overcome his/her learning needs despite the challenges the individual is faced with. The Oxford Advance Learner's Dictionary (2014) explains management as to succeed in solving one's problem. Autistic children as individuals have many problems which must be tackled properly with information and knowledge, hence the focus of this chapter of the book is to identify the related contemporary (modern) skills and therapies used for remediating speech, language and communication disparity common with autistic learners as well as methods used in teaching and educating autistic children as to restore them socially into the society and promote self dependency.

HISTORICAL BACKGROUND AND BASIC CONCEPT OF AUTISM/ AUTISTIC LEARNER

Leo Kanner (a medical doctor) in 1943 at the John Hopkins University in Baltimore discovered the condition when he was working with schizophrenia patients and alongside in the same 1940s, a German Pediatrician by name Hans Asperger also discovered a withdrawn behaviour among his patients, which is now known as Asperger Syndrome. This implies that for decades in the United States, Autistic children have been known, but it has been growing and recognized recently in Nigeria. Autism emanated from the Greek word "autos" meaning "self", lonely, isolated, withdrawn, social apathy. For century, it has been used to describe condition in which people cannot engage in social interaction. Although the a condition or disorder sometimes, is often erroneously mistaken for intellectual disorder (mental retardation), or schizophrenia (mental illness) because the affected person exhibits some similarity of characteristics and behaviour.

The Individual With Disability Education Act (IDEA) of United States define Autism as a developmental disability, significantly affecting verbal and non-verbal communication and social interaction, usually evident before age three years (3 years), which adversely affects a child's educational performance. Sullivan (1994) remarked that autism is a severe disorder of communication and behaviour, a lifelong disability that typically appears during the first three years of children's life. Some can speak, while some cannot throughout their life hence require speech management apart from other behavioural disorder therapies. Essentially, communication, behaviour and social interaction are common in the definition. Hence it requires skillful management and treatment.

SYMPTOMS/CHARACTERISTICS

In early infants, the early signs are inability to want cuddling, lack of eye contact or abnormal responses to touching and affection. Other early signs include inability to follow objects visually, not responding to one's name when called, lack of facial expression such as smiling. However, some children with ASD develop normally until the age of one or two years (1/2 years), then they stop learning a

new skill or lose the ones they already possessed and learned.

Gbegbin and Raji (2004) listed the following characteristics of Autistic children as identified by the National Information Center for Children and Youth with Disabilities.

Communication problem such as using and understanding language. Profound inability to use language in a normal way, difficulty in relating to people, objects and events. Difficulty with change in routine or familiar surroundings and repetitive body movement or behaviour patterns called stereotypical behaviour.

These behaviours vary in severity and manner from one autistic child to another and all require adequate management.

CLASSIFICATION OF ASD

There are three main classifications:

(1. Autistic Disorder

This is considered the classic form of autism. Patients usually have significant delays in language, social skills and they have unusual behaviour and interests with measurable intellectual disability.

(2. Asperger's Syndrome

This is usually a milder form of autism. Patients have delay in social abilities and communication skills, unusual behaviours and interest. However, they may have a specific interest that encompass much of their time and thought. They may spend much of their time devoted to a hobby such as trains, computers or cars toy. They usually do not have issues with language skills or intellectual development. Many of them are intelligent when it comes to their own special interests. They are called little professors in their area of interest by experts. They may be near genius in intelligent quotients (IQ).

(3. Pervasive Development Disorder

This is also called atypical autism or not otherwise specified. This category meets few of the symptoms for any of the criteria for classic autism or Asperger's Syndrome with milder symptoms, and may experience social skills delay and communication (Center for diseases control) and prevention <http://www.cdc.gov/ncbddd/autism/factshtml-August2014> retrieved.

CAUSES OF AUTISM (ETIOLOGY)

Majority of people assumed the causes to unknown, but neurological and bio chemical imbalance of the brain. Recently, it is widely believed that people with ASD have difficulty in eliminating toxic chemicals from their body. Therefore, exposure to environmental contaminations could play a significant role in poor neural development or brain function processing.

It appears however that genetics, environment and interaction of a child's physical and psychosocial environment, play an interrelated role in the possible causes of ASD. This can be indicated in the high incidence of twins with autism and genetic siblings, who have the disorders.

Other causes include parental old-age (advanced age), low birth weight, and multiple birth's; viral infection, such as the flu in the first trimester, bacterial infection such as urinary-tract infection in the second trimester. All these can increase the risk of ASD by 40%. Essentially, environmental toxins and genetics hold better clues to the increase in prevalence; although, this is yet to be empirically proved, because no specific environmental toxin, has been indentified, but vulnerable chemical varieties especially the ones that may harm foetus, include organophosphate, insecticides, mercury exposure, chloropyrifos and heavy metals.

STATISTICS

Currently, the number of children diagnosed with ASD has increased almost ten-fold in the last 40 years, and it is assumed that one in every 88 children is diagnosed with autism. The United States Centre for Diseases Control (CDC) estimated that one in 150 births as against 160 children; about hundred and ninety thousand children are with autism, going by CDC estimates. However, in United States, more than 2 million people are affected worldwide.

In Nigeria, Autism experts believe that, there may be more autistic children in Nigeria than in Britain or America, since many parents and individuals, are not aware of how it steals our children, even till date. According to the organization "Autism speaks"; ASD affects more children than diabetes, AIDS or cancer, combined. It affects more males than females in ratio 8 to 4.

However, by gender, one can break it down to have five times more males, one in fifty four (1:54) than females, one in two hundred and fifty two (1 in 252), as the affected populace.

PROBLEMS

They have social problem/interaction. They have communication problem. Some may only babble words or utter single words as sentence e.g. water for I want water, and sometimes speechless, wave hand and use hand to demand objects and signs. They have eating behaviour problem. They have poor diet quality and may accept only food of one colour and reject others. Among the challenges of ASD patients is poor diet quality, because of sensory processing problem and feeding disorders. 49% to 89% of patients with ASD experience some kind of problem in this eating behaviour. In fact, some feeding difficulties revolve around changes in the routine. They may refuse to eat because they are not sitting in a particular place on the table, cloth of the table that is changed, or like to eat the same food daily. The slightest change in routine can cause a tantrum (annoyance) or refusing to eat totally. They sometimes smell everything given to them including objects. Anyone with offensive odour will be thrown away. Other issues may occur in the area of sensory processing, such as if ASD child is hypersensitive to sounds, he may not want to eat in a noisy area, or with others who engaged in conversations. In case it is visual sensitivities, they may accept foods only of certain colors. They may also not eat foods that are touching on their plate. Some children are sensitive to the way the foods feel in their mouth. They may avoid crunchy food or that is sticky in the mouth. They sometimes have digestive problems. The way food smells can cause similar reactions, and taste problem can be indicative of autism characteristics; inability to recognize certain taste and can distinguish between others, hence they avoid several types of food.

Benetto and colleagues' study, showed that children with ASD were less able to accurately identify sour or bitter taste, but could recognize salty and sweet taste. They may avoid proteins, but accept food in the carbon hydrate group. About 65% are said to be non-right handed, while some that are hypersensitive to sound are said to be disgraceful.

MANAGEMENT

Currently, there is no known cure for autism as it persists throughout the individual's life but some of the characteristics features related to the disease/condition can be reduced to the barest minimum with commitment medically using therapy, education, speech rehabilitation and appropriate residential programmes.

Medically, autistic children sometimes experience digestive symptoms and the use of probiotics (yeast), antifungal and digestive enzymes to curb abdominal pain, bloating, gas, constipation, vomiting, nausea, diarrhea, and gastro esophageal reflux diseases that many ASD patients experience.

Early behavioural, cognitive or special interventions can help autistic children gain self care, social and communication skills.

Not many children with autism live independently after reaching adulthood although some may be successful with adequate therapy and education. There are no specific drugs to treat autism, but special education and training curriculum system improve prognosis. Autism affects information processing in the brain by altering how the nerve cells and their synapses connect and organize. In essence, school and classroom environments play a central role in children's development and interactions. Within these contexts are critical to our understanding of student success. A positive teacher and student relationship have been found to be associated with student's social and emotional well being, coupled with academic performance and sense of trust and connectedness. Applied behaviour analysis (ABA) (NICHCY 2003) which is based on scientific principle using reinforcement, prompting, shaping, chaining and modeling are handy for special educationist to manage the autistic children in the home and classroom.

SITUATION

Kaucher & Eggen (2008) explain classroom management in terms of time management, as to optimize learning and be able to divide class time, into overlapping four categories namely allocated time, instructional time, engaged time, and academic learning time; while there is also classroom behaviour management of the child and teacher behaviour in classroom situation involving organization of

physical environment and the daily schedules, organization of the curriculum and individualized instructions, evaluate learning and communication outcomes of instruction to others are all components of classroom management.

The skills to be learnt in the class are to be broken down to the smallest tasks and taught individually. It may take place in the home, school or special pre-school. It can be used to teach eye- contact, imitation of fine motor skills and gradually to learn more complicated skills as each smaller one is mastered. This is called Discrete Trial Instruction (DTI).

The classroom location setting for autistic children need not to be distracted by noise since they are sensitive to sound. Whenever need be, they need to play and enter learning situation at intervals. The classroom should contain all the necessary materials and equipment such as tables, chairs, desks, chalk board, computer and computer monitors, books shelves, television, radio tape recorders with earphones, resting area and bathroom with shower should be available in the school area and all the facilities need to be well fenced. (Karen, 1998).

Karen (1998). The first few days of the autistic child in school/clinic should be one of observation of each child's interests, needs and strength for learning as the child wanders around the classroom or clinics.

Karen (1998) from her experiences in class teaching of autistic children stated that morning session is the best time to engage the autistic children in cognitive and affective learning. She listed ten (10) top priorities as follows:

- (1. Pursue early behavioural medical intervention including item and accurate diagnosis.
- (2. Take tough love approach with the student, stressing both firmness and affection in the context, establish an absolute consistency of expectations.
- (3. Extend the instructional domain to everywhere the student goes, cafeteria, bathroom, play ground, music room, classroom etcetera.
- (4. Make sure staffs attend to tasks in all areas, if for short periods at first. It is the basic for all future.

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- (5. Speak clearly concisely at all times to guarantee comprehension, monitor and adjust your verbal presentation, if you are not connecting.
- (6. Ignore counterproductive attention getting behaviours but reward compliance with simple praise.
- (7. Be firm but fair in making sure the student carries out directives, even if it requires providing assistance. Do not begin a task you cannot complete.
- (8. Delegate authority to more than one caregiver, all of whom must be clear on designated behaviour intervention.
- (9. Constantly challenge the student to learn new skills, while continuing to address lingering deficits.
- (10. Exercise at all time the planning, patience and perseverance.
- (11. Involve other professionals such as occupational therapist assisting to improve on poor hand skills and other sensory problems. Essentially, cooperation with parents is a vital aspect of managing autistic children.

THE USE OF INDIVIDUAL EDUCATION PROGRAMME (IEP)

Nwazuoke (2004) attested that IEP is a road map for special education instruction which spells out where the students are presently, where they are going, how they are going to get to the place, how long it will take them and how to indicate when they have arrived there.

IEP consideration and writing depending on identifying the child, setting up goals that are broken down into manageable tasks and are measurable. Indicate when the service will begin and when it will end; and how regularly the service will be rendered, duration of the services and location where it will be provided and evaluated. Parents must be notified of the progress.

IEP involves different experts including the parents in diagnosis, planning and implementation and is very helpful for autistic children.

Karen (1998) suggested the following considerations: -

- (1. Teach skills to students the need to function successfully in the environment.

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- (2. Emphasise the use of age appropriate material.
- (3. Teach life skills in the natural settings where they occur such as parks, restaurants (canteen) grocery stores (supermarket) street, buses and so on.
- (4. Teach skills using the actual material like (money).
- (5. Design educational programmes and goals so that assessment data is collected efficiently and charted daily.

Other techniques of management include speech and language therapy and feeding remedies. One can use feeding team like dietician, occupational therapist, behavioural therapist, speech and language pathologist to access habits that may be hindering food intake. Highly refined food can also lead to eating behaviour problem, because it may contain artificial dyes and preservatives which may aggravate behavioural symptoms hence family should eat natural whole food.

Food dyes and artificial colours as additive may be linked to hyperactivity, breathing disorders, skin eruptions and gastrointestinal symptoms. Both non-ASD patients and for those with ASD they have problems of eliminating foods that contain these substances and can be use to assess patients reaction.

- Artificial flavourings, sweeteners, such as saccharine, naptime, accesulfane and aspartame may cause headaches, mood changes, nausea, vomiting and diarrhea in ASD population.
- Artificial preservatives can lead to hyperactivity also. Therefore, removing foods that contain these substances may be beneficial.
- Patients need to be screened for nutritional deficiencies that can result from the medication they take. Medication can even affect appetite, causes nausea, vomiting, hard stool, diarrhea, constipation, weight gain/loss, sedation, drooling, esophageal reflux and dyspraxia and can negatively affect feeding status of patient.
- Dysphagla lead to decrease food intake for fear of choking, while swallowing, constipation can lead to decrease in appetite.

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Supplementation is another aspect of treatment for ASDs. This supplementation may include multivitamins such as omega-3 fatty acid, vitamin D and B6, magnesium and other nutrients. However, beginning multiple supplements at a time may impede the ability to determine what is working or not, in ASD patients, so gauge the effectiveness of one before using another supplement.

- Starting one supplement at a time whether there is an improvement in symptoms or not need to be ascertained.
- ASD patients needs to follow the least restrictive regime possible, while identifying symptoms improvement.
- Use of multivitamins without colour or flavours can help offset limited dietary preferences and poor nutritional intake. Some prefer liquid to swallow pills or chewable form, so determine the patient's tolerance as to find the right multivitamin.
- Omega-3 fatty acids is beneficial to brain development and proper neural function, as research has shown with a 5gram daily of omega-3 fatty acid recommended.
- Vitamin D protects against DNA damage and can help to repair any damage that has occurred.
- Reduce environmental toxins as to reduce oxidative stress.
- Other supplements include Glutathione to detoxify and protect oneself against oxidation damage.

- Dimethylghyanis further improve language skills and the ability to make contacts. Probiotics, antifungals and digestive enzymes are common treatment for the abdominal pain, bloating sometimes experienced by ASD patients. Speech therapy and language management can be employed using peer games, card play, piano play, music and dancing, games and activities that are fun driving, to motivate speech and language skills is necessary.

As a speech pathologist, management of communication, language and speech is important to the writers and it can be medical, educational or therapy oriented. The major concern of educators and

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clinicians is to affect behaviour. The pathologist must re-arrange communicative relations between the speaker and their listeners. The clinicians manipulate appropriate communicative behaviours. Speech therapy is both play and fun. The oral play is presented as a funny thing, while the child is encouraged to watch, imitate and gradually become a little braver and more cooperative. There are highly structured play with rules, such as board games, card games, puzzles, hide and seek, "spy" type of games, following the conventional rules. The child, parents and therapist, may be involved in game or therapy sessions, such as word endings with "K" sounds, car races, free play, with little structure and few rules, as to provide opportunities for adults to model target sounds, words or language structure. Helping the child to hear and say sounds, syllables, words and longer utterances, is the work of speech therapist, and different methods can be applied as to improve patient's speech and communication. The patient can play piano, and take note and attentions to rhythm, songs, music and recorded sentences on tape recorder even the speech of the client can be recorded for play back and evaluation.

There may be oral placement therapy, non-speech oral motor exercises; muscles based therapies, oral-motor work, depending on the need of clients. Mirror glass can be used to model sounds, words or speech/sentences. The patient may suck thickened drinks with straws; blowing of cotton, balls, feather, cow horns, whistle, windmills, biting of tongue/waggles, and experiment with articulators and sounds exploratorily. The client can chew rubber objects, chewing gum or mouthing plastics, leaking of peanuts, butter and other foods from around the mouth. Patients can play with oral motor tools and toys, with a variety of intervention techniques such as traditional production treatment, using call and say with pictures cards, action picture, cards to stimulate more mature vocalizations and connecting it to meaning that can be used to communicate consistently. Therapy can involve variegated babbling or duplicated babbling and other muscle exercises. The technician manipulate various objects, pictures, toys and other stimuli that might set the stage of speech and language rehabilitation for individuals with speech delays; while the child imitate the models of

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the clinician either via prompting, peer collaborations or group activities, until desirable response is recorded/achieved, with autistic patient.

More so, the need to involve the family and other significant persons in the home is crucial for success and support system. The fundamental modes of treatment must involve:

- a. Evoked communication behaviours
- b. Create non-existent communicative behaviour
- c. Increase existing communicative behaviours
- d. Strengthen and sustain communicative behaviours.
- e. Control undesirable behaviour
- f. Use evoking procedures which include instructional modeling, prompting, shaping, physical stimuli; and it is a continuous process, involving diagnosis, treatment and evaluation of task. (Lerner, 2010) presented it as a cycle. The target objective(s) must be in the IEP, and treatment should begin with auditory stimulation, speech organ exercises, using motor kinesthetic training, expression and repetition of rhythms, rhymes, songs and monotonous/nonsense syllables and words, using varied tones of babbling and sound labeling.

The autistic patient needs to be trained in the production of correct phonemes, morphemes and syllables as well as correct articulation disorders. Mirror can be employed to shape the mouth and place, manner of sounds/speech productions. Environmental experiences, cards and pictures and events are synonymous for teaching client in speech sessions.

CONCLUSION.

Invasion of technology has introduced numerous diagnostic machine and equipment to assist learners with autism in the management, diagnosis and early intervention which can enhance efficient services and supportive remediation.

In short, Quantum analyzer can locate the minerals or vitamins that is lacking in individuals while Atomic Absorption Spectrophotometer (AAS) machine is available to drain some excessive minerals/toxin. Similarly hearing problems can be

detected with auditory evoked response machine as early as six months of age. Cochleography, tympanogram, middle ear analyzer, electro-analysis, and voice synthesizer are all available equipment for diagnosis and support Hearing Aids, modulators and attenuators are handy for training of speech. Currently, there is no known cure for autism as it persists throughout the individual's life. But the characteristics future of the disease can be reduced to the barest minimum with appropriate educational intervention and residential programme.

However, it is on record that the governor of Nasarawa State, His Excellency Tanko Almakura is building a government residential school in Keffi, near Abuja to cater for the need of Autistic learners. Essentially, dealing with autistic children requires the best of special educators, parents, and those relevant to their cause must collaborate and be committed to solve the autistic problems. They require skillfulness, patience, painstaking, and ability to empathize, because of their short attention span, inability to comply with instruction on other issues that are complicated. Nigerians should be much concerned about autistic welfare. Since they are part of the society that need to be self fulfilled and contribute their quota to nation building and development.

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