Teachers' Knowledge and Attitude toward Attention Deficit Hyperactivity Disorder among Primary School Pupils in Osogbo, Nigeria

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Abstract

The study explored teachers' general knowledge of Attention Deficit Hyperactivity Disorder (ADHD) (knowledge about etiology, symptoms and consequences). It also investigated teachers' attitude towards pupils that have this disorder. Descriptive research design was utilized in the study with proportionate sampling technique. The study participants were 324 primary school teachers: Male (46.3 %) and female (53.7%). Two standardized instruments were used for data collection (Knowledge of Attention Deficit Disorders Scales (KADDS)) and Teachers Attitude towards Attention Deficit Hyperactivity Disorder Questionnaire (TAADHDQ). Data collected were subjected to frequency and percentages analysis. Results indicated that the teachers had average general knowledge of the disorder among pupils. (etiology (58.3%), symptoms (46.6 %) consequences (61.4%)) It also showed that majority (77.2%) of teachers demonstrated positive attitude towards the victims. The study recommended that teachers need more education on disorders in pupils especially ADHD and its impact on student's well-being as this understanding will help in providing prompt diagnosis, support and accommodation of affected pupils

Key words: Teachers' Knowledge, Attitude, Attention Deficit Hyperactivity Disorder

Introduction

The stretch from the time when a child is born to the time of adolescence is tagged as Childhood. Developmental psychology categorises childhood into several stages: toddlerhood (when a child is acquiring the skill of walking), early childhood, middle childhood to adolescence. The word "childhood" can be traced back to 17th and 18th centuries, in the educational theories of philosophers such as John Locke and the increase in literature targeted at children (John Dewey 2015). Childhood being a formative period can be complex as it is usually marked by rapid development in different areas, physical, cognitive, emotional and language development. While many children experience hitch-free childhood, this period presents challenges and difficulties that impair the well-being of some children. Parry, (2005) established that the period of childhood is faced with various behavioural disorders and if not properly cared for, it might lead to fixation

Among troublemaking behaviour disorders often found are Attention Deficit Hyperactivity Disorder (ADHD), Oppositional Defiant Disorder (ODD), Conduct Disorder (CD) and. The aforementioned disorders present similar signs, making identification of the nature of the disorder to be difficult and time consuming. It is not impossible to find two of the three disorders present in a child or adolescent at once. Some elements that can make the situation worse include abuse of substance problems from emotions, disorderliness of mood, and challenges from family. (Connor, Steeber & McBurnet 2010)

Attention Deficit Hyperactivity Disorder is a complex neurobiological disorder that is frequently discovered in children, but can be challenging to identify due to its multifaceted nature (Sroubek, Kelly & Li, 2013). The symptoms of this disorder include hyperactivity and inattentiveness that influence the affected pupil's daily life. The disorder is classified into three subtypes which are predominantly hyperactive, predominantly inattentive, and combined hyperactive and inattentive. The third subtype is reported to be present in over 50% of those identified. (Diagnostic and Statistical Manual of Psychiatric Disorders Edition V, 2013)

Along with these, there must be documentation of the difficulties in not less than two distinct situations: a child must present it prior to 12 years and the disorder must be affecting how the child functions. The manifestation of inattentive sub-type include: difficulty in obeying given instructions, difficulty to be attentive when spoken to, difficulty in completing instructions in succession, struggling to organize, cognitive stamina seems to be lacking, getting distracted easily, easily losing things and very forgetful in the conditions in which things happen every day. (American Psychiatric Association, 1994)

More still, manifestation of hyperactive/impulsive sub-type include: making small movement with hands, jerky movement with feet in seat, restlessness when comportment is needed, running and climbing around extraordinarily, ever ready to move, talking too much, saying answers before reading out questions, difficulty in taking turn, and interrupting frequently. Same with other neurobiological disorders, Attention Deficit Hyperactivity Disorder does not have a particular blood test or additional medical examination to know its presence. Zhang, Chang, Li, Zhang, Du, Ott & Wang, (2011) remarked that the Processes for it identification are on-going but do not possess the experience needed in diagnosis at the moment. Therefore, the diagnosis is done based on the rating of the teachers and/or parents, family and medical history, interviews and observations. Moreover, the symptoms of the disorder pose challenges to parents, teachers and other pupils; the symptoms are noticed at the beginning of formal schooling either by teachers or parents of such children (Bener, Qahtani & Abdelaal, 2006). (Matza,

Paramore & Prasad, (2005) reported that such children typically display poor performance compare to their peers in terms of academic assessment. leave seats allocated to them, raise unnecessary questions, disturb other students at their work and fail to finish their allotted classwork, they usually need extra time of the teacher than other students. In sum, students having this condition require additional attention in the school environment compare to other students. Hepperlen, Clay, Henly and Barke, (2002) observed that teachers most often attribute these symptoms to lack of adequate parenting, or tagged the student lazy and unwilling to work. Whereas, teachers understanding of the disorder as a neurological disorder, which can respond to interventions like medical and instructional attention, will enhance their expertise and attitude toward pupils with this condition.

The prevalence of this disorder among students has been documented in literature. The Center for Disease Control reported a prevalence rate of 9% in children between ages 6 -18years in the United States. In another study conducted in Qatar, which examined its occurrence among children aged 6-12 years in government schools found that the prevalence as reported by teachers who suspected their students of having the condition, ranged from 9.4% to 18% (Bener et al 2006).

In the same vein, American Academy of Pediatrics (2012) asserted that ADHD is about 10% of all classrooms. In Nigeria, a study on Attention Deficit Hyperactivity Disorder among pupils from 6-12 years revealed 8.7% prevalence according to ratings by teachers, parents' and other caregiver (Adewuya & Famuyiwa, 2007). In another recent study, Oke, Oseni, Adejuyigbe, and Mosaku (2019) confirmed the prevalence among primary school pupils in Ile-Ife, southwest of Nigeria. It is therefore paramount for teachers to have the understanding of the nature and be equipped to identify children with this condition, have the knowledge of their needs, both educationally and socially and learn ways to help them to succeed in the classroom. Pfiffner and Barkley (2000) affirmed that there is need to train teachers in order to understand the nature of this prevalent disorder through the biological lens rather than been environmental. Also, teachers should show willingness and ability to support behavioral methods so that they can achieve success in the classroom. To make education inclusive teachers should be able to absorb and identify the differences in children in the classroom.

It is assumed that the information teachers have concerning the disorder can make a difference regarding their communication and teaching of the children identified with this disorder. It will also help teachers make necessary adjustment to accommodate all pupils, to adopt varieties of teaching methods and set realistic goals. These are to establish a very good learning environment that will guarantee success for learners that manifest this disorder (Zentall, 2006).

The symptoms exhibited by pupils due to this disorder, could make teachers show negative attitude toward them. Batzle, Weyandt, Janusis, and DeVietti (2010) observed that teachers view of pupils with this condition as less favorable than pupils without the condition with regards to behaviour, intelligence, and personality. Research findings suggest that the disposition of teachers to pupils with this disorder can impact how other children perceive them (Hinshaw, 2004). The literature has established that qualifications of teachers' and their years of teaching service can impact on their attitude toward pupils that manifest this condition. According to Jimoh (2014), there was a notable impact of qualifications and years of teaching experience on teachers' understanding and perspective towards Attention Deficit Hyperactivity Disorder. In another study, teachers who were already working scored an average of 60.2% on the disorder knowledge assessment, which was notably higher than the scores of teachers in practice (Anderson, Watt, Noble, and Shanley 2012). It is pertinent for teachers to be equipped with up-to-speed information that will enable them be a part of the procedure for assessing and treating children with this condition. Researches carried out to determine teachers' knowledge of Attention Deficit Hyperactivity Disorder have brought about different contention, as few of them have reported that teachers do not possess adequate knowledge of this disorder, therefore, have misconceived the characteristics, causes and results of the disorder (Jimoh, 2014). However, studies also revealed that teachers had substantial information. (Dessie, Asmare Techane, Tesfaye & Gebeyehu 2021). In view of the disparities in the studies above, this study intends to further establish teacher's knowledge and attitude towards ADHD pupils.

Problem Statement

Attention-deficit hyperactivity disorder is regarded as a health challenge that increases complications associated with academic and psychological difficulty in school children. Children with this condition face the challenge of academic and behavioral problems (Loe & Feldman, 2007). Teachers have the duty to discover the symptoms of this disorder among children since they stay longer with the teacher in the classroom. In the course of classroom interaction, teachers observe and detect changes and differences in pupils' behavior. However, the validity of their assessment could be dependent on the how well informed a teacher is about this disorder, this includes information about manifestation, causes, and effect of the disorder, this information could affect teachers' attitude towards the victim.

Teacher's wrong attitude and insufficient information can result in consequences that may not be reversible whereas a deliberate effort with acceptance and support by teachers can help in improving low self-confidence, and social segregation reduction. Therefore, enough sentience and

correct disposition should be created towards Attention Deficit Hyperactivity Disorder as teachers' diverse opinions regarding this disorder might influence their attitude and attitude of other students towards the affected pupils. To date, research on teachers' knowledge and attitude toward this disorder in primary schools in Nigeria is still limited. Hence, the study aims to investigate the knowledge and attitude of primary school teachers in Osogbo Osun state toward pupils with this condition, , as well as their association with their demographic characteristics.

Objectives of the Study

To assess knowledge and attitude of teachers towards Attention Deficit Hyperactivity Disorder among primary school pupils in Osogbo, Nigeria. Specifically, the purpose of the study was to:

1. explore teachers' general knowledge (symptoms, etiology and consequences) of Attention Deficit Hyperactivity among pupils in Osogbo; and
2. investigate teachers' attitude towards this Disorder among pupils of primary school in Osogbo.

Research Questions

The following questions were raised:

3. What is the level of teachers' general knowledge (symptoms, etiology and consequences) of this disorder among the pupils in Osogbo?
4. What is the teachers' attitude towards this Disorder among pupils of primary school in Osogbo?

Methodology

This research employed descriptive survey design. The population comprised all primary school teachers in Osogbo, Nigeria. There are two Local Government Area in Osogbo, namely, Osogbo and Olorunda Local Government Area (LGA). Osogbo has 271 primary schools, 20% of these schools were selected using Proportionate sampling technique totalling 54 primary schools. One teacher was selected from each class of primary school using Simple random sampling technique, that is, 6 teachers from each selected primary school, totaling 324 primary school teachers.

Two questionnaires were used to elicit data for this study. Knowledge of Attention Deficit Disorders Scales (KADDS) and Teachers Attitude towards Attention Deficit Hyperactivity Disorder Questionnaire (TAADHDQ). The first questionnaire was divided into two sections Section A comprised the demographic information. These include gender, years of teaching experience and academic qualification. Section B assessed teachers'

knowledge using (KADDS). It comprised 25 items adapted from Sciutto, Terjesen and Bender, (2000) the scale was a 4-point response scale using a true, false, or don't know. A total KADDS score of between 25 - 50 suggested low knowledge, a score of between 51 - 75 suggested average knowledge; and a score of between 76 - 100 suggested high knowledge. The scale was reliable at 0.79 Cronbach's alpha.

The second Questionnaire, Teachers Attitude towards Attention Deficit Hyperactivity Disorder questionnaire (TAADHD) measured teachers' attitude toward pupils with Attention Deficit Hyperactivity Disorder. It comprised 25 items adapted from Amiri, Noorazar, Fakhari, Darounkolaee, & Gharehgoz (2017). It was a 4-point Likert scale using Strongly Agree 4 points, Agree 3 points, and Disagree 2 points, to Strongly Disagree 1point. The reliability of the instrument was also established through the test re-test reliability method which yielded 0.71 reliability index.

Result

Table 1: Demographic Information

Gender	**Frequency**	**Percentages (%)**
Male	105	32.4
Female	219	67.6
Total	**324**	**100.0**
Qualification		
NCE	135	41.7
OND	32	9.9
HND	56	17.3
Ist Degree	85	26.2
2nd Degree	16	4.9
Total	**324**	**100.0**
Years of Teaching Experience		
1-5 yrs	148	45.7
6-10 yrs	142	43.8
11 yrs and above	34	10.5
Total	**324**	**100.0**

As shown in Table 1, 324 teachers participated in the study, majority 67.6 % were female, majority (41.7%) of the participants were NCE holders, and majority (45.7%) of the teachers had less than 10 years teaching experience

Research Question 1: What is the level of teachers' general knowledge (symptoms, etiology and consequences) of Attention Deficit Hyperactivity Disorder among primary school pupils in Osogbo?

In order to answer this question, the teachers' responses on KADDS were aggregated and analyzed using percentage calculations. The range was

categorized into levels based on teachers' knowledge of the symptoms: high, average, and low.

The threshold for determining the teachers' knowledge of the symptoms was set at 11. The scores ranging from 11 - 22, 23 - 33, and 34 – 44, indicated low, average, and high levels of knowledge regarding symptoms of the disorder, respectively. The threshold for the level of knowledge on the etiology was set at 5. Scores on teachers' knowledge ranging from 5 - 10, 11 - 15, and 16 - 20 were classified as low, average, and high levels of understanding regarding the causes of the disorder, respectively. The threshold for the level of knowledge on the consequences was set at 9. Scores on knowledge of consequences ranging from 9 - 18, 19 -27, and 28 - 36 were classified as representing low, average, and high levels of understanding regarding the consequences of ADHD respectively. The threshold score for general knowledge was 25. Teachers' knowledge on Attention Deficit Hyperactivity Disorder was categorized into three levels: low (scores between 25 -50), average (scores between 51-75), and high (scores between 76-100). The result is shown in Table 2.

Table 2: Percentage Analysis of Teachers' Level of General Knowledge (symptoms, etiology and consequences) on the Attention Deficit Hyperactivity Disorder ADHD among Primary School Pupils in Osogbo.

	Level of Knowledge	Frequency	Percentage (%)
ADHD Symptoms	High	72	22.2
	Average	151	46.6
	Low	101	31.2
	Total	324	100.0
ADHD Etiology	High	102	31.5
	Average	189	58.3
	Low	33	10..2
	Total	324	100.0
ADHD Consequences	High	98	30.2
	Average	199	61.4
	Low	27	8.3
	Total	324	100.0
General level of knowledge	High	79	24.4
	Average	217	67.0
	Low	28	8.6
	Total	324	100.0

Result in Table 2 indicates that 72 representing (22.2%) of the teachers had high level of knowledge of the Symptoms, 151 (46.6%) of the teachers had average level while 101 (31.2%) had low knowledge of the symptoms.

The result also shows that majority (46.6%) of the teachers had average knowledge on the Symptoms. The Result also indicates that 102 representing (31.5%) of the teachers had high knowledge on etiology of ADHD, 189 (58.3%) had average knowledge while 33 (10.2%) of the teachers had low knowledge of etiology. The result further indicates that (58.3%) of the respondents had average level of knowledge of etiology. The Result in Table 2 further indicates that 98 representing (30.2%) of the teachers had high level of knowledge of consequences of the disorder, 199 (61.4%) had average level, while 27 (8.3%) of had low level of knowledge of consequences. The result reveals that teachers' knowledge on the consequences of ADHD among primary school pupils in Osogbo, was average.

The Result on general level of teachers' knowledge in Table 2 indicates that 79 representing (24.4%) of teachers had high knowledge of this condition in pupils, 217 (67.0%) had average level of knowledge, while 28 (8.6%) of the teachers had low level of knowledge. This shows that teachers' general knowledge on ADHD was also average.

Research Question 2: What is the teachers' attitude towards Attention Deficit Hyperactivity Disorder among primary school pupils in Osogbo,?

To answer the question, responses to (TAADHDQ) were added and analyzed using frequency and percentages. The ranges of the scores were calculated to be 25, 100 and 37.5 respectively. The results were categorized into two (positive and negative) it's cut off was 25. Teachers with scores 25 – 62.5 were regarded as having negative attitude, while teachers with scores 62.6 – 100 were regarded as having positive attitude. The result is presented in Table 3.

Table 3: Percentage Analysis of Level of Teachers' Attitude towards Attention Deficit Hyperactivity Disorder among Primary School Pupils in Osogbo

Teachers Attitude towards ADHD	Frequency	Percentage (%)
Positive Attitude towards ADHD	250	77.2
Negative Attitude towards ADHD	74	22.8
Total	**324**	**100.0**

Result in Table 3 indicates that 250 teachers (77.2%) showed positive attitude while 74 teachers (22.8%) showed negative attitude towards the pupils with this condition. This shows that the teachers' attitude towards children with this disorder was positive.

Discussion

The study examined teachers' knowledge and attitude towards ADHD among pupils in Osogbo, Nigeria. The finding from the first objective shows

that teachers' general knowledge about ADHD among primary pupils in Osogbo, was average. This result aligns with that of Khademi, *et al* (2016) whose findings showed that primary school teachers in Tehran (Iran) displayed average knowledge of ADHD and the study of Kos, *et al* (2004) which discovered an average score of 60.7% and 52.6% knowledge of the disorder between in-service teachers and pre-service teachers,. On the contrary, Jimoh (2015) found that primary schools teachers in Lagos state had unsatisfactory level of knowledge of the condition. The observed average level of teacher's general knowledge of this disorder could be as a result of teachers lack of experience as majority of the teachers have spent less than six years with primary school pupils

In another finding, most of the teachers of primary school pupils in Osogbo had average knowledge on symptoms, etiology and consequences of the disorder. This is in support of the study conducted by Vereb and DiPerna (2004) whose finding revealed that elementary school teachers from Pennsylvania and New Jersey had moderate knowledge on symptoms and etiology of this disorder. In another major finding of this study, primary school teachers' in Osogbo, showed average knowledge of the consequences of this disorder among pupils. This finding negates that of Perold, Louw, and Kleynhans (2010) who reported that Cape Metropole, primary school teachers had inadequate knowledge about the consequences. The observed disparity among studies may not be unconnected with cultural differences, differences in sample size, and sampling technique, different research design, differences in research instrument used for the study, and differences in respondents among others. Although the teachers in this study had moderate general knowledge of the disorder, yet, appreciable number of these teachers still had little awareness about the symptoms of this disorder. Plausible explanation for observed results from current study could be associated to the fact that majority of the respondents are inexperienced and are in possession of the minimal qualification for the teaching profession since Jimoh, (2014) reported that level of education and length of service significantly influence teachers' knowledge towards the disorder in Nigeria.

Furthermore, this study uncovers that the teachers in Osogbo, Nigeria exhibited a favorable disposition towards children with this condition in primary school. These results align with the report of Khademi, et.al (2016), which indicated that primary school teachers in Tehran, Iran, had an average attitude towards this disorder. On the contrary, Mulholland, et.al. (2015) discovered that some teachers showed unfavorable sentiments towards students with this disorder, concurring that they found the symptoms linked to the disorder vexing within the classroom.

The teachers favourable attitude towards the pupils with this condition can be ascribed to their possession of average level of knowledge about the

disorder just as Ohan, Cormier, Hepp, Visser, & Strain (2008) and Sherman, Rasmussen, & Baydala, (2008) submitted that teachers' knowledge and attitudes towards ADHD could impact their responsibilities, teacher-pupils relationship and by extension affect the educational performance of the pupils.

Conclusion

The study investigated teachers' knowledge and attitude towards Attention Deficit Hyperactivity Disorder among pupils in Osogbo. The study concluded that teachers' knowledge on symptoms, etiology and consequences of ADHD was average. It was also established that teachers' had favourable attitude towards the disorder among pupils in Osogbo.

Recommendations

From the findings, the under listed recommendations were made.

1. Psychology courses that teach children disorders should be factored into teachers' education curriculum in order to make teachers in training aware of common disorders in children
2. School authorities, educational psychologists and school counselling units are challenged to assume more responsibility and play active role in sustaining a positive disposition towards the affected children
3. In-service teachers' knowledge about disorders in children should be updated through periodic conferences, seminars and workshops

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