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## **Teachers' Perception of Attention Deficit Hyperactivity Disorder and their Knowledge of Strategies Used for Pupils with the Disorder**

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### **Abstract**

*Attention-Deficit Hyperactivity Disorder (ADHD) is one of the most frequent diagnoses in schools today, it is a common childhood neuro-development disorder that involves unremitting, and controversial childhood disorders, receiving large amounts of attention from researchers and general public. Pupils with this disorder have problems with attention span, impulse control and activity which frequently interfere with both classroom and social activities. The success of these categories of pupils in classroom situation depends on the ability of teachers to manage them. Despite the existence and availability of many empirical studies examining the causes, assessment, associated issues and treatment of ADHD, relatively few studies have examined teachers' perception of ADHD and their knowledge of support strategies used for pupils with the disorder. The extent to which this is done forms the basis of this study. A descriptive survey research was conducted, two hundred and thirty five pre-primary and primary school teachers participated in the research process where it was discovered that teacher had positive perception of the disorder and had low knowledge of the majority of the measured strategies used in handling pupils with ADHD. It was recommended that government and all private school owners should encourage the teachers through training for better implementation of strategies used for pupils with ADHD. Curriculum for teacher education should be restructured to include early childhood special education courses for pupils with special needs like ADHD.*

**Key words:** *Teachers' Perception, Teachers' Knowledge of Strategies, Attention Deficit Hyperactivity Disorder.*

## Introduction

Children spend most of their time in classrooms and other school settings. Here they are expected to follow rules, behave in socially appropriate ways, participate in academic activities and refrain from disrupting the learning process or activities of others. Teachers do not only have to teach pupils the skills and knowledge that form part of the curriculum but they also have to teach them to behave in a manner that meets organizational, cultural and social expectations. However, the work of the teacher becomes much more demanding when there are pupils in the classroom that have Attention Deficit Hyperactivity Disorder (ADHD). Their problems with attention span, impulse control and activity level frequently interfere with both classroom and social activities (Creelman, 2021, Barkley, Murphy and Fischer, 2008; DuPaul and Stoner, 2003). Attention-Deficit Hyperactivity Disorder (ADHD) is one of the most frequent diagnoses in schools today.

ADHD has numerous symptoms, although the three most identifiable symptoms are impulsivity, hyperactivity and inattention. (DuPaul and Stoner, 1994). These are defined as impulsivity (the tendency to act without consideration or judgment, hyperactivity (the tendency to fidget excessively and having a difficulty working quietly) and inattention (having trouble sustaining and directing attention from lectures, readings and conversation Having a difficulty completing projects, such as homework and in class assignments; having trouble maintaining an organized living and/or work place, such as desks, study areas and backpacks; inconsistent work performance and lacking attention to detail) (DuPaul and Stoner, 1994). Pupils showing symptoms of ADHD are more likely to perform lower academically than non-ADHD pupils (Barkely, 1990) and may not pay attention to instructions on given tasks. They often act up and disrupt others, call out without permission, become angry when reprimanded, leave their seat without permission, play with classroom objects and constantly tap their hands and feet (DuPaul and Stoner, 1994).

Behaviours displayed by pupils with ADHD often get in the way of classroom and social activities, are disruptive to the teaching process, and hamper children's learning (Barkley, Murphy, and Fischer, 2010; Dupaul and Stoner, 2003). The likelihood of academic underachievement increases when the pupils' disorder is unrecognized and not managed in a suitable manner (Heller and Loc, 2019, Barkley, 2006; Green and Chee, 1997). Experiencing school difficulties, academic underachievement, and problems with peers, not only lowers pupils with ADHD's self-esteem (Danckaerts et al., 2010), but may affect teacher's self-esteem as well (Glass, 2001).

Despite the immense amount of research, literature, and information on ADHD, the disorder is often misunderstood. The behaviour of a child with ADHD is often misinterpreted by parents and professionals alike who perceive the child, to be bad-mannered disobedient and lazy (Lazarus, 2011). It can be expected therefore that children might go undiagnosed or over diagnosed since the ADHD symptoms can be confused with other disorders and behaviour problems. Thus, teachers' ability to identify children is tremendously associated with their understanding of the behavioural profile of children with ADHD. Shortages in research, and the significant role of the teachers in identification and intervention processes, raise the demand to assess their perception about the disorder.

Teachers are often assigned the task of implementing educational and behavioural interventions for pupils with ADHD in the classroom (Dupaul and Stoner, 2003; Snider et al., 2003). Teachers are also expected to monitor the progress made by the pupils as a result of treatment, even when they have not implemented it (Tannock and Martinussen, 2001). For example, although teachers do not prescribe stimulant medication, the Nigeria Ministry of Health (MOH, 2001) stresses the importance of monitoring symptoms and side effects closely when a child is prescribed stimulant medication, and that this should be informed by observations and reports from parents and teachers when possible. Thus, teachers require knowledge about the symptoms or behaviours being targeted by the treatment. Nowacek and Mamlin (2007) reported a lack of literature addressing teachers' instructional and behavioural strategies for pupils with ADHD. Many children with ADHD do not qualify for special education services, so classroom teachers are expected to implement support strategies in the classroom with little formal training about ADHD strategies and supports.

Although the ordinary experience of teachers and anecdotal evidence suggest that the behaviour of children with ADHD is influenced by school and teachers, there is no formal evidence to support this. Clearly, there would be many advantages if the behaviour of children with ADHD could be modified with school-based strategies. Although evidence is lacking, the desired outcomes for children with ADHD are, nevertheless, improvements in their behaviour within the school setting, academic achievement, attitude to school, self-esteem, peer relationships, social inclusion and post-education opportunities. Another desired outcome, which extends beyond the clinical question but is important to bear in mind, is an improvement in the quality of life for teachers of children with ADHD (Barbarese and Olson 1998).

Other researchers have recommended educational support strategies for assisting children with ADHD-associated behaviour. Reeve (1990) reviews three models for school-based strategies. Stimulus reduction is based on the belief that eliminating distractions from the environment helps the ADHD child to focus on appropriate stimuli. Behaviour modification is another technique that has been used in managing the behaviour and learning of many ADHD children. For example, systematic rewards may be given for appropriate behaviour or for completing assignments, and punishments such as time outs are utilised to deal with inappropriate behaviour. These approaches have been subject to criticism on the grounds that they foster dependence on others to manage the learning environment. As a response to that, cognitive behaviour modification has been proposed. Regarding the Nigerian context, most of the research done on the ADHD focused on the medical perspective of the disorder in relation to prevalence rates and psychological remediation programmes. No published research, to the knowledge of the authors, was found to examine the Nigerian teachers' perceptions of ADHD. The ADHD disorder was found to be novel in the Nigerian society as a whole, and among the educators in particular.

Thus, teachers' ability to identify children with the disorder is tremendously associated with their understanding of the behavioural profile of children with ADHD. Shortages in research, and the significant role of the teachers in identification and intervention processes, raise the demand to assess their perception about the disorder. The dearth of information on

primary school teachers' perception and their knowledge of strategies used for pupils with ADHD in Nigerian context as well as the importance of the role of teachers in making ADHD pupils learn in classroom situations therefore call for a study along this line.

### **Research questions**

- i. What is the perception of primary school teachers about attention deficit hyperactivity disorder?
- ii. What knowledge of the support strategies do primary school teachers have in handling children with attention deficit hyperactivity disorder?

### **Method**

This study adopted descriptive survey design, the population for this study comprised pre-primary and primary schoolteachers in Ikere-Ekiti. This study used simple random sampling technique in the selection of 15 public primary schools, 10 private primary schools and 10 teachers from each of the public and private primary schools making a total number of 250 respondents that participated in the study. The researchers made use of one validated instrument tagged "Teachers' Perception of ADHD and Knowledge of Support Strategies used for Pupils" (TPA-KSSA)." The questionnaire consisted of 12 item Likert scale format of strongly agree (SA), agree (A), disagree (D), and strongly disagree (SD). The other section was three point likert scale format of "True (T), False (F) and Don't Know (DK). The reliability co-efficient of the instrument yielded 0.89 Alpha.

### **Results**

**Research Question 1:** What is the perception of primary school teachers about ADHD?

To answer this question, the responses gathered using TPA-KSSA were summarized under section B which comprised 12 items. All Items were designed on a 4-point Likert rating scale. The weighted average of these items was calculated and the summary is presented in Table 1

**Table 1: Teachers' Perception of Attention Deficit Hyperactivity Disorder**

S/N	Teachers' Perception of ADHD	Mean	SA	A	D	SD	Total
1	I believe full-time general education is the most appropriate educational placement for a pupil with ADHD	3.04	89 (37.9%)	74 (31.5%)	64 (27.2%)	8 (3.4%)	235 (100%)
2	I believe full-time special education is the most appropriate educational placement for a pupil with ADHD	2.87	64 (27.2%)	88 (37.4%)	72 (30.6%)	11 (4.7%)	235 (100%)
3	ADHD has impact on the educational experiences of pupils diagnosed with the disorder	3.00	71 (30.2%)	100 (42.6%)	57 (24.3%)	7 (3%)	235 (100%)
4	One could benefit from additional training on working with pupils with ADHD	3.06	78 (33.2%)	97 (41.3%)	57 (24.3%)	3 (1.3%)	235 (100%)
5	I feel confident in my ability towards with and support pupils with ADHD.	2.90	56 (23.8%)	107 (45.5%)	64 (27.2%)	8 (3.4%)	235 (100%)
6	Parenting style can cause ADHD	2.78	51 (21.7%)	92 (39.1%)	82 (34.9%)	10 (4.3%)	235 (99.6%)
7	ADHD occurs in boys more than girls	2.49	37 (15.7%)	62 (26.4%)	116 (49.4%)	20 (8.5%)	235 (100)
8	Stimulant medication can increase the child's attention and concentration	2.76	42 (17.9%)	102 (43.4%)	83 (35.3%)	7 (3%)	235 (100%)
9	Parents' involvement is an essential intervention process.	2.92	64 (27.2%)	97 (41.3%)	62 (26.4%)	11 (4.7%)	234 (99.6%)
10	Pupils with ADHD are perceived to have average to high IQ.	2.69	48 (20.4%)	83 (35.3%)	85 (36.2%)	18 (7.7%)	234 (99.6%)
11	There is tendency of pupils with ADHD to have difficulties in their relationships with their peers.	2.90	63 (26.8%)	94 (40%)	69 (29.4%)	9 (3.8%)	235 (100%)
12	Children with ADHD tend to have difficulties in their relationships with their teachers.	2.78	49 (20.9%)	102 (43.4%)	68 (28.9%)	16 (6.8%)	235 (100%)
<b>Weighted average</b>			<b>2.84 (71%)</b>				

The result shows that 74 (31.5%) and 89 (37.9%) agreed and strongly agreed respectively that full-time general education is the most appropriate educational placement for a pupil with ADHD; 88 (37.4%) and 64 (27.2%) both agree and strongly agreed that they believe full-time special education is the most appropriate educational placement for a pupil with ADHD; 171 (70.8%) of the teachers accepted that ADHD has impact on the educational

experiences of pupils diagnosed with the disorder and majority accepted one could benefit from additional training on working with pupils with ADHD.

Added to that, 107 (45.5%) agreed and 56 (23.8%) strongly agreed that they feel confident in their ability to work with and support pupils with ADHD, and 92 (39.1%) agreed and 51 (21.7%) strongly agreed that parenting style could lead to ADHD. However, 136 (57.4%) of the teacher disagreed and also strongly disagreed that ADHD was more frequently among boys than girls. In terms of medication, more than half the teachers reported that stimulant medication could increase the child's attention and concentration and that parents' involvement was an essential intervention process. In terms of intellectual ability, ADHD children tend to have average to high IQ. This was supported by 83 (35.3%) who agreed and 48 (20.4%) who strongly agreed. Also, 157 (66.8%) knew there was tendency of pupils with ADHD to have difficulties in their relationships with their peers and majority of the teachers also accepted that children with ADHD tend to have difficulties in their relationships with their teachers as well. From the weighted average which is 2.84 (71%), it indicates that most of the teachers have good perception of attention deficit hyperactivity disorder.

**Research Question 2:** What knowledge of support strategies do primary school teachers have in handling pupils with ADHD?

To answer this question, 7 support strategies were measured under section c. Each of the support strategies includes 4 items. All items were designed on a 3-point Likert rating scale. The weighted averages of these items were calculated and the summary is presented in Tables 2a, 2b, 2c, 2d, 2e, 2f and 2g below

**Table 2a Teachers' Knowledge of Attention as Support Strategy used for pupils with ADHD**

S/N	Statements	Mean	Std. Dev.	Don't know			Total
				False	True		
1	Giving pupils positive and negative verbal feedback as well as nonverbal feedback like nods, frown, smile, pats or approval is the most appropriate strategy in handling children with ADHD.	1.32	.810	51 (21.7)	57 (24.3)	127 (54.0)	235 (100)
2	I am not well skilled in implementing attention as a strategy.	1.23	.783	51 (21.7)	79 (33.6)	105 (44.7)	235 (235)
3	Teacher's attention strategy is effective in helping pupils who exhibit inattention, hyperactivity, and/or impulsivity (even if they are taking medications for these symptoms)	1.42	.798	46 (19.6)	45 (19.1)	144 (61.3)	235 (100)
4	The time and resources to implement this intervention is not available.	1.15	.775	55 (23.4)	89 (37.9)	91 (38.7)	235 (100)
<b>Weighted average</b>				<b>2.55 (85%)</b>			

The results in Table 2a show that 127 (54%) of the teachers responded it is true that giving pupils positive and negative feedback as well as nonverbal feedback like nods, frown, smile, pats of approval is the most appropriate method of handling children with ADHD. Added to that, 144 (61.3%) affirmed that teachers' attention is equally effective compared to 45 (19.1%) who responded false. However, 105 (44.7%) responded they are not well skilled in using this attention strategy. Only about 79 (33.6%) responded they are able to use it. This shows that although most of them understand it is effective, they do not have the wherewithal to implement the strategy. From the weighted average of the result which is 2.55 (85%), it shows that there is high knowledge of attention as a support strategy for handling children with ADHD among the participants.

**Table 2b: Teachers' Knowledge of Token Economy as a Support Strategy used in Handling Pupils with ADHD.**

S/N	Statements	Std. Mean	Std. Dev.	Don't know	False	True	Total
1	Awarding tokens or points which are depended upon specified behaviours is appropriate for handling pupils with ADHD.	1.31	.872	64 (27.2)	35 (14.9)	136 (57.9)	235 (100)
2	I am not well skilled in implementing this strategy	1.22	.786	52 (22.1)	79 (33.6)	104 (44.3)	235 (100)
3	Token economy strategy is effective in helping pupils who exhibit inattention, hyperactivity, and/or impulsivity (evenif they are taking medication for these symptoms)	1.23	.877	69 (29.40)	42 (17.9)	124 (52.8)	235 (100)
4	The time and resources to implement this intervention is not available.	1.06	.769	62 (26.4)	97 (41.3)	76 (32.3)	235 (100)
<b>Weighted average</b>				<b>1.21 (40%)</b>			

In terms of use of token economy, the results in Table 2b show that 136 (57.9%) of the teachers accepted it is true that awarding tokens or points which are depended upon specified behaviours is appropriate for handling pupils with ADHD and 124 (52.8%) believe it is the most effective. Also, majority of them believed that there were time and resources to implement this strategy only that 52.8% of them, which is more than half the population responded they did not have the technical know-how to use it. From the weighted average of the result which is 1.21 (40%), it shows that there is low knowledge of use of token economy as a support strategy for handling children with ADHD among the participants.



**Table 2c:** Teachers' Knowledge of time-out from positive reinforcement as support strategy used in handling pupils with ADHD

S/N	Statements	Mean	Std. Dev.	Don't know	False	True	Total
1	Restricting the child's access to positive reinforcement such as placing the child in the corner of the room on a chair can be best approach in handling pupils with ADHD.	1.06	.780	65 (27.7)	92 (39.1)	78 (33.2)	235 (100)
2	Time-out positive reinforcement strategy is effective in helping pupils who exhibit inattention, hyperactivity, and/or impulsivity (event if they are taking medication for these symptoms).	1.26	.841	51 (21.7)	79 (33.6)	105 (44.7)	235 (100)
3	The time and resources to implement this intervention are not available.	1.10	.820	56 (23.8)	63 (26.8)	116 (49.3)	235 (100)
4	I am not well skilled in implementing this strategy	1.21	.843	62 (26.4)	56 (23.8)	117 (49.8)	235 (100)
<b>Weighted average</b>				<b>1.16 (39%)</b>			

With regards to the use of time-out from positive reinforcement, the result in Table 2c shows that most of the teacher, that is 65 (27.7%) do not have the knowledge that restricting the child's access to positive reinforcement such as placing the child in the corner of the room on a chair can be best approach in handling students with ADHD and 92 (39.1%) responded false to the idea. Added to that 116 (49.3%) of them believed time and resource for implementing this strategy was unavailable and majority, 117 (49.8%) responded that they did not have the skill to use the method. From the weighted average of the result which is 1.16 (39%), it shows that there is low knowledge of use of time-out from positive reinforcement as a support strategy for handling children with ADHD among the participants.

**Table 2d: Teachers' Knowledge of Home-based Contingency as Support Strategy used in Handling Pupils with ADHD**

S/N	Statements	Mean	Std. Dev.	Don't know	False	True	Total
1	Combining school and home efforts to improve child's classroom behaviour is a suitable strategy for handling pupils with ADHD.	1.53	.791	44 (18.7)	23 (9.8)	168 (71.5)	235 (100)
2	The time and resources to implement this intervention is not available.	1.24	.784	51 (21.7)	79 (33.6)	105 (44.7)	235 (100)
3	I am not well skilled in implementing this strategy.	1.26	.819	56 (23.8)	63 (26.8)	116 (49.3)	235 (100)
4	Home-based contingencies strategy is effective in helping pupils who exhibit inattention, hyperactivity, and/or impulsivity (even if they are taking medication for these symptoms).	1.23	.843	62 (26.4)	56 (23.8)	117 (49.8)	235 (100)
<b>Weighted average</b>				<b>1.32 (44%)</b>			

In terms of home-based strategy, the results in Table 2d show that just about 20% of the teachers did not have the knowledge of this strategy as to combining school and home efforts to improve child's classroom behaviour for handling pupils with ADHD. Whereas, 168 (71.5%) of them were aware about the strategy, majority of them, that is 117 (49.8%) accepted true that it could be effective in handling the disorder. What appears to be the major problem from the result is that most of them did not have the skill to implement the strategy. From the weighted average of the result which is 1.32 (44%), it shows that there is low knowledge of home-based contingency as a support strategy for handling children with ADHD among the participants in general.

**Table 2e: Teachers' Knowledge of Structure as Support Strategy used in Handling Pupils with ADHD**

S/N	Statements	Mean	Std. Dev.	Don't know	False	True	Total
1	Providing organisation in the classroom such as pupils with daily schedule is a suitable strategy for handling pupils with ADHD.	1.50	.807	47 (20)	23 (9.8)	165 (70.2)	235 (100)
2	The time and resources to implement this intervention is not available.	1.11	.741	53 (22.6)	104 (44.3)	78 (33.2)	235 (100)
3	I am not well skilled in implementing this strategy.	1.22	.829	60 (25.5)	63 (26.8)	111 (47.2)	234 (99)
4	Structure of the classroom strategy is effective in helping pupils who exhibit inattention, hyperactivity, and/or impulsivity (even if they are taking medication for these symptoms).	.98	.688	58 (24.7)	124 (52.8)	53 (22.6)	235 (100)
<b>Weighted average</b>				<b>1.20 (40%)</b>			

In terms of home-based strategy, the results in Table 2e show that just about 20% of the teachers do not have the knowledge of the strategy that providing organisation in the classroom such as providing pupils with daily schedule was a suitable strategy for handling pupils with ADHD, while 165 (70.2%) of them were aware about the strategy, majority of them. However, 124 (52.8%) did not believe it could be effective in handling the disorder and most of them, that is 111 (47.2%) did not think that the resources to implement it is unavailable. However, 63 (26.8%) believed they are able to use it. From the weighted average of the result which is 1.20 (40%), it shows that there is low knowledge of attention as a support strategy for handling children with ADHD among the teachers in general.

**Table 2f: Teachers' Knowledge of Physical Arrangement as Support Strategy used in Handling Pupils with ADHD**

S/N	Statements	Mean	Std. Dev.	Don't know	False	True	Total
1	Arranging seats in classrooms, such as having pupils with ADHD in close proximity to teacher can reduce ADHD in pupils.	1.48	.813	48 (20.4)	26 (11.1)	161 (68.5)	235 (100)
2	Physical arrangement strategy is effective in helping pupils who exhibit inattention, hyperactivity, and/or impulsivity (even if they are taking medication for these symptoms)	1.47	.807	47 (20)	30 (12.8)	158 (67.2)	235 (100)
3	I am not well skilled in implementing this strategy	1.30	.826	55 (23.4)	54 (23)	126 (53.6)	235 (100)
4	The time and resources to implement this intervention is not available.	1.18	.833	64 (27.2)	65 (27.7)	106 (45.1)	235 (100)
<b>Weighted average</b>				<b>1.33 (44%)</b>			

With regards to the use of physical arrangement, the results in Table 2f show that arranging seats in classrooms, such as having pupils with ADHD in close proximity to teacher can reduce ADHD in pupils, 161 (68.5%) of them know it is one of the strategies being used which shows that majority of them are aware, and in the same manner, 158 (67.2%) of them believe it is an effective method. Again, the major difficulty in the view of many of them regards the unavailability of time and resources to implement the task and the inadequate skill to use the strategy. Only about 55% of them believe they are able to implement the skill. From the weighted average of the result which is 1.33 (44%), it shows that there is low knowledge of physical arrangement as a support strategy for handling children with ADHD among the teachers in general.

**Table 2g: Teachers' Knowledge of Varied Presentation and Format of Materials as Support Strategy used in Handling Pupils with ADHD**

S/N	Statements	Mean	Std. Dev.	Don't know	False	True	Total
1	Using different modalities such as videos, overheads, posters, models, as well as adding colour, shape, or texture can reduce ADHD in pupils.	1.51	.781	42 (17.9)	30 (12.8)	163 (69.4)	235 (100)
2	Varied presentation and format of materials strategy is effective in helping pupils who exhibit inattention, hyperactivity, and/or impulsivity (even if they are taking medication for these symptoms).	1.42	.804	47 (20)	42 (17.9)	146 (62.1)	235 (100)
3	I am not well skilled in implementing this strategy	1.22	.797	54 (23)	75 (31.9)	106 (45.1)	235 (100)
4	The time and resources to implement this intervention is not available.	1.14	.769	55 (23.4)	92 (39.1)	88 (37.4)	235 (100)
<b>Weighted Average</b>				<b>1.32 (44%)</b>			

In addition, in terms of use of presentation and format of materials, 163 (69.4%) which also covers more than half of the population accepted true that using different modalities such as videos, overheads, posters, models, as well as adding colour, shape, or texture can reduce ADHD in pupils. And in terms of whether they believe it is an effective support strategy, 62.1% of them believe it is true. However, 106 (45.1%) responded they did not have the technical knowhow to implement the strategy while 75 (31.9%) believed they are well able. From the weighted average of the result which is 1.23 (44%), it shows that there is low knowledge of attention as a support strategy for handling children with ADHD among the participants.

### Discussion

The findings of this study revealed that pre-primary and primary school teachers had a positive perception of ADHD (Table 1); this indicates that the positive views/ perception may be attributed to increase in the level of teachers' awareness. This contradicts the findings of Harrison and Rush (2008) which concluded that teachers develop negative perceptions through the frustrating classroom experiences with these types of pupils.

Majority of the participants like the results across the literature, perceived ADHD to impact educational experiences of the pupils with the disorder. The teachers in this study agreed that they could benefit from additional training on ADHD and this finding is in line with the submission of Bussing et al., (1998), Harrison and Rush (2008), which stated that there is the growing need of ADHD training in general educational pre-service training (Table 4.1). Additionally, more than half of the teachers in this study agreed that ADHD is due to parenting spoiling and this is in line with the findings of Novilitis and Fang (2005); Bekle (2004) which revealed that parenting style can cause ADHD. Majority of the teachers in this study are also alert to the vital role of parents in remedial efforts. 68% of the participants stressed that parental involvement is an essential part in the intervention process for pupils with ADHD. A similar ratio was reported among the American teachers (Arica et al., 2000). Majority of teachers in this study perceived that stimulant medication can increase the child's attention and concentration (Table 4.1), this finding is in agreement with Barkley (1998), who found out that giving stimulants to pupils with ADHD had the unexpected effect of calming them down.

Equally, majority of the teachers in this study perceived themselves to be confident in their ability to teach pupils with ADHD, this is in agreement with Kos et al., (2006) which submitted that teachers generally perceived themselves as being competent to handle these children. These perceptions may decrease teachers' level of stress during classroom interaction since they can seek psychological and parental support in their daily interaction with ADHD pupils. A number of authors suggested that environmental factors such as class size and culture may influence teachers' perception of ADHD and which pupils have ADHD (Einarsdottir 2008). Since each pupil has unique needs, it is important for teachers to be able to have a repertoire of strategies in order to best meet the needs of pupils, especially those that are exhibiting difficulties such as ADHD, few of these studies specifically asked question regarding the various empirically supported strategies to be used for pupils with ADHD (Stacey 2003). In this study, the knowledge of such empirically supported strategies were used, the findings revealed that majority of the participants have perceived knowledge that all the measured strategies are appropriate for handling pupils with ADHD (Tables 2a, 2b, 2c, 2d, 4.2e, 2f and 2g), but their knowledge of most of the strategies via their weighted averages is low in general: Teachers' Attention 85% (2.25); Token Economy 40% (1.21); Time-out of Positive Reinforcement 39% (1.16); Home-based contingency 44% (1.32); Structure 40% (1.20); Physical Arrangement 44% (1.33) and Varied Presentation and Format of materials 44% (1.32). This means that the participants' knowledge of Teachers' Attention is high while their knowledge of the remaining strategies is low. This could be as a result of them not having time, skills and resources to implement the strategies. This finding is in contrast with the findings of Stacey (2003) where teachers believed that they knew more about instructional management techniques such as attention, physical arrangement of the classroom, structure and varied presentation and. They felt they knew less about behavioural methods such as Token economy, response cost and Time-out from positive reinforcement.

## Conclusion

This study investigated teachers' perception of ADHD and their knowledge of strategies used with pupils with the disorder in Ikere- Ekiti. The results of the study have established that majority of pre-primary and primary school teachers have positive perception of ADHD even though their level of perception of ADHD still needs to be increased. The results of the study specifically showed that majority of the participants perceived that all the measured strategies are appropriate for pupils with ADHD but in general, their knowledge of these strategies is low.

## Recommendations

Based on the findings of this study, the followings are recommended:

- !▶▶ The success of ADHD pupils at school is mostly influenced by the classroom teachers; therefore, teachers should participate in the pre-service and in-service training, workshops and seminars on ADHD. Those that participate will not only acquire the competence to teach pupils with the disorder but also develop their knowledge base, perception towards the pupils having the disorder.
- !▶▶ It should be noted that unless support services are provided for teachers in teaching pupils with ADHD, not much success can be achieved. It is therefore recommended that support staff should be recruited to all pre-primary and primary schools for better performance.
- !▶▶ The federal, state governments and all private school owners are the major employers of teachers and so should encourage the teachers through regular training and improved condition of service. It is recommended therefore that there should be improvement in the funding of regular schools.
- !▶▶ Government should make efforts to restructure the teacher education programmes by introducing a course such as Early Childhood special Education to increase the level of preparedness of prospective primary school teachers before they graduate and enter into teaching profession.
- !▶▶ Schools should be provided with learning materials by government and all private schools owners that can appeal to pupils' sense of sight to really sustain their attentions in classroom situations. Equally, teachers should be given time and resources to implement the support strategies for pupils with ADHD. ▶▶ Schools should be provided with learning materials by government and all private schools owners that can appeal to pupils' sense of sight to really sustain their attentions in classroom situations. Equally, teachers should be given time and resources to implement the support strategies for pupils with ADHD.

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