ISSN (2210-1578) J. Tea. Tea. Edu. 10, No. 1 (Jan-2022)

http://dx.doi.org/10.12785/jtte/100104

# Primary School Teachers' Knowledge of Autism Spectrum Disorders and Their Attitudes Towards Inclusive Education

# Osenweugwor Ngozi Aihie<sup>1</sup> and Okunola Uwaoluetan<sup>2</sup>

Department of Educational Evaluation and Counselling Psychology, University of Benin, Benin City, Nigeria

Received 31 May 2021, Revised 20 Nov 2021, Accepted 10 Dec 2021, Published 01 Jan 2022

Abstract: The study investigated teachers' knowledge of Autism Spectrum Disorder (ASD) and their attitudes towards the inclusion of learners with ASD in the regular classrooms. The influences of sex, age and years of teaching experience on teachers' attitudes towards inclusive education were also assessed. The study employed the descriptive survey research design. Simple random sampling was used to select 150 respondents from 10 randomly selected Primary schools in Egor Local Government Area in Benin City, Edo State, Nigeria. An Autism Knowledge and Attitude Scale (AKAS), adapted from Hansen (2015) and Mahat (2008) was validated and used to collect data for the study. Data collected were analyzed using means, Students' t-test, and Analysis of Variance (ANOVA). Results revealed that the teachers had a high-level knowledge of ASD and positive attitudes toward the inclusion of learners with ASD in regular education classrooms. Male teachers were found to be more favorably disposed to the inclusion of learners with ASD than female teachers. Age and years of teaching experience did not significantly influence the attitudes of teachers toward the inclusion of learners with ASD in regular classrooms. Recommendations were made.

Keywords: Autism, Teacher, Knowledge, Attitude, Inclusive Education, Classroom

#### 1. INTRODUCTION

The teaching staff can be regarded as the most significant agents in the educational system. Teachers directly implement the curriculum and educational policies, organise learning experiences and more importantly, meet the various needs of the learners within the classrooms. Teachers who have a good knowledge of their subject areas and current educational practices tend to be more effective in managing their classrooms than those who do not. However, the success of the teaching-learning process depends to a large extent on the attitudes of the teachers. Teachers generally set the tone of their classrooms and a teacher with a positive attitude will be more willing to create a healthy classroom environment than one with a negative attitude.

Learners on the other hand, have a wide range of needs and behaviours. Some learners are calm, attentive to instructions and quick to grasp concepts taught while some are unsettled and require extra effort to encourage students to focus and grasp concepts taught. Yet another group of learners consists of those who have conditions that require special effort and attention on the part of the teacher in order to benefit from the educational process. These learners are classified as Special Education Needs (SEN) learners. The condition may be due to learning difficulties such as dyslexia and dysgraphia. Others may

be due to developmental conditions such as Autism Spectrum Disorder (ASD), Attention Deficit Hyperactive Disorder (ADHD) among others. ASD refers to a range of conditions characterised by some degree of impaired social behaviour, communication and language and a narrow range of interests and activities that are both unique to the individual and carried out repeatedly. Autism Society of America (2019) defined ASD as a complex lifelong developmental disability that typically appears during early childhood and can impact a person's social skills, communication, relationships and selfregulation. Autism is characterised in the Diagnostic and Statistical Manual of mental disorders (DSM-V) by persistent differences in communication, interpersonal relationships and social interaction across different environments, restrictive and repetitive behaviour patterns, activities and interests (APA, 2013). According to the American Psychiatric Association's diagnostic and statistical manual, which is used by clinicians to diagnose autism, these core features must be present in early childhood but may not fully manifest until social demands exceed the person's capacity to cope with them and challenges may be masked by learned coping strategies. It has been reported that ASD is among the fastest growing developmental conditions in the world with an estimated



rate of 1 in 68 children diagnosed with the disorder (CDC and Prevention, 2014). In Nigeria, it is estimated that 1 out of every 125-150 children are living with ASD, giving a total of about 600,000 children (Lesi et al,2014). Despite, this, however, in Nigeria there is no policy in place for neurodevelopmental disorders due to the fact that many of them are hidden, though no social class or economic status is spared. Although there are Special Needs Schools and Centres available in Nigeria, these may not be accessible to many parents due to factors such as location and funds. Many parents therefore end up enrolling their Special Needs children in regular schools. Unfortunately, for some of the children with ASD, social experience generally and particularly in school has been negative as they end up lonely, socially excluded and bullied by other children. Moreover, the Nigerian National Policy on Education (FRN,2013) proposed the inclusion of learners with Special Needs into the general education classrooms where they are to be taught by general education teachers. The full implementation of this policy is yet to take place but due to the prevalence of developmental disorders like autism; the presence of learners with special needs in mainstream schools is gradually becoming inevitable. The practice of inclusion is based upon the protection of children's access to education and benefitting from such practices. For the children with ASD, benefits of inclusion include improved social acceptance and improved social communication. Inclusion raises the self-esteem of learners with ASD, leads to accepting attitudes by their peers and subsequently less stigmatisation and isolation. Other learners also benefit as it helps them learn to accept behaviours and attitudes. Contemporary psychological and pedagogical studies emphasise that the success of inclusive education with children with ASD depends largely on teachers' readiness and ability to understand the specific needs of the learners and take them into account when implementing teaching (Alysina et al, 2020). For the inclusive education policy to be effectively implemented, teachers need to be adequately equipped with knowledge about special needs education and the practice of inclusive education. Teachers need to be well equipped with knowledge about the challenges and conditions that learners have for them to effectively organise instructions that address the individual needs of all learners. They also need to be willing to modify their classroom environment and teaching strategies for the benefit of all learners. The success of inclusive education will to a large extent depend on the attitudes of the teachers towards it. Teachers' attitudes in turn may depend, among others, on their experiences and knowledge about Special Needs learners. Age and work experience of the teachers as well as their being male or female may also influence their attitudes to the inclusion of children with ASD in their classrooms. Global prevalence of ASD is rising and there is increased

recognition and knowledge of the disorder but there is still a dearth of information on ASD in Nigeria (Onaolapo & Onaolapo, 2017). In Benin City, Nigeria, Audu and Egbochuku (2010) found that ASD is prevalent in the primary schools with more boys affected with the disorder than girls. Are the teachers aware of some of the features of ASD? What is their attitude to having learners with the disorder in the general education classrooms? The present study was designed to assess primary school teachers' awareness/ knowledge of ASD and their attitudes toward inclusive education. The influences of sex, age and years of teaching experience on the attitudes of teachers towards inclusion of learners with ASD in general education classrooms were also assessed. To guide the study, two research questions were raised, and three hypotheses formulated.

#### I. Research Questions

- 1. What is the Primary School teachers' level of knowledge about ASD?
- 2. What is the Primary school teachers' general attitude towards the inclusion of learners with ASD in regular education classrooms?

# II. Hypotheses

- 1. There is no significant difference between male and female teachers' attitudes towards the inclusion of learners with ASD in regular education classrooms.
- 2. There is no significant difference in teachers' attitudes towards the inclusion of learners with ASD in regular education classrooms based on age.
- 3. There is no significant difference in teachers' attitudes towards the inclusion of learners with ASD in regular education classrooms based on years of teaching experience.

### 2. LITERATURE REVIEW

Spectrum Disorders (ASD) Autism is developmental disorder that affects communication and behaviour of individuals. According to WHO (2019), key facts about ASD include that it begins in childhood and tends to persist into adolescence and adulthood. Lesi et al. (2014) described autism as a neurodevelopmental disorder, a behavioural syndrome of neurological dysfunction which is characterised by impaired reciprocal social interaction, impaired verbal and non-verbal communication, impoverished imaginative social activity and a marked restrictive, repertoire of activities and interests. Specific causes of ASD are not known but research has shown that combinations of genetic and environmental factors are responsible for it. Due to the increase in the prevalence of ASD among children and the unique learning characteristics of these children, it is essential for teachers and other education providers to



have specialised skills so that they can effectively carry out the instructional process in the classroom (Simpson, 2005). Teachers need to learn about ASD and the needs of children with ASD as a crucial step to providing adequate support and service to learners with ASD. Research about ASD in Sub-Saharan Africa in general and Nigeria in particular has been identified to be limited and mostly conducted within the medical and healthcare fields (Franz, Chambers, Isenburg & Vries, 2017). Also, research in the region concerning ASD and educational issues is limited (Obitayo, Etonyeaku & Ofoegbu, 2013). The existence of considerable knowledge gaps in research and practice regarding ASD in the region have been asserted (Franz et al, 2017). A systematic review of research on autism in Sub Saharan Africa revealed that research in this region were mainly on awareness levels, quality of services provided and caregivers' challenges (Abubakar, Ssewanyana & Newton, 2016). research on ASD in Nigeria has been mainly on the prevalence and knowledge/awareness of ASD.

Audu and Egbochuku (2010) investigated the existence of ASD in primary schools in Edo State, Nigeria and found that parents' and teachers' knowledge about ASD was limited. In the same vein, Odunsin, Preece and Garner (2017) carried out a comparative study of the understanding of ASD among teachers from urban and rural areas of Lagos, Nigeria and found that over 50% of the urban teachers and almost 70% of the rural teachers had only a low or moderate understanding of ASD. In another study in Nigeria, Paul and Gabriel-Brisibe (2014) found a low level of awareness about ASD among Primary School teachers in Yenagoa, Bayelsa State, Nigeria. It was found that 60% of the teachers had heard the word "autism", 21% revealed they had wrong perceptions of ASD while 18.2% perceived ASD as a psychiatric condition similar to madness and so believed that the learners are uneducable. It is imperative for teachers to be aware of the features of ASD and other developmental disorders as this may influence their attitudes to disability generally. A research done in Malaysia, an African country, a study by Philips (2005) showed that teachers in general education classrooms lack knowledge regarding ASD, particularly in cognitive, social and emotional development of children. Effectively addressing the needs of learners with ASD has implications for all aspects of educational provision: the school and classroom environment, the curriculum, teaching materials and teaching strategies (Barson, 2010). When teachers do not have adequate knowledge or hold wrong perceptions of ASD, they are unable to correctly provide the right educational, social and emotional support that will match the child's abilities and needs. and this may result in negative outcomes. On the other hand, teachers who have specialized training in ASD and/ have working experience with learners with ASD generally have improved perceptions about the disorder and are more efficient in dealing with them (Syriopulou-Delli, 2012). Although there is a growing awareness of ASD in the Western world and some parts of Africa, the level of preparedness of teachers to cater to the educational and social needs of these children in Nigeria is poor (CDC and Prevention 2014.)

Inclusive education is the full integration of learners with and without disabilities or disorders into the same classrooms thereby exposing them to the same learning opportunities. The concept of inclusive education is an approach that ensures the presence, contribution, and achievement of all learners in a classroom regardless of their abilities. It often involves the modification of the structures, systems, policies, practices, and cultures in schools in order to accommodate the diverse needs of all learners within the school community. Inclusion stresses the need for equal participation but leaves room for special assistance and facilities needed and for differentiation within a common learning framework. Inclusive education as originally defined by the Salamanca statement (UNESCO,1994, as cited in Salovita, 2020), refers to schooling in which all children with disabilities have access to regular classrooms with the help of adequate support. The practice of inclusion is based upon protecting children's access to education. For children with ASD, proposed benefits include improved social acceptance and improved social communication, and peers play critical roles in these outcomes (Campbell, 2016). For example, inclusion may reduce stigma, allow for social standing of learners with ASD. Studies reveal that learners with ASD who are exposed to inclusive settings gain a great deal from being in such settings. Not only do learners with ASD benefit from inclusion, but their peers also benefit from being exposed to children with a diversity of temperaments (Eldar, 2010). The practice of inclusive education in Nigeria can be impacted by the knowledge about disabilities as well as the attitude of the professionals in the community. The academic success of learners with disabilities is dependent on many variables and teachers' attitudes remain among the most important factors influencing children's performances. If a teacher does not want a particular child in his/her classroom, no number of extra resources or training can save the placement from being a failure. Teachers' knowledge about ASD can change their cultural beliefs and negative attitude towards disability generally. Also, a teacher with positive attitude to the inclusion of Special Education Needs learners in regular education classrooms can influence the behaviour of the children without disorders towards their peers with the disorders. This can gradually affect the community positively. With increase of the prevalence of ASD, regular teachers are seeing more and more of learners with ASD in their classrooms throughout the world.



While some teachers may be comfortable with the situation, some may feel overwhelmed, fearful or distressed (Davis, 2011). Mortier (2010) identified five teachers' perspectives that appeared to promote effective inclusion practice in regular classrooms: an open attitude, a safe environment, equal input to the construction of ideas, commitment to success and positive atmosphere. Bhatnagar and Das (2013) investigated attitudes of secondary school teachers to inclusive education in India found that the teachers had positive attitudes towards inclusive education. Wilkerson (2012), in a study to assess teachers' attitudes towards the inclusion of learners with autism in regular education classrooms, found that most teachers agreed that both regular and special education teachers were responsible for educating learners with ASD, and over 50% of the teachers were willing to make classroom modifications to meet the individual needs of learners with ASD. The present study investigated the teachers' willingness to accept learners with ASD in their classrooms, willingness to modify the classroom environment, adapt curriculum to meet the needs of all the learners and encourage participation of learners with ASD in all class activities. In a study by Humphrey and Symes (2013), it was revealed that teachers had negative attitudes towards inclusive education because they felt that they lacked the necessary knowledge and skills. This buttresses the importance of adequate knowledge about the disorder in providing valuable support to the children with special needs. Teachers' attitudes to inclusive education may be influenced by demographic variables such as sex, age, educational qualification, teaching experience and acquaintance with a person with ASD. Ahmed (2012) examined teachers' attitudes towards inclusion of learners with ASD in regular classrooms and the results revealed that teachers' sex, educational qualification, past contact with a learner with ASD in the classroom, past success in teaching a student with ASD and perceived school support for inclusive teaching practices are some of the significant predictors of teachers' attitudes. Several studies have reported that female teachers have a more positive attitude towards inclusive education than male teachers (Alguraini ,2012; Salovita, 2020). On the contrary, other studies such as Bhatnaga and Das (2014), Das (2013) and Ernst and Rogers (2009), among others, reported that male teachers had more positive attitudes towards inclusive education than female teachers. Chabra, Srivastava and Srivastava (2010) and Parasuram (2006) however found no statistically significant difference between male and female teachers' attitudes towards inclusive education, implying that sex has no influence on the attitudes of teachers to inclusive education. Regarding the influence of chronological age on the attitudes of teachers towards inclusive education, Ahmed, Sharma and Deppeler (2014) and Das (2013)

found that younger teachers had more positive attitudes towards inclusive education than older teachers. Chabra, Srivastava and Srivastava (2010) however found no association between attitudes to inclusive education and the age of the teacher. Wilkerson (2012), Das (2013) and Salovita (2020) found that teachers with fewer years of teaching experience had significantly more positive attitudes towards inclusive education and higher levels of agreement with inclusive attitudes related to professional roles and functions than older and more experienced teachers. Park and Chitiyo (2011) and Van-Reusen, Shoho and Barker (2001) investigated the attitudes of teachers towards children with autism and inclusive education respectively and found that years of teaching experience had no relationship with the attitudinal responses of the teachers in the study.

Studies in Nigeria regarding ASD have been mainly on the prevalence and awareness of participants, both in the Medical and in the educational settings. There is a dearth of research on the attitudes of general education teachers to inclusive education which makes the investigation of teachers' knowledge awareness of ASD and their attitudes towards the inclusion of learners with ASD in their classrooms imperative.

#### 3. METHODOLOGY

The study adopted the descriptive survey research design. The study simply sought a description of the variables of knowledge of ASD characteristics and attitude towards inclusive education as they occurred in the sample of the study. There was no manipulation of the variables. The population of study consisted of 729 teachers in 39 public primary schools. A sample of 150 teachers was randomly selected from 10 randomly selected public primary schools in the area of study to participate in the study.

# I.Instrument for data collection

The instrument for data collection was a questionnaire titled Autism Knowledge and Attitude Scale (AKAS), adapted from Hansen (2015) and Mahat (2008). The instrument had two sections A and B. Section A sought demographic information on the sex, age and years of teaching experience of the respondents. Section B consisted of two subscales (i) a 15-item Autism Knowledge Scale which measured the respondents' knowledge of ASD and (ii) a 15-item Attitude toward inclusive Education Scale which measured respondents' attitude toward the inclusion of pupils with ASD in the general education classrooms. Responses to the items on this subscale were based on a 4-point scale ranging from strongly agree to strongly disagree. The instrument was face/content validated by the researchers. Crombach alpha statistic was used to determine the internal consistency of the subscales and α values of 0.625 and 0.804 were obtained for the Autism Knowledge



subscale and the Attitude toward inclusion sub scale respectively

# II. Procedure for data collection

Copies of the questionnaire were administered to the respondents after due consent was obtained and the completed forms retrieved on the same day.

#### III. Methods of data analyses.

Data collected for the study were analysed using means and standard deviation to answer the research questions while Student's t-test and ANOVA were used to test the hypotheses at 0.05 level of significance.

#### 4. FINDINGS

TABLE 1. Descriptive of teachers' level of knowledge about ASD

Variable	N	Sum	Mean	SD	Test Mean	Remark
Knowledge of ASD	150	1528	10.19	2.38	7.5	High

The result displayed on Table 1 with respect to the teachers' level of knowledge about ASD shows that the mean score is 10.19 (67.9% of total scores obtainable) and SD= 2.38. This mean score is higher than the test mean of 7.50 (50% of total scores obtainable), therefore it is inferred that the teachers have a high level of knowledge about ASD.

TABLE 2. Descriptive of teachers' attitude towards the inclusion of learners with ASD in general education classrooms

Variable	N	Sum	Mean	SD	Test Mean	Remark
Attitude	150	6705	44.70	5.26	37.50	Positive

Results on Table 2 show that the mean score for the teachers' attitudes towards the inclusion of learners with ASD in their classrooms is 44.7 (74.5% of the total obtainable scores). This mean score is higher than the test mean of 37.5 with SD =5.26. It is therefore inferred that the teachers' attitude to the inclusion of the learners is positive

TABLE 3. Student's t-test of sex differences in teachers' attitudes towards the inclusion of learners with ASD in general education classrooms

Variable	Sex	N	Mean	SD	df	t- value	p- value (sig 2- tailed
Attitude	Male	35	46.89	4.97	148	2.875	.005*
7 Hilliade	Female	115	44.03	5/19			

 $\alpha = 0.05$ 

Results on Table 3 show that the mean scores for males and females are 46.89 and 44.03 respectively. The calculated t-value of 2.875 is significant at p=.005. The null hypothesis is therefore rejected, and it is upheld that the male teachers have a significantly more positive

attitude towards the inclusion of learners with ASD in general education classrooms than the female teachers.

TABLE 4. Descriptive of teachers' attitudes towards inclusive education by age

Age Bracket	N	Mean	Standard Deviation
25- 35	74	45.03	5.68
36 - 45	52	45.25	4.41
46 years and above	24	42.50	5.27
Total	150	44.70	5.26

Table 4 displays the numbers, means and standard deviations of the three age brackets of teachers with regards to their attitude to the inclusion of learners with ASD in general education classrooms. Teachers in the age bracket 36-45years have the most positive attitudes (mean=45.250, followed by teachers aged 25-35years (mean=45.03) and then teachers in the age bracket, 46years and above (mean=42.50). Analysis of variance (ANOVA) was carried out to determine if the differences were statistically significant and the results are displayed on Table 5 below.

TABLE 5. ANOVA of Differences in teachers' attitude to inclusive education by age

	Sum of Squares	df	Mean Square	F	Sig (p- value)
Between Groups	139.804	2	69.902	2.579	0.079
Within Groups	3983.696	147	27.100		
Total	4123.500	149			

 $\alpha = 0.05$ 

The results on Table 5 reveal that the F value of 2.579 was not significant at 0.05 level of significance. The null hypothesis was thus upheld that there is no significant difference in the teachers' attitudes toward the inclusion of learners with ASD in regular classrooms based on age. There is therefore no significant difference among the three age brackets with reference to teachers' attitudes to the inclusion of learners with ASD in general education classrooms

TABLE 6. Descriptive of teachers' attitudes to inclusive education by years of teaching experience

Years of teaching experience	N Mean		Standard Deviation	
1 – 5 years	75	45.45	5.42	
6 – 10 years	28	45.29	5.68	
11 years and above	49	43.25	4.53	
Total	150	44.70	5.26	

On Table 6 are displayed the numbers, means and standard deviations of three categories of teachers with respect to their attitude toward the inclusion of learners



with ASD in general education classrooms and years of teaching experience. Teachers with 1-5years teaching experience have the highest mean scores followed by teachers who have 6-10years teaching experience and lastly teachers with over 11 years teaching experience. To determine the strength of the mean differences, the results were subjected to analysis of variance (ANOVA) and the results are displayed below on Table 7.

TABLE 7. ANOVA of Differences in teachers' attitudes to inclusive education by years of teaching experience

	Sum of Squares	df	Mean Square	F	Sig (p- value)
Between Groups	154.642	2	777.321	2.864	0,00
Within Groups	3968.858	147	26.999		
Total	4123.500	149			

 $\alpha = 0.05$ 

Results on Table 7 reveal that the F - value of 2.864 was significant at 0.060 level of significance. Since 0.06 is higher than  $\alpha$  level of 0.05, the null hypothesis is thus upheld that there is no significant difference in attitudes of teachers based on years of teaching experience. It is concluded that years of teaching experience have no influence on the attitudes of teachers to the inclusion of learners with ASD in general education classrooms.

#### 5. DISCUSSION

The results of the study indicate that the primary school teachers have a high-level knowledge of ASD. Most of the teachers were able to identify the characteristics of ASD and also affirmed that with early intervention, pupils with ASD can benefit from the learning process. This may be due to their experiences and observation of the children who are already present in the schools (Audu & Egbochuku, 2010) and also information in the news and social media about autism. Nigeria has joined the rest of the world in celebration of the Autism day on April 2<sup>nd</sup> every year and so more persons are becoming aware of the disorder. finding is at variance with those of Audu and Egbochuku (2010) and Odunsin, Preece and Garner (2017) who made findings that indicated that the knowledge of ASD among education professionals in Nigeria is low. The findings also revealed that the teachers had a positive attitude towards the inclusion of learners with ASD in regular education classrooms. The positive attitude of these teachers may be attributed to the teachers' knowledge of the disorder. When an individual possesses knowledge about a concept, it becomes easier for the individual to associate with that concept. Teachers who do not have a good knowledge about the disorder may label the children with the disorder as having a mental disorder and

so uneducable and may not be favourably disposed to having them within their classrooms. This result corroborates Al- Shammari (2006) who reported overall positive attitudes of teachers towards inclusive education and Wilkerson (2012) who found that over 50% of teachers were favourably disposed to making classroom modifications to meet the individual needs of learners with ASD. The result is however in contrast with Humphrey and Symes (2012) who found that teachers' attitudes to inclusive education was negative. However, the reasons given by the teachers for their negative attitudes was their lack of knowledge and skills which further reinforces the importance of adequate knowledge about the disorder in providing valuable support to the children with special needs.

In the present study, male teachers were found to have significantly higher positive attitudes to the inclusion of learners with ASD in regular education classrooms than the female teachers in the study. This finding corroborates the findings of Bhatnaga and Das (2014), Das (2013) and Ernst and Rogers as cited in Salovita (2020), but is in contrast to the findings of Chabra, Srivastava and Srivastava (2010), Alquraina (2012) and Salovita (2020). While Alquraina (2012) and Salovita (2020) found that female teachers had significantly more positive attitudes to inclusive education, Chabra, Srivatava and Srivastava (2010) found no relationship between sex and attitudes of teachers towards inclusive education.

The findings of the study reveal that there is no association between teachers' ages and their attitudes towards inclusive education. The expectation would have been that older teachers would be more willing to accommodate learners with disorders in their classrooms, but the finding tends to support the assertion that attitude formation is due to experience, observation and interaction with others (Mc Cray & McHatton, 2011) which may not necessarily be a function of age. The finding corroborates Chabra, Srivastava and Srivastava (2010) but is at variance with Ahmed, Sharma and Deppeler (2014) and Das (20130 who found that younger teachers had more positive attitudes to inclusive education than older teachers.

Furthermore, years of teaching experience of the teachers in the study did not influence their attitudes to inclusive education. This may be explained by the fact that knowledge about developmental disorders (which may influence attitudes) may not be due to the teachers' length of service on the job. The results however corroborate Park and Chitiyo (2011) and Van-Reusen, Shoho and Banter (2001) who made similar findings. The finding however contrasts Wilkerson, Das (2013) and Salovita (2020) who found that teachers with fewer years of teaching experience had more positive attitudes to inclusive education than more experienced teachers.



# 6. CONCLUSION

From the findings of the study, it can be concluded that the teachers are highly knowledgeable about ASD and are also favourably disposed to the inclusion of learners with ASD in the general education classrooms.

#### 7. RECOMMENDATIONS

The findings of the study show that the teachers are aware of the features of children with ASD, and they are favourably disposed to inclusive education. While these are crucial to the success of the teaching-learning process of the children with special needs, it does not confer on the teachers the special skills needed to cater to the needs of Special Education Needs pupils. It is therefore recommended that in implementation of the policy on inclusive education, training of these general education teachers to equip them with adequate knowledge and skills of specialized care needed by children with special needs should be stressed. It is also recommended that Special Education graduate teachers be made available in the schools to assist these teachers where required. Guidance counsellors should also be made available in the schools to render psychological, social and emotional assistance to staff, pupils and their parents.

# REFERENCES

- Ahmed, A. (2012) Variables affecting teachers' attitudes towards inclusive education in Bangladesh. *Journal of research in special education needs*, 12 (3), 134-140
- Abubakar, A, Ssewayana, D, & Newton, R. (2016). A systematic review of research on autism spectrum disorders in Sub Saharan Africa. *Behavioural Neurology* 2016.

# http://doi.org/10.1155/2016/3501910 on 30/05/2020

- Ahmed, M., Sharma, U. & Deppeler, I (2014). Variables affecting teachers' intention includes students with disabilities in regular primary schools in Bangladesh. *Disability and Society* 29(2), 317-331
- Alquraini, T.A. (2012). Factors related to teachers' attitudes towards the inclusive education of students with severe intellectual disabilities in Riyadh, Saudi. *Journal of Research in Special Educational Needs*. 12(3), 170-182
- Al-Shammari, Z. (2006). Special Education teachers' attitudes towards autistic learners in autism schools in the state of Kuwait. A case study. *Journal of Instructional Psychology*, 33(3), 170-178
- Alysina, R., Nesterova, A.A., Suslova, T. & Khitryuk, V. (2020). Teachers' attitude towards inclusive education of children with ASD: A review of Russian and foreign research. The education and science journal, 21 (10), 189-210

- American Psychiatric Association (2013). *Diagnostic and Statistical Manual of Mental Disorders* (5<sup>th</sup> Ed). American Psychiatric Association
- Audu, V.E.I., & Egbochuku, E.O. (2010). Autism among primary school pupils in Benin metropolis: Implications for counselling. *Edo Journal of Counselling*, 3(2), 257-268
- Autism Society of America (2019). www.autism-society.org
- Barson, C. (2010). *The autism spectrum in the 21<sup>st</sup> Century: Exploring psychology, Biology and practice.* Jessica Kingsley Open University, 211-244
- Bhatnagar, N., & Das, A.K. (2014). Attitudes of secondary regular school teachers towards inclusive education in Delhi, India: A qualitative study. *Exceptionality education intewrnational*,24 (2),17-30
- Campbell, J. (2016). The importance of peers in inclusive education for individuals with ASD. *Organization for autism research*. https://researchautism.org
- Centre for Disease Control and Prevention (2014). Autism Spectrum Disorder ,:Data & Statistics. <a href="http://www.cdc.gov/ncbddd/autism/data.html">http://www.cdc.gov/ncbddd/autism/data.html</a>
- Chhabra, S., Srivastava, R. & Srivastava, I. (2010). Inclusive education in Botswana: The perception of schoolteachers. *Journal of disability policy studies*, 20(4), 219-228
- Davis, J.M. (2011). Integrated working in children's services.

  Sage
- Eldar, E. (2010). Successes and difficulties in the individual inclusion of children with Autism Spectrum Disorders (ASD) in the eyes of their coordinators. *International Journal of inclusive education*, 14 (1), 97-114
- Federal Republic of Nigeria (2013). National Policy on Education. NERDC
- Franz, L., Chambers, M., Isenburg, N & De Vries, P.I. (2017). Autism Spectrum Disorders in Sub- Saharan Africa: A comprehensive scoping review. Autism Research, 10 (5), 723-749
- Hansen, I.K. (2015). Development and validation of a survey of knowledge of Autism Spectrum Disorders. *Unpublished Master's Thesis*. <a href="https://aquila.usm.edu/masters">https://aquila.usm.edu/masters</a> theses
  - Humphrey, N. & Symes, W. (2013). Inclusive education for pupils with Autism Spectrum Disorders in secondary mainstream schools: Teacher attitudes, experience and knowledge. *International Journal of inclusive education*, 17(1), 32-46
- Lesi, F.E., Adeyemi, J.D., Aina, O.F., Umeh, S.S., Olagunju, A.T.& Oyibo, W. (2014). Autism in Nigeria: A call for action. *Journal of Clinical Science*, *11*, 33-40
- Mc Cray, E., & Mc Hatton, P. (2011. Understanding pre-service general educators' perceptions about inclusion. *Teacher education Quarterly*,22(1), 135-155



- Mahat, M. (2008). Development of a psychometrically sound instrument to measure teachers' multidimensional attitudes towards inclusive education. *International journal of special education*, 28(1),82-92
- Mortier, K. (2010). Communities of practice in inclusive education. *Educational Studies*, 36,345-355
- Obitayo, N.O., Etonyeaku, E.A.C & Ofoegbu, T. (2013). The use of ICT as an integral teaching and learning tool for children with autism: A challenge for Nigerian education system. *Journal of Education and Practice*, 4 (23), 63-69
- Odunsi, R., Preece, D. &Garner, P. (2017). Nigerian teachers understanding of ASD: A comparative study of teachers from urban and rural areas of Lagos State. *Disability, CBR and Inclusive Development (DCID)*, 29(3), 98-113
- Onaolapo, Y. & Onaolapo, O.J. (2017). Global data on ASD prevalence: A review of facts, fallacies, and limitations. *Universal journal of clinical medicine*, 5(2), 14-23
- Parasuram, K. (2006). Variables that affect teachers' attitudes towards disability and inclusive education in Mumbai, India. *Disability and Society*, 21 (3), 231-242
- Park, M. & Chitiyo, M. (2011). An examination of teacher attitudes towards children with autism. *Journal of research in special education needs*, 11(1), 70-78

- Paul, N.I.& Gabriel, C.U. (2014). Awareness of autism amongst primary school teachers in Yenagoa city, Bayelsa State. *Niger journals*, 42 (1), 46-50
- Philips, S.C. (2005). Level of knowledge of Autism Spectrum Disorders among teachers in mainstream classes. https://rmc.upsi.edu.my/v2/ewacana/Sindrom.html
- Salovita, T. (2020). Attitudes of teachers towards inclusive education in Finland. Scandinavian journal of educational research, 64(2), 270-282
- Simpson, R. (2005). Evidence-based practices and learners with Autism Spectrum Disorders. *Focus on autism and other developmental disabilities*, 20 (3), 140 - 149
- Syriopoulou-Delli, C.K. (2012). Teachers' perception regarding the management of children with autism spectrum disorders. *Journal of autism and developmental disorders*, 42(5),755-768
- Van-Reusen, A.K., Shoho, A.R., & Barker, K.S. (2001). High school teachers' attitudes towards inclusion. *The high school journal*, 84(2), 7-20
- Wilkerson, S.E. (2012). Assessing teachers' attitudes towards the inclusion of students with autism. University of Louisville