



Incidence of Autistic Characteristics, Teachers Training, and Perceived Self-efficacy for Providing Early Intervention for Children with Autism Characteristics

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ABSTRACT

The incidence of autism characteristics is on the increase. Teachers' level of self-efficacy and preparedness for providing appropriate education has the potential to improve inclusive education services for children with autism characteristics. The main thrust of the study was to determine incidence of autism characteristics, teachers perceived preparedness and teacher's self-efficacy in providing early intervention services for children with autism spectrum disorders(ASD) characteristics in Delta and Imo States. The study used a quantitative survey design. Questionnaire was used to collect data from 38 teachers drawn from two tertiary institutions-based staff demonstration schools. Data was analysed using descriptive and inferential statistics. The result indicated that that there is high incidence of autistic characteristics in the classrooms. Teachers training and class taught have more impact on levels of self-efficacy in providing early intervention services for children with ASD but 60.53% of the respondent reported not having received any training on early intervention for children with autism characteristics. The study contributes to knowledge on the need to train all regular teachers on how to provide early intervention for children with autistic characteristics. Type of training a teacher received impacts on their self-efficacy for service delivery in related areas. Based on the findings of the study, it is recommended that early childhood education teachers should be retrained on how to manage learners with autism characteristics.

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INTRODUCTION

Early identification and intervention as well as collaborative specialist care services, which facilitate positive outcomes, are evident in the preparedness and management of learners with special needs in developed nations (Eskay, & Oboegbulem 2013). Learners with autism are part of this group of learners. However, dearth of relevant literatures studies and data, teachers' preparedness for their education, limited knowledge among health care providers, poor community awareness, limited facilities and a

dearth of specialist care services are some of the challenges confronting autism in Africa. Assessment of the knowledge of autism and challenges encountered in its management among teachers would help in addressing issues confronting the disorder.

There is need for good level of preparedness and resource in schools' settings so that it would promote awareness, facilitate early diagnosis and intervention, and improve quality of care and outcomes in educating children with autism. In fact, studies on autism from Nigeria,

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including that of Onyisi, Okpoko and Victor-Aigbodion (2025) indicate a low level of autism knowledge, and awareness even among teachers and other professionals in related sectors. Majority of researches have not reported much on incidence and teacher's self-efficacy for intervention. Their knowledge and preparedness on autism, in any setting is crucial to the provision of optimal services and reduction of the burden associated with autism.

The importance of education and training for all has been fully established in both advanced and developing countries (Nsiah-Peprah, 2004). Platt (1961) in his model of education as a contributor to development argued that when people are educated, they are able to search for existing technologies, generate new ones and examine physical resources to identify their productive capabilities. It is the responsibility of every society to educate its own children to acquire the skills knowledge attitude necessary for the children to survive in that particular society. This appropriate education should start from the early childhood years. This is because the early years according to Osanyin (2012) and Odili (2004) are the most important years for growth and development.

Brain research like that of Terrace and Site (2009) have established that the most rapid development of the brain occurs in the first few years of a child's life. Early intervention can therefore be defined as education given to a person from birth to adolescence. However, in Nigeria, education from birth to around Lower Basic 3 is usually referred to as Childhood Education. This can be divided into early childhood education (0-7 years) and later childhood education (8 years – Adolescence) although the United Nation Convention defines a child as every human being below the age of 18 years (UN, 1990). The Nigerian political rule of law therefore adopts 18 as the age when the individual should be able to fend for himself or live on his or her own.

Educational opportunities are the available chances created by the parents and government of any country for its children to be educated (Edwin, 2000). As far back as 1978 the Federal Republic of Nigeria in The national policy

on Education stated that: Government shall direct its policy towards ensuring that there are equal and adequate educational opportunities at all levels. In the same vein the convention on the rights of the child made free and compulsory primary education an obligation of the state and the right of all children. The convention states specifically that every person shall be able to benefit from educational opportunities designed to meet the basic learning needs. Consequently, item two of the millennium Development Goals (MDGS) adopted by the United Nations in 2000, proposed that by 2015, children of educable age should have free, affordable and accessible education (Ajayi 2018).

Item 4 of the sustainable Development Goals (2015) ensures inclusive and equitable quality education and promotion of life-long opportunities for all (Anyanwu, & Opara 2024). This SDG supports inclusion which, is the active participation of group children with certain disabilities and typically developing children in the same classrooms and community settings, (Micet, 2022). Mainstreaming which is helping those with special needs meet the existing exception of the classroom and integration which is the placement of children with special needs in the education programme. The Nigerian government, in the National Policy on Education promises to provide appropriate education for children special needs including those with autism as stipulated in section 10 pg 36 of the policy. In accordance with prevailing government policy to provide equal education opportunities for all children, the FGN (2014) stipulated that it will provide: Adequate education for all learners with special needs and diversified and need-appropriate curriculum for all persons with special educational needs.

Learners with autism disorder present a variety of symptoms that range from mild to severe (Anyanwu, Onwubiko, & Egwim, 2023; Osborn, Gill, Cherney & Seladi, 2021 Ede et al 2020). According to the American Academy of Pediatrics (2003) they exhibit characteristics such as delayed speech, deficient social skills, difficulty adapting to change and other idiosyncratic interests, hyper-sensitivity to sights, sounds and differences between one child and another is



usually a matter of degree. The most important part of educating an autistic child is to ensure an optimal development of the child's capacities and personality. The teacher therefore needs to know the effect of autism on the child's learning capacity and general development. at the same time the teacher needs to have the competencies required for creating the best conditions for efficient learning and planning the sequencing of the child's learning. In all this, the importance of teacher motivation cannot be over emphasized.

Ginga and Kauru (2019) pointed out the positive role teachers' play in academic performance and retention of students with autism. Therefore, there is need to prepare teachers for attending to educational needs of students (Igabari 2022: Anyanwu,2017) including preparing them for students with autism and this cannot be overemphasized. Litton, Rotatori, Coombs-Richardson, and Martinez (2017) emphasized the need for preparing teachers through course work that will help them acquire evidence-based competencies for handling learners with autism. In Nigeria, the need to prepare teachers for individuals with special needs is recognized by National University Commission (2023). It released a document that listed inclusive education for young children with special needs as one of the compulsory course for pre service teachers in many departments. Gomez-Mari, Sanz-Cervera and Tarraga-Minguez (2021) reported that teacher's knowledge of autism is low generally and there are variations in this knowledge based on educational status, contact with learners with autism and prior training on autism related content.

Similarly, Preece, Odunsi an Garner (2017) conducted a research to determine Lagos state teachers' of understanding the concept of autism, they reported that teachers level of professional preparedness was still low as at the time they conducted the study. Similarly, McDougal, Riby and Hanley (2020) studied factors that impart on the learning of children with autism and found out that teachers training is part of the factors that can positively impact on students learning. The place of appropriate training of teachers for appropriate identification and

intervention for students with autism is stressed by many researchers (Eskay & Oboegbulem 2013, Sackville-Jones 2019, Taresh, Ahmad, Rolan, Marof & Zaid 2020). To attend to needs of autistic students, teachers need skills to identify them and label them appropriately (Taresh., Ahmad, Roslan, Marof, & Zaid, 2020 & Sackville-Jones 2019). They need skills to prepare the normal children to accept them in class and work with parents in the case (7,6, & Duerias, Wood, Maher & Sanchula, 2022).

There are implications that the level of teachers' preparation for teaching learners with autism in Nigeria is low. Flint, Hench and Salt (2014) observed that persons with autism in Nigeria are often not diagnosed or wrongly diagnosed. They equally observed that awareness and intervention for children with autism was still at a very low level in Nigeria. They tried to evaluate the effectiveness of a short training programme for teachers on structured instructional teaching intervention on autism.

Many Nigerian researchers have investigated teachers' knowledge and attitude to learners with autism spectrum disorders. An example is, Ekom-Idorenyin (2020), who studied attitude of teachers towards children with autism in Bayelsa State Nigeria. She used a questionnaire to collect information on her dependent and independent variables. Some have studied the impact of preparing teachers through training. Shatri (2017), studied impact of training and experience on teachers' attitude towards inclusion of learners with special needs in regular schools .The researcher reported that both variables had positive impact on teachers' attitude toward inclusion of persons with special education needs in the regular classroom. However, the research suggested that training should focus on how to make education more accessible to learners with autism. Similarly, Omolayo, Auta, Akinyemi and Dennis (2020) in their cross-sectional survey report said that teachers training and chronological age had significant positive relationship with their knowledge about autism, more teachers in their study sample were aware of the concept of autism. They stated the need to train more teachers on autism spectrum disorders.



Autism has been reported to be on the increase. One out of every 44 children in the us is diagnosed with autism spectrum disorder. Boys are four times more likely to present symptoms of autism than girls. In Nigerian situation, Adeniyi and Kuku (2018) reported that although the incidence of autism is on the increase in Nigeria, it is difficult to pin a definite prevalence rate on it. According to Ackah and Appiah (2018); Unegbu (2019); Anyanwu, Okezie, and Ihome (2018). Early childhood identification and intervention is an essential contributor and catalyst for the development of a culture of positive attitudes towards children with autism in a country like Nigeria. As Nigeria struggles towards attaining the quest for Education for All (EFA), the Millennium Development Goals (MDGs), and Sustainable Development Goals (SDGs) an integrated, inclusive and effective early intervention programme for children with autism becomes inevitable for children with autism. This would provide mutual benefits for children with autism, parents and families, educators and professionals and the society at large (Unegbu, 2019).

Successful inclusion of students with autism spectrum disorder (ASD) in general education classrooms can be challenging and may require additional supports for teachers. Thwala (2018), in his study explored the strategies that teachers use in including learners with autism spectrum disorders in the mainstream classrooms. This qualitative study draws on a purposive sample of 36 teachers who have experience teaching children with ASD within three primary schools that practice inclusive education and have rich cases of learners with ASD in Eswatini. Through the use of focus group discussions, individual interviews and observations data was collected on teaching strategies they employ in their teaching. Conventional content analysis was used to analyse data and result was thematically presented.

Teachers reported several strategies including: pictography, learner fixations, routine, motivation, and sitting arrangement. Conclusions are made that teachers in the mainstream classrooms have knowledge on some of the

strategies for including learners with ASD. However, the respondents believe they were not well equipped to implement these strategies. Respondents recommended frequent workshops for teachers on strategies to employ in teaching children with ASD in the mainstream classrooms.

Sharma and Rangarajan, (2019), observed that a majority of the studies they reviewed on teaching strategies for children with ASD in South Asia focused mainly on the following teaching practices: assessment, alternative and Augmentative Communication systems, and parent-implemented programs. They equally observed that, enough attention has not been given to the implementation of other best teaching practices.

Theoretical Foundation

The theoretical framework of this study is based on Bandura's social cognitive theory. This theory posits that self-efficacy beliefs are important predictors of behaviour and work performance. This study drew from theory and research on teachers' self-efficacy and perceived challenges in special education settings. The study considered the role of self-efficacy, perceived level of training as a challenge in helping teachers overcome perceived challenges in providing effective early intervention services to children with autism spectrum disorders. This theoretical framework provided the foundation for research questions and methods used in the research.

Research Questions

1. What is the level of teachers' perceived incidence of autism characteristics among their pupils?
2. How do teachers perceive their level of training to manage students who are autistic characteristics?
3. What are the differences in gender, area of specialization, class taught, years of experience among teachers' perceived self-efficacy to provide intervention services for autistic children?

Hypothesis

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There is no significant relationship between in-service teachers' training about autism and their perceived self-efficacy to serve learners with autism.

METHODOLOGY

The descriptive survey design was used in this study. This is seen as the most appropriate design because it helped to collect the required data from the target respondents. Due to the inconvenience of online surveys in the locality, hard copies of the questionnaire were given to respondents. The setting of this research consisted of two University Staff Demonstration schools in urban and semi urban areas of Nigeria. These schools serve as laboratories for schools and faculties of education in such institutions. They are seen as model schools where best practices are tried out. Two schools were selected

from the 2 geographical regions. These regions are south/east, south/south Nigeria.

These regions selected out of the 6 geographical regions that made up the nation. Teachers who participated in this study had years of experience, ranging from 1-20 years. The purposive sampling technique was used to select teachers who taught in early childhood classes; made up of nursery 1-3 and lower basic 1-3. The population of teachers was 38 early childhood teachers and 38 -returned fully completed questionnaires. Data was analysed using mean, standard deviation and percentages.

RESULTS

Research Question 1: What is the level of teachers' perceived incidence autism characteristics among their pupils?

Table 1: Mean analysis of the level of teachers' perceived incidence autism characteristics among their pupils

S/N	Statement	Mean	SD	Remark
Social Interactions characteristics				
1.	SI1	3.77	1.34	High
2.	SI2	3.45	1.23	High
3.	SI3	2.95	1.54	Low
4.	SI4	2.98	1.42	Low
5.	SI5	3.27	1.39	High
6.	SI6	3.07	1.47	High
7.	SI7	3.11	1.51	High
8.	SI8	3.34	1.24	High
9.	SI9	3.20	1.42	High
10.	SI10	3.43	1.21	High
11.	SI11	3.34	1.40	High
12.	SI12	3.41	1.42	High
13.	SI13	3.25	1.43	High
14.	SI14	3.27	1.48	High
15.	SI15	3.14	1.39	High
High Sensory characteristics				
16.	HS1	3.09	1.25	High
17.	HS2	3.43	1.02	High
18.	HS3	3.02	1.23	High
19.	HS4	3.05	1.22	High
20.	HS5	3.16	1.24	High
21.	HS6	3.16	1.22	High
22.	HS7	3.14	1.27	High
23.	HS8	3.14	1.25	High

Hypersensitive Response to Sensory Information

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S/N	Statement	Mean	SD	Remark
24.	HSI1	3.27	1.28	High
25.	HSI2	3.16	1.31	High
26.	HSI3	3.14	1.23	High
27.	HSI4	3.07	1.21	High
28.	HSI5	3.30	1.32	High
29.	HSI6	3.16	1.22	High
30.	HSI7	3.23	1.16	High
Autistic Language/Communication characteristics				
31.	ALC1	3.32	1.27	High
32.	ALC2	3.02	1.13	High
33.	ALC3	3.16	1.01	High
34.	ALC4	3.00	1.10	High
35.	ALC5	3.05	1.01	High
36.	ALC6	2.91	1.29	Low
37.	ALC7	3.18	1.23	High
38.	ALC8	3.16	1.14	High
39.	ALC9	2.89	1.30	Low
40.	ALC10	3.02	1.13	High
Average Mean		3.18	1.27	High
Criterion Mean 3.00				

Table 1 shows the mean analysis of the level of teachers' perceived incidence autism characteristics among their pupils. The result shows that the mean score ranged from 2.89 to 3.77, with an average mean of 3.18, which is greater than the criterion mean 3.00. Hence, the level of teachers perceived incidence of autism characteristics among their pupils is high. This indicates that, across the different domains of

social interaction, sensory processing, sensory hypersensitivity, and communication, teachers frequently observe behaviours or traits consistent with autism characteristics.

Research Question 2: How do in-service teachers perceive their level of training to manage students who are autistic characteristics?

Table 2: Percentage analysis of how in-service teachers perceive their level of training to manage students who are autistic characteristics?

Response	Frequency	Percentage
Yes	15	39.47%
No	23	60.53%
Total	38	100%

Table 2 shows the percentage analysis of how in-service teachers perceive their level of training to manage students who are autistic characteristics. The result shows that 15 teachers, representing 39.47% reported that they have received training on how to manage students with autistic characteristics while 23 teachers, representing 60.53% reported that they have not received any training related to managing

students with autism characteristics. In other words, majority of in-service teachers do not feel adequately trained to manage students who exhibit autistic characteristics, which suggests a low perceived level of training among in-service teachers in this area.

Research Question 3: What are the differences in gender, area of specialization, class taught,

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years of experience among in-service teachers
perceived Self-Efficacy to provide intervention
services for autistic children?

Table 3a: Mean comparison of male and female in-service teachers perceived Self-Efficacy to provide intervention services for autistic children

	Male		Female	
	Mean	SD	Mean	SD
SEM1	2.63	1.01	2.84	1.11
SEM2	3.21	0.92	2.96	0.98
SEM3	3.11	1.05	2.92	1.08
SEM4	2.84	0.83	2.68	1.03
SEM5	2.95	0.78	2.60	0.91
SEM6	2.63	0.96	2.72	0.89
SEM7	2.58	1.22	2.64	0.91
SEM8	3.00	1.05	2.56	1.12
SEM9	2.74	1.05	2.72	1.24
SEM10	3.00	1.05	2.80	1.16

Table 3b: Mean comparison of early childhood and primary education in-service teachers perceived Self-Efficacy to provide intervention services for autistic children

	Early Childhood Education		Primary Education	
	Mean	SD	Mean	SD
SEM1	2.41	1.12	2.96	0.98
SEM2	2.82	0.95	3.22	0.93
SEM3	3.00	1.00	3.00	1.11
SEM4	2.94	0.75	2.63	1.04
SEM5	2.94	0.66	2.63	0.97
SEM6	2.59	1.00	2.74	0.86
SEM7	2.65	1.06	2.59	1.05
SEM8	2.71	1.16	2.78	1.09
SEM9	2.53	1.23	2.85	1.10
SEM10	2.71	1.26	3.00	1.00

Table 3c: Mean comparison of Nursery school and lower basic school in-service teachers perceived Self-Efficacy to provide intervention services for autistic children

	Nursery School		Lower Basic School	
	Mean	SD	Mean	SD
SEM1	2.59	1.12	3.00	0.94
SEM2	3.00	1.07	3.18	0.73
SEM3	2.96	1.13	3.06	0.97
SEM4	2.70	0.99	2.82	0.88
SEM5	2.59	0.93	3.00	0.71
SEM6	2.59	1.08	2.82	0.53
SEM7	2.52	0.98	2.76	1.15
SEM8	2.52	1.16	3.12	0.93
SEM9	2.56	1.28	3.00	0.87
SEM10	2.74	1.26	3.12	0.78

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Table 3d: Mean comparison of less experienced and experienced in-service teachers perceived Self-Efficacy to provide intervention services for autistic children

	Less Experienced		Experienced	
	Mean	SD	Mean	SD
SEM1	2.70	1.06	2.86	1.10
SEM2	3.03	0.96	3.14	0.95
SEM3	3.03	1.00	2.93	1.21
SEM4	2.83	0.79	2.57	1.22
SEM5	2.90	0.80	2.43	0.94
SEM6	2.67	0.92	2.71	0.91
SEM7	2.73	1.11	2.36	0.84
SEM8	2.70	1.06	2.86	1.23
SEM9	2.70	1.15	2.79	1.19
SEM10	2.90	1.09	2.86	1.17

Table 3a to 3d show the differences in gender, area of specialization, class taught, years of experience among in-service teachers perceived Self-Efficacy to provide intervention services for autistic children. The result shows that primary education teachers show higher self-efficacy than early childhood specialists; that lower basic school teachers feel more confident than nursery teachers; that less experienced teacher's report higher self-efficacy than more experienced ones; and that between male and female respondents, only minimal differences are

observed, suggesting gender does not significantly influence self-efficacy levels. These findings suggests that teacher preparation and class taught, may play a more critical role in shaping teachers' self-efficacy than gender or years of teaching experience.

Hypothesis

Hypothesis 1: There is no significant relationship between in service teachers training about autism and their perceived self-efficacy to serve learners with autism

Table 1: Pearson's correlation analysis of the relationship between in service teachers training about autism and their perceived self-efficacy to serve learners with autism

Variable	<i>n</i>	<i>r</i>	<i>r</i> ²	<i>r</i> ² %	<i>P</i>	Remark
In-Service Training Perceived Self-Efficacy	44	0.300	0.09	9.0	0.048	Rejected

$\alpha = 0.05$

Table 1 shows a Pearson's correlation analysis, which was conducted to examine the relationship between in service teachers training about autism and their perceived self-efficacy to serve learners with autism. The result shows that $r = 0.300$, $r^2 = 0.09$, $p < 0.05$ level of significance. Hence, the null hypothesis is rejected, which means that there is a significant relationship between in service teachers training about autism and their perceived self-efficacy to serve learners with autism. In-service training of teachers contributes 9.0% to the variability in their perceived self-efficacy to serve

learners with autism. The result shows that there is a relationship between in-service teachers' training about autism and their perceived self-efficacy to serve learners with autism. So the null hypothesis is rejected. These findings suggests that teacher preparation may play a more critical role in shaping teachers' self-efficacy for providing intervention for pupils with autism characteristics

DISCUSSION OF FINDINGS.

Research Question 1: What is the level of teachers' perceived incidence autism characteristics among their pupils? The result

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here showed that characteristics of autism are observed among pupils in the classroom. Folorunsho (2025) reported that there is a rise in reported cases of autism in Nigeria. The writer equally observed that levels of awareness, diagnosis, advocacy, intervention and autism targeted policies are springing up. This is corroborated by Torty. Eyang, Asindi and Usun (2024) who pointed out that the incidence of autism in Calabar is on the increase.

Research question 2 which asked How do in-service teachers perceive their level of training to manage students who are autistic characteristics? Most of the teachers reported that they have not been trained on how to provide intervention for children with autism. This affirms Atakpo (2017) & Atakpo (2019) observed that more needs to be done in area of teacher training and Fayemi, Ostrowski, (2024) observed that intervention services for children with autism is still evolving in Nigeria.

The third research question sought to answer, what are the differences in gender, area of specialization, class taught, years of experience among pre service teachers perceived self-efficacy to provide intervention services for autistic children. The result shows that primary education teachers show higher self-efficacy than early childhood specialists; it equally shows that lower basic school teachers feel more confident than nursery teachers; that less experienced teacher's report higher self-efficacy than more experienced ones; and that only minimal differences are observed, suggesting gender does not significantly influence self-efficacy levels in handling children with autistic characteristic.

The testing of the hypothesis shows that there is a relationship between in-service teachers' training about autism and their perceived self-efficacy to serve learners with autism So the null hypothesis is rejected. These findings suggests that teacher preparation may play a more critical role in shaping teachers' self-efficacy for providing intervention for pupils with autism characteristics. These findings agree with the report of Anyanwu and Okorodudu (2015) that teacher preparation play a more critical role in shaping readiness and performance.

CONCLUSION

This study helped to provide information on components that should be incorporated into the teacher training curriculum, to improve their competence for handling learners who are on the autism spectrum disorder related characteristics.

REFERENCES

- Adeniyi, S. O., & Kuku, O. (2018). Perceived knowledge of educability and social acceptability of children with autism among culturally diverse parents in Lagos State. *International Journal of Arts, Social Sciences, and Education (IJASSE)*, 2(1–2), [page range].
- Ajayi, V. O. (2018). Millennium development goals (MDGs) and sustainable development goals (SDGs). In *Evaluation procedures in science education*. Department of Curriculum and Teaching, Faculty of Education, Benue State University, Makurdi.
- American Academy of Pediatrics. (2003). *Caring for young teenagers*. [Publisher].
- Anyanwu, C. J. (2017). *Training and motivation as correlates of inclusive practices among teachers of students with disabilities in South East Nigeria* (Doctoral thesis, Delta State University, Abraka).
- Anyanwu, C. J. (2019). Challenges associated with educating the visually impaired in inclusive settings: Implications for service delivery. *Nigerian Journal of Teacher Education and Teaching*, 17(1), 115–126.
- Anyanwu, C. J., & Okorodudu, R. I. (2015). Exposure to inclusive education components and inclusive practices: A study of teachers from integrated schools in South East Nigeria. *DELSU Journal of Educational Research and Development*, 14(1), 152–163.
- Anyanwu, C. J., & Opara, U. E. (2024). Inclusive education. In C. J. Anyanwu, U. Ihem Chijoke, C. J. Atteng, F. Atare, M. U. Iheme, & C. N. Ugwuegbulam (Eds.), *Introduction to special needs education*



- programmes and services (pp. [pages]). Ibadan: Praxis Publishers.
- Anyanwu, C. J., Okezie, B. U., & Iheme, M. U. (2018). Meeting the academic needs of learners with hearing impairments in Imo State: An examination of service models. *The Exceptional Child*, 20(1), [page range].
- Anyanwu, C. J., Onwubiko, C., & Egwim, G. (2023). Autism spectrum disorders: Types, characteristics and educational implications. In A. Osisanya, A. F. Komolafe, K. U. Lazarus, & A. T. Adewunmi (Eds.), *Advances in special needs education practices* (pp. [pages]). John Archers Publishers Ltd.
- Atakpo, T. E. (2017). Overview of early childhood education (ECE) teacher preparation curriculum content in South-South Nigerian universities. *Journal of Teacher Perspectives*, 12(2), 478–485.
- Atakpo, T. E. (2019). Effect of early childhood teacher preparation for sustainable development in Nigeria. *Benue State University Journal of Education*, 9(2), 135–143.
- Cherney, K., & Seladi-Schulman, J. (2021). Knowing about autistic spectrum disorder (ASD). *Healthline*. <https://www.healthline.com>
- Da Conceicao, D. A. (2017). Autism and diagnosis: Advice for teachers. *National Autistic Society*. <https://www.autism.org.uk/advice-and-guidance/professionals>
- Duerias, A. D., Wood, C., Maher, C. E., & Sanchula, G. (2022). Analysis of a peer teaching programme for teaching social responsiveness to neurotypical preschoolers. *Education and Treatment of Children*. <https://doi.org/10.1007/643494-022-00073-7>
- Ede, M. O., et al. (2020). Rational emotive family health therapy for reducing parenting stress in families of children with autism spectrum disorders: A group randomized control study. *Journal of Rational-Emotive and Cognitive-Behavior Therapy*, 38(2), 243–260. [https://doi.org/\[insert DOI\]](https://doi.org/[insert DOI])
- Edwin, A. E. (2000). Educational opportunities of the Nigerian child. In Q. N. Obinaju (Ed.), *The Nigerian child: His education in a sociological and psychological environment* (pp. [pages]). [Publisher].
- Ekom-Idorenyin, W. V. (2020). Attitude of teachers towards pupils with autism spectrum disorders (ASD) in selected primary schools in Rivers State, Nigeria. *European Journal of Education Studies*. <https://doi.org/10.46827/EJES.V010.2837>
- Eskay, M., & Oboegbulem, [First initial]. (2013). Learners with disabilities in an inclusive education setting in Nigeria: Implications for administrators. *U.S.-China Education Review*, 3(5), 313–318.
- Flint, C., Hench, K., & Salt, J. (2014). Evaluation of a 3-day autism training model in Nigeria. Paper presented at the International Meeting for Autism Research. <https://www.researchgate.net/publication/n/268143668>
- Folorunsho, A. D. (2025). Autism spectrum disorders among children ages 2–17: Prevalence, awareness, advocacy and legislation action scoping review. <https://doi.org/10.21203/rs.3.s-6735926/v1>
- Ginga, U. A., & Kauru, A. I. (2019). Effect of explicit teacher instruction on autism students' academic performance and retention ability in directed numbers among junior schools in Daura Education Zone, Katsina State, Nigeria. *Abacus (Mathematics Education Series)*, 44(1), 260–270.
- Gill, K. (2021). Understanding the symptoms of autism spectrum disorder in kids. *Healthline*. <https://www.healthline.com>
- Gomez-Mari, I., Sanz-Cervera, P., & Tarraga-Minguez, R. (2021). Teachers'

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- knowledge regarding autism spectrum disorder: A systematic review. *Sustainability*, 13(9).
[https://doi.org/\[insert DOI\]](https://doi.org/[insert DOI])
- Gore, K., Gilbert, M., Hawke, M., & Barbaro, J. (2024). Investigating autism knowledge, self-efficacy and confidence following maternal and child health nurse training for early identification of autism. *Frontiers in Pediatric Neurology*, 14.
<https://doi.org/10.3389/fneur.2023.1201292>
- Hill, D. A., Fayemi, A., & Ostrowski, S. (2024). The evolution of services for children with autism and developmental disabilities in Nigeria. *International Journal of Disability, Development and Education*, 71(7), 1118–1132.
- Igabari, Q. E. (n.d.). Motivation of teachers in implementation of universal basic education and the implications for efficiency and effectiveness in assessment. *ABSU Journal of Curriculum and Teacher Education*, 2(2), [page range].
- Litton, F. W., Rotatori, A. R., Coombs-Richardson, R., & Martinez, R. (2017). Preparation for teachers for students with autism spectrum disorders: A call for quality and quantity. *American Journal of Education Research*, 5(2), 225–230.
<https://doi.org/10.12691/education-5-2-19>
- Love, A. M. A., Findley, J. A., Ruble, L. A., & McGrew, J. H. (2019). Teachers' self-efficacy for teaching students with autism spectrum disorder: Associations with stress, teacher engagement and student IEP outcomes following COMPASS consultation. *Focus on Autism and Other Developmental Disabilities*, 35(1), 47–54.
- McDougal, E., Riby, D. M., & Hanley, M. (2020). Teachers' insight into the barriers and facilitators of learning in autism. *Research in Autism Spectrum Disorders*, 79, 101674.
<https://doi.org/10.1016/j.rasd.2020.101674>
- National University Commission. (2023). *Core curriculum and minimum standards for Nigerian university system (CCMAS)*. Author.
- Nsiah-Peprah, I. (2004). Assessment of the role of private schools in the development of education in Ghana: A study of the Kumasi Metropolis. *Journal of Science and Technology*, 24(2), [page range].
- Odili, J. N. (2004). *Introduction to child developmental psychology*. Gab Oris Enterprises.
- Ogbebor, G. G. (2005). *Understanding special education for Nigerian schools*. Justice Jeco Press and Publishers.
- Omolayo, B. O., Auta, M., Akinyemi, E. O., & Dennis, U. (2020). Knowledge and awareness of autism spectrum disorder among teachers in Ekiti State. *African Journal of Teacher Education*, 9(2), 42–61.
<https://doi.org/10.21083/ajote.v9i2.624>
- Here's the continuation of your **APA 7th edition** alphabetized reference list from where we left off:
- Omolayo, B. O., Auta, M., Akinyemi, E. O., & Dennis, U. (2020). Knowledge and awareness of autism spectrum disorder among teachers in Ekiti State. *African Journal of Teacher Education*, 9(2), 42–61.
<https://doi.org/10.21083/ajote.v9i2.6240>
- Onyishi, C. N., Okpolo, C. C., & Victor-Aigbodion, V. V. (2025). Teachers' awareness and perception of inclusive education for learners with autism: Implications for the campaign against stigma. *Ikenga International Journal of Institute of African Studies*, 26(1), 51–80.
- Osanyin, F. A. (2012). *Once upon a child* (Inaugural Lecture Series). University of Lagos Press.



- Osborn, C. O. (2021). Does my 3-year-old have autism? *Healthline*.
<https://www.healthline.com>
- Platt, W. M. (1961). *Towards strategies of education*. Standard Research Inc., International Industrial Development Centre.
- Poudyal, S. (2022). Awareness of autism among primary school teachers in Yenagoba City, Bayelsa State. *Academia.edu*.
<https://www.academia.edu/34572129>
- Preece, D., Odunsi, R., & Garner, P. (2017). Nigerian teachers' understanding of autism spectrum disorder: A comparative study of teachers from urban and rural areas in Lagos State. *Disability, CBR & Inclusive Development*, 29(3).
<https://doi.org/10.5463/DCID.v29i3.637>
- Sackville-Jones, R. (2019). Developing autism content in teacher training courses. *National Autistic Society*.
<https://www.autism.org.uk/advice-and-guidance>
- Shaheem, M. (2022). Autism among American children and teens surged 50% in three years from 2017, with one in 30 kids diagnosed with the disorder by 2020, study finds. *Daily Mail*.
<https://www.dailymail.com>
- Sharma, U., & Rangarajan, R. (2019). Teaching students with autism spectrum disorders in South Asia: A scoping study and recommendations for future. *International Journal of Developmental Disabilities*, 65(5), 347–358.
<https://doi.org/10.1080/20473869.2019.1641017>
- Shatri, S. (2017). Impact of training and experience on teachers' attitude towards the inclusion of children with special educational needs in the ordinary and comprehensive school. *Academic Journal of Interdisciplinary Studies*, 6(3), 57–[page end].
<https://doi.org/10.1515/ajis-2017-0021>
- Taresh, S. M., Ahmad, N. A., Roslan, S., Marof, A. N., & Zaid, S. M. (2020). Mainstream preschool teachers' skills at identifying and referring children with autism spectrum disorders (ASD). *International Journal of Environmental Research and Public Health*, 17(12), 4284.
<https://doi.org/10.3390/ijerph17124284>
- Thwala, S. K. (2018). Teachers' strategies of including learners with autism spectrum disorders in mainstream classrooms in Swaziland. *International Journal of Humanities Social Sciences and Education*, 5(12), 78–85.
<https://doi.org/10.20431/2349-0381.0512009>
- Torty, C., Eyang, K., Asindi, A. A., & Usun, E. (2024). Autism spectrum disorders in Calabar, Nigeria. *Iranian Journal of Child Neurology*, 18(3), 75–81.
- Whalon, K. J., & Hart, J. E. (2010). Children with autism spectrum disorder and literacy instruction: An exploratory study of elementary inclusive settings. *Remedial and Special Education*, 32(3), 243–255.
<https://doi.org/10.1177/0741932510362174>