



Adolescent Autism in Nigeria: Prevalence, Factors and Recommendations

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ABSTRACT

Background: Autism in adolescence is a common disorder within and beyond the shores of Nigeria. It is therefore imperative to review their peculiarities and plausible approaches as have been proven effective at this time for easing the burden.

Aims: To establish the magnitude of adolescents with Autism Spectrum Disorder (ASD), specific problems associated with ASD in adolescents, and the impact on their academic performance and quality of life with a focused look on school-based interventions applicable in Nigeria.

Methods: A review of existing literature over the last 10 years from Google Scholar and Pubmed.

Results: There is a high prevalence of ASD in adolescents and the underlying factors are complex and interrelated. Available studies have shown the disorder's impact on various aspects of academics and social life. Evidence-based interventions have been explored to improve outcomes.

Conclusion: There is sufficient indication of a large burden of autism in adolescents. Thus, research in this field must be expanded towards improving general education for adolescents with autism, as well as the inclusion of programs targeted at meeting the individual needs of these adolescents.

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INTRODUCTION

Autism spectrum disorder (ASD) can be defined as a pervasive neurodevelopmental state characterized by distinct behavioural patterns. In line with the Fifth Edition of the Diagnostic and Statistical Manual of Psychiatric Disorders-Text Revision (2022) (1), the central clinical features of ASD include impairments in two main areas of functioning i.e. social interaction and communication, as well as noted repetitive behavioural patterns, activities and/or interests. In the ICD-10 (2019) (2) it is defined as abnormal development before the age of three years, as seen in at least one out of the following areas: (I) use of expressive language in social communication; (II) development of selective social attachments (III) aptitude for symbolic or functional play with repetitive and restrictive patterns of behaviour.

The increasing recognition of this disorder, its emotional impact on affected families, and the challenging monetary demands associated with treatment and support currently make ASD an important illness at the scientific, clinical, and public health levels (3). This is made further so by the fact that though treatment modalities for ASD have significantly improved over the years, the disorder remains incurable (3).

The idea that ASD may be confined to highly industrialized and developed countries has now been debunked. ASD is now universally recognized as a neurodevelopmental disorder that can occur across borders (4). Yet, research on ASD in sub-Saharan Africa remains sparse and limited, despite the rising prevalence of the disease in Nigeria and worldwide.

With improvements in under-five mortality across

Nigeria and other sub-Saharan African regions, it is expected that there will continue to be a steady rise in the numbers of children and adolescents, as well as adults, living with neurodevelopmental disorders, autism inclusive (5).

THE BURDEN

In a school-based epidemiological study conducted in mainstream schools in Southeastern Nigeria (both primary and secondary) by Chinawa et al in 2016, the prevalence of ASD was documented as 2.9% amongst those between the ages of 3 and 18 (6). In another study by Bakare et al conducted at a special school for children with developmental disabilities, a prevalence of 11.4% amongst 44 was documented (5). The same authors established at a mental health clinic in the same region a prevalence of 0.8% amongst a total of 393 children who attended the clinic within a timeframe of one year (5). In the Southwest, a study done by Lagunju et al (4) revealed over a six-year span a prevalence of 2.3% of 2,320 children seen at pediatric neurology and psychiatry clinics.

In Nigeria, adolescents with ASD are often identified later in life when transitioning to secondary schools as this constitutes a more challenging environment. ASD may also be noticed at times of severe illness when families are likelier to seek medical attention (as health-seeking behaviour is generally poor) (7). This failure of early identification often results in deprived social integration, lack of intervention, and reduced quality of life.

The findings of this review highlight the need for further population-based studies to better define the epidemiology of ASD in Nigerian adolescents.

FACTORS INVOLVED

Several reports have documented possible factors that may be responsible for the late presentation of Nigerian children with ASD. These include predominantly stigma, ignorance about the disorder, cultural practices, paucity of trained personnel, inadequacy of healthcare infrastructure, poor access to healthcare, as well as financial and psychological factors on the part of parents/ caregivers (5).

The burden of stigma associated with having a child with autism is often so great that people attribute the disorder to angry ancestral spirits, a grave sin committed (which is more often than not blamed on

the mother), or a curse of the devil (5). It is thus commoner for children with autism to be seen by a religious healer at first signs of neurodivergence than to present at a health facility.

Additionally, health insurance is unavailable for most Nigerian parents/guardians, and if at all available, in most cases it is unlikely to suffice for long-term care. This mandates out-of-pocket costs which many in the economic landscape of the country cannot afford. Therefore, a mixture of these factors stands to prevent many children and adolescents with ASD from seeking any form of medical intervention at all or till late adolescence (5).

SPECIFIC PROBLEMS

Adolescents with autism are prone to social and academic setbacks in comparison to their peers.

In a study done by Shochet et al in 2022, compared to neurotypical children, those with ASD experience a higher risk of developing mood/anxiety disorders due to deficits in communication and interaction ability. The prevalence is estimated to be as high as 54%. More than half of adolescents with ASD battle with comorbid anxiety or depression, especially in early adolescence. If left untreated these depressive/anxiety symptoms, whether clinical or subclinical, will often abide into adulthood (6).

Keen, Webster, and Ridley found in their comprehensive review (8) that when it comes to academics, adolescents with ASD exhibit a high degree of variability across the spectrum. They analyzed performances in specific domains such as writing, reading, etc. to establish a pattern. Reading, writing and oral language proficiency were found to range between average to poor, while mathematical aptitude for adolescents with ASD was more often than not average.

Beyond the scope of social and academic issues, it was also observed in a 2014 study by Lagunju, Bella-Awusah & Omigbodun (4) that the diagnosis of ASD in Nigeria and indeed sub-Saharan Africa at large is rarely made exclusive of intellectual disability. This further worsens both of the aforementioned problems in academic and social settings. Other common comorbidities observed in Nigerian children and adolescents include attention deficit hyperactivity disorder, seizure disorders, and in some instances self-injurious behaviour (8, 9)

RECOMMENDATIONS

It has been found that long-term outcomes for individuals with ASD depend heavily on adequate educational intervention and services during the adolescent period (9). Thus, urgent care must be provided to them with the necessary support to improve interaction and communication skills during this period of development. While parental interventions have been deeply researched and discussed, interventions delivered in the school setting by instructors (teachers) also produced strong results in a meta-analysis conducted by Watkins et al (10).

In Watkins' study, educational service providers were first taught to identify children with the disorder and manage challenging behaviours (10). Appropriate training was done to enable instructors to identify the individual specific needs of such a student and to address negative counterproductive attitudes in their environment such as bullying (10). A succinct screening tool with precise autism spectrum disorder indicators was administered and the potential for self-harm or worsened social isolation was also identified and relayed to parents and appropriate health service providers. This resulted in improved social outcomes for such adolescents, and such may be implemented even at the primary school level (10).

Depression prevention programs can likewise be implemented to improve depressive symptomology for targeted adolescents (9). This is especially feasible in the rapidly awakening age of mental health consciousness. Cognitive-behavioural therapy as conducted by a trained school-health practitioner can also be used to cater to the anxiety that these adolescents are prone to (5).

Generally, a stronger sense of school connectedness evidenced by peer and staff support, and greater academic engagement has been associated with reduced depressive symptoms, increased self-esteem, improved optimism, and lesser paranoid tendencies, social withdrawal, and loneliness (9).

It is also recommended that parents and professionals advocate for the development of autism-friendly policies by legislatives that aim at raising community awareness to tackle negative stigma (8) as is so prevalent in the sub-Saharan African clime.

RESOURCEFUL ADOLESCENT PROGRAM FOR TEACHERS (RAP-T)

RAP-T is a program specifically tailored to increase

teachers' recognition of the value of inclusion, wholesome relationships and a sense of belonging in educational achievement and mental well-being. These characteristics are summed up in the term "school connectedness." The program seeks to promote this ideology by providing resources and strategies and simultaneously aims to help teachers manage their own stress.

RAP-T is delivered as a 2-hour intensive workshop for teachers and other school personnel. The program was adapted in 2016 to the Resourceful Adolescent Program for Teachers of Adolescents with ASD (RAP-T-ASD) to include additional information on the peculiar challenges facing adolescents with ASD in secondary education, as well as the peculiar challenges that teachers of such students may encounter (9). It also emphasizes the importance of "school connectedness" for these students to support academic success, prosocial tendencies, emotional well-being. It teaches teachers to identify and encourage students' strengths (9).

RAP-T-ASD is augmented with the Resourceful Adolescent Program for Adolescents and the Resourceful Adolescent Program for Parents for maximum efficacy (9).

Physical Exercise

Studies done by Huang et al (11) showed that communication, social interaction, and motor skills in children and adolescents with autism was significantly improved by physical activity. Therefore, the expansion of physical education in the curriculum which is lacking in many mainstream Nigerian secondary schools would be a major improvement in the care of adolescents with ASD.

Hence, it appears that the school-based, multilevel intervention offers a feasible and sustainable approach for improving symptomatology and outcomes in the autism spectrum. Favourable feedback from participants and facilitators has indicated that this framework is workable in any basic school culture (9) and would likely be well-received in the Nigerian educational setting.

CONCLUSION

Autism spectrum disorder amongst Nigerian adolescents is not an uncommon disorder. Several factors including financial constraints, social stigma,

sociocultural beliefs, and ignorance have contributed to poor outcomes for Nigerian adolescents on the autism spectrum.

Much more work must be done in researching and implementing positive strategies to help improve the academic and social well-being of adolescents with ASD, as well as their general well-being. Optimizing school environments, both mainstream and specialized, and equipping staff to cater to neurodivergent needs will improve the quality of life of these adolescents beyond parental or familial interventions alone, and

in turn, produce more functional and well-rounded adults for society.

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REFERENCES

1. American Psychiatric Association. Diagnostic and statistical manual of mental disorders: DSM-5. 5th ed. Washington, D.C.: American Psychiatric Publishing; 2013.
2. World Health Organization. The ICD-10 Classification of Mental and Behavioural Disorders. Genève, Switzerland: World Health Organization; 1993.
3. Ruparelia K., Abubakar A., Badoe E., et al. Autism Spectrum Disorders in Africa: Current challenges in identification, assessment, and treatment: A report on the International Child Neurology Association meeting on ASD in Africa, Ghana, April 3-5, 2014. *J Child Neurol.* 2016;31(8):1018-1026. doi:10.1177/0883073816635748.
4. Lagunju I.A., Bella-Awusah T.T., Omigbodun O.O. Autistic disorder in Nigeria: profile and challenges to management. *Epilepsy Behav.* 2014;39:126-129. doi:10.1016/j.yebeh.2014.08.020.
5. Bakare M.O., Taiwo O.G., Bello-Mojeed M.A., Munir K.M. Autism Spectrum Disorders in Nigeria: A scoping review of literature and opinion on future research and social policy directions. *J Health Care Poor Underserved.* 2019;30(3):899-909. doi:10.1353/hpu.2019.0063.
6. Chinawa J.M., Manyike P.C., Aniwada E.C., et al. Prevalence and socioeconomic correlates of autism among children attending primary and secondary schools in South East Nigeria. *Afr Health Sci.* 2016;16(4):936-942. doi:10.4314/ahs.v16i4.8.
7. Eziakaku U.N., Murphy G.H., Mensink A.-M., Moonen X., Langdon P.E. Using the consensus group method to select the best screening tools for autism and intellectual disability for use with Nigerian adolescents. *J Policy Pract Intellect Disabil.* 2023;20(4):342-358.8.
8. Shochet I.M., Saggars B.R., Carrington S.B., et al. A school-based approach to building resilience and mental health among adolescents on the autism spectrum: A longitudinal mixed methods study. *Sch Ment Health.* 2022;14:753-775. doi:10.1007/s12310-022-09501-w.
9. Keen D., Webster A., Ridley G. How well are children with autism spectrum disorder doing academically at school? An overview of the literature. *Autism.* 2016;20(3):276-294.
10. Watkins L., O'Reilly M., Ledbetter-Cho K., Lang R., Sigafos J., Kuhn M., Lim N., Gevarter C., Caldwell N. A meta-analysis of school-based social interaction interventions for adolescents with autism spectrum disorder. *Rev J Autism Dev Disord.* 2017;4:277-293.
11. Huang J., Du C., Liu J., Tan G. Meta-analysis on intervention effects of physical activities on children and adolescents with autism. *Int J Environ Res Public Health.* 2020;17(6):1950.