

## AWARENESS AND ATTITUDE OF PRIMARY SCHOOL TEACHERS IN KANO METROPOLIS, NIGERIA TOWARDS PUPILS WITH LEARNING DISABILITIES, HOW EFFECTIVE IS THE SCHOOL HEALTH PROGRAMME?

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### ABSTRACT

**Background:** Teachers have central role in identification and management of children with learning disabilities.

**Objectives:** Ten years after drafting the national guidelines for implementation of school health programme in Nigeria, this study assessed awareness and attitude of primary school teachers in Kano metropolis towards children with learning disabilities as proxy for the effectiveness of school health programme.

**Method:** A descriptive cross-sectional design was used to study a random sample of 186 primary school teachers in Kano. Data was collected with the aid of a self-administered semi-structured questionnaire, and analyzed using IBM SPSS Statistics for Windows, version 22.

**Result:** The mean age of the teachers was  $32.8 \pm 7.8$  years. Majority had post-secondary school education 170(91.9%) and had worked for an average of  $7.5 \pm 6.8$  years. About half 98(53.0%) were aware of a link between lack of academic progression in children and some probable medical condition(s), but none of them knew the characteristics of learning disabilities. About one-quarter of the teachers 52(28.1%) had negative attitude towards pupils with learning disability. Teaching in a large class was the only factor that emerged as the independent predictor of the teachers' positive attitude towards students with learning disabilities.

**Conclusion:** Majority of the teachers had positive attitude towards pupils with learning disabilities but none of them could identify the features of such children. Ministries of health and education should work closely with development partners and interested researchers to resuscitate the school health programme.

**Keywords:** Learning disabilities, Primary school teachers, Awareness, Attitude, Kano-Nigeria

### INTRODUCTION

While it is normal for children to have trouble with learning from time to time, a disability is suspected if a certain area of learning consistently becomes a problem. A learning disability according to medical and mental health professionals is a neurobiological disorder of cognitive and/or language processing caused by atypical brain functioning, and results in discrepancy between the child's achievement and his/her actual intellectual

ability in oral, listening, comprehension, reading, written expression, mathematics calculation, and mathematical reasoning skills;<sup>1</sup> and in a manner that it interferes with school performance and/or daily functioning.<sup>2</sup>

Learning disabilities (LD) affect about 1-2.5% of the general population and 10-15% of school-aged children.<sup>2,3</sup> Verbal and non-verbal learning disabilities are described in the literature.<sup>4</sup> The verbal subtype is characterized by relative deficits

in language skills (e.g. dyslexia and specific language impairment,<sup>5</sup> whereas the non-verbal disability manifest impaired visual-spatial abilities (e.g. dyscalculia and non-verbal learning disorder (NLD)).<sup>6,7</sup> The subtypes of learning disabilities may occur in combination with each other, or with certain social skill deficits and emotional or behavioural disorders such as attention deficit disorder.<sup>8,9</sup> In all cases however, negative effect of the condition in children include among others low self esteem, behavioural and social problems including truant behaviour and school absenteeism; and eventually frustration, dropping out of school and other juvenile delinquencies.<sup>10</sup> The situation may be worrisome and distressing to the parents, other members of the family, community and the teachers who may find it hard to communicate or understand the child's behaviour. There is no "cure" for learning disabilities but early intervention can provide tools and strategies to lessen their effects.<sup>11</sup> Studies have shown that early identification and multidisciplinary intervention of learning disabilities yield good results.<sup>12,13</sup>

Teachers, by virtue of their proximity and frequent contact with pupils in the class room or during screening as part of the school health service have a central role to play in identifying and reporting symptoms of the condition, advising parents to seek medical care and assisting children with the problem to get around the disability and achieve academically and socially productive lives. Empirical evidence suggest that teachers' awareness and attitude towards children with learning disability influence their learning and behavioural outcomes.<sup>14-16</sup>

The implementation guidelines on National school health programme in Nigeria was developed in 2006.<sup>17</sup> Ten years into the life of this document this study assessed the awareness of learning disabilities and attitude of primary school teachers in Kano metropolis towards children with learning disabilities as proxy for the effectiveness of the programme. Findings from the study will be useful to policy makers and programme managers in Education sector, the educationists and researchers for monitoring purposes, and in conceptualizing formidable interventions towards achieving universal basic education and the goal of "health for all".

## MATERIALS AND METHOD

### *Study Area/Setting*

Kano is cosmopolitan state located in the northwestern zone of Nigeria; it covers an area of 20,760 sq. km and a population of 9,383,682 based on 2006 national census, making it one of largest and most populous states in Nigeria.<sup>18</sup> Kano metropolis is comprised of eight local government areas: Kano municipal, Dala, Gwale, Fagge, Nassarawa, Tarauni, Ungogo and Kumbotso. It covers a land area of 499sq.km, and has a population of 2,828,861 according to 2006 population census.<sup>18</sup>

Kano state has several federal and state owned educational institutions located across both urban and rural communities, although majority are around Kano metropolis. Like in many parts of Nigeria, there has been a perpetual failure of significant number of students at the different levels of the qualifying national examinations.

### *Study design*

A descriptive cross-sectional design was used for the study.

### *Study population/Inclusion criteria*

This was comprised of teachers from both public and private primary schools in Kano metropolis.

### *Sample size determination*

A sample of 185 primary school teachers was determined using the Fisher's formula for estimating minimum sample size for descriptive studies [ $n = z^2pq/d^2$ ],<sup>19</sup> based on a standard normal deviate (z) 1.96 at 95% confidence interval; margin of error (d) 0.05 and a 90% knowledge of learning disabilities among primary school teachers in Ile-Ife, Nigeria.<sup>20</sup>

### *Sampling technique*

A 2 - stage sampling technique was used for selection of the study subjects. At first stage, the primary schools in Kano metropolis were stratified in public and private and 10 schools were randomly selected from each of the categories by simple balloting. At the second stage, the lists of all teachers in each of the selected schools were compiled and between 9 and 10 teachers were randomly selected in the same fashion as described above until the sample size was met.

### *Instrument description and method of data collection*

A self-administered semi-structured questionnaire with mostly closed questions was used for data collection. The questionnaire elicited information on the respondents' bio-data, their awareness of learning difficulties, and the teachers' attitudes toward children with learning difficulties.

Pre-testing of the questionnaire was done on twenty (20) teachers in Danbatta, one of the LGAs outside the study area. The questionnaires were administered by six trained research assistants.

### *Data management and analysis*

Data was analyzed using IBM SPSS Statistics for Windows, version 22. Armonk, NY: IBM Corp. Quantitative variables were summarized using appropriate measures of location and variability, whereas categorical variables were presented as frequencies and percentages. The teachers' attitude towards children with learning disability was scored and graded using a system adapted from a past study,<sup>21</sup> where attitude was scored on a Likert scale ranging from 1 to 3 from "Agree" - (3) through "Indifferent" - (2) to "Disagree" - (1), indicating respondents' level of agreement with specific statements regarding the children. Each correct response attracted two (2) points whereas neutral and incorrect responses attracted one (1) and zero (0) points respectively. Out of a total of 22 points, respondents that scored 0-11 points were considered to have negative attitude whereas those that scored 12-22 points were adjudged to have positive attitude towards children with learning disabilities.

Pearson's chi-square and Fisher's exact probability tests were used to identify factors significantly associated with the teacher's attitude towards learning disability at bi-variate level.  $P < 0.05$  was considered significant. Covariates that were associated with teachers' attitude (adjusting for age and sex) with  $p < 0.2$  were included in the multivariable analysis. Variables were included in model if they resulted in  $>10\%$  change-in-estimate or a change in log likelihood with  $p\text{-value} < 0.2$ . Variables that resulted in change in coefficient standard errors of already included variables by  $>20\%$  were assumed to be collinear and excluded from the model.

### *Ethical considerations*

Informed consent was obtained from prospective respondents before questionnaire administration. The consent form was in the local language (Hausa), and literate respondents indicated acceptance by signing the consent form while the non-literate ones affixed their thumbprints. Permission and ethical clearance for the study were obtained from the Kano State Primary Health Care Management Board and the Institutional Review Board of Aminu Kano Teaching Hospital respectively. Data was collected in February/March, 2015.

## RESULTS

### **Socio-demographic characteristics**

The mean age of the teachers studied was  $32.8 \pm 7.8$  years. Majority was in the age range of 20-40 years 157(84.8%), had post secondary school education 170(91.9%), and teach either of Mathematics, English or Art-based subjects 133(71.9%) at primary 4 - 6, 85(45.9%) or primary 1-3, 80(43.2%). The teachers had worked for an average of  $7.5 \pm 6.8$  years. The number of students per class taught by the teachers ranged from 8 to 250 with a mean of  $34.0 \pm 20.2$  per class. The socio-demographic characteristics of the teachers are summarized in Table 1.

### **Awareness of learning disabilities**

About half of the school teachers 98(53.0%) were aware of a link between lack of academic progression among children and some probable medical condition(s) requiring medical attention in children. About a quarter of the teachers 38(20.5%) knew that students with learning disabilities subconsciously loose attention during lessons in class or have genuine difficulty understanding lessons. However, none of the teachers knew that frequently occurring writing difficulties (dyslexia), problems with calculations (dyscalculia), problem of comprehension or attention deficit hyperactive disorder are associated with learning disabilities, and none of them knew the ways to identify students with the problems.

### **Attitude of teachers towards pupils with learning disabilities**

The parameters used for assessing the teachers'

attitude towards pupils with learning disabilities are as summarized in Table 2. More than three-quarters of the teachers agreed with most of the statements that elicited their willingness to take responsibility for identification or support of the children with learning disabilities in the classroom except for the statement that good teachers must always be willing to teach a class of pupils with learning disabilities that was agreed to by only 77 (41.6%) of the teachers. On the other hand, less than 40.0% of the teachers think positively about the children with the condition. Specifically, 14 (7.6%) did not agree that pupils with learning disability acquired it as punishment from God because of the bad deeds of their parents, 36 (19.5%) did not agree that the pupils cannot be treated because they inherited the condition from their parents and 52 (28.1%) did not agree that the children should be punished when they fail a task to make them sit up.

Overall, 52 (28.1%) of the teachers were assessed to have negative attitude towards pupils with learning disability (Table 2). On bi-variate analysis, neither the age, sex, educational status or marital status of the teachers nor their duration of teaching experience or the size of students per class were significantly associated with the teachers' attitude towards learning disability as shown in Table 3. On binary logistic regression however, using a model consisting of teachers' age  $\geq 35$  year' and female sex, considered as the 'a priori variables', in addition to large class size and being ever married, large class size was the only factor that emerged as the independent predictor of the teachers positive attitude towards students with learning disabilities (Table 3).

**Table I:** Socio-demographic characteristics of the Teachers

Characteristic	Frequency (n = 185)	Percentage (%)
<b>Age (Years)</b>	87	47.0
20 - 30	70	37.8
31 - 40	22	11.9
41 - 50	6	3.2
>50	32.8±7.8	
Mean ± SD		
<b>Sex</b>	95	51.3
Male	90	48.7
Female		
<b>Highest Level of education</b>	8	4.3
Secondary	170	91.9
Post secondary (OND, NCE, HND)	7	3.8
University degree		
<b>Years of teaching experience</b>	124	67.0
1 - 8	37	20.0
9 - 16	24	13.0
> 16	7.5 ± 6.6	
Mean ± SD		
<b>Class of teaching</b>	20	10.8
Kindergarten	80	43.2
Primary 1 - 3	85	45.9
Primary 4 - 6		
<b>Subjects taught</b>	52	28.1
Mathematics	39	21.1
English	28	15.1
Science based subject(s)	24	13.0
Social science based subject(s)	42	22.7
Art-based subject(s)		
<b>Class size</b>	106	57.3
1 - 34	77	41.6
35 - 68	2	1.1
> 68	34 ± 20.2	
Mean ± SD		

**Table 2:** Parameters used for assessing the teachers' attitude towards pupils with learning disabilities

Parameters	Frequency (n = 185)	Percentage (%)
Agreed that teachers have a central role in identifying pupils with learning disabilities early enough	149	80.5
Agreed that teachers must walk around the class while teaching to enable them locate any child with features of learning difficulty early enough	164	88.6
Agreed that teachers that do not care about their pupils' learning problems are not fit to teach	146	78.9
Agreed that all teachers must undergo a course/training on Special education	141	76.2
Agreed that head teachers should ensure that other teachers devote special/extra periods to pupils with learning disabilities	135	73.0
Agreed that good teachers must always be willing to teach a class of pupils with learning disabilities	77	41.6
Did not agree that pupils with learning disabilities cannot be treated because they inherited their condition from their parents	36	19.5
Did not agree that pupils with learning disabilities acquired it as punishment from God because of the bad deeds of their parents	14	7.6
Did not agree that pupils with learning disabilities are just lazy and playful	68	36.8
Did not agree that pupils with learning disabilities developed the condition because they lack proper home upbringing	60	32.4
Did not agree that punishing pupils with learning difficulties when they fail a task will make them sit up to their expectations	52	28.1
<i>Attitude grade</i>	133	71.9
Positive	52	28.1
Negative		

**Table 3:** Factors associated with the teachers' attitude towards pupils with learning disabilities

Characteristic	Bi - variate			Binary logistic regression		
	Positive attitude (n = 133)	Total (N =185)	Chi-square (p value)	Crude OR (95%C.I)	Z test	Adjusted OR (95%C.I)
Age 35 years	43 (32.3)	66	2.31 (0.13)	0.60(0.31; 1.16)	2.06 (0.04)*	0.42 (0.18; 0.96)
Female sex	66 (49.6)	90	0.18 (0.67)	1.15(0.60; 2.18)	0.03 (0.98)	1.01 (0.52; 1.97)
Being ever married	93 (69.9)	128	0.12 (0.73)	0.78(0.41; 1.51)	1.06 (0.29)	1.56 (0.69; 3.54)
Large class size (Students' number in class > 35)	74 (55.6)	106	0.54 (0.46)	1.13(0.57; 2.25)	1.22 (0.22)	0.64 (0.31;1.31)

\*Statistically significant

## DISCUSSION

Learning disability in children become noticeable when they enter school and fail to acquire academic skills, or when they develop emotional problems after several years of repeated failures and students become more conscious of their poor achievement in comparison with their peers. The condition can also be identified early when children interact with experienced teachers, or during screening of pupils as part of school health programme. School health programme refers to all aspect of school programme which contribute to the understanding, maintenance and improvement of health of school population, and consists mainly of school health services, school health instruction and healthful school environment.<sup>22</sup> The programme is designed to ensure that school pupils are as healthy as possible and to obtain the maximum benefit from their education with the environment safe and conducive for learning.<sup>17</sup> An effective school health programme can be one of the most cost effective investments a nation can make to simultaneously improve education and health.<sup>17,22</sup> The success of this programme therefore is tied to teachers' awareness, involvement and attitude towards it.

Although about half of the teachers interviewed in this study were aware of a link between failure of a pupil to progress in class and some form of health problem associated with learning, only a quarter knew correctly that the condition genuinely required medical attention. This finding does not augur well for any effective school health service that should facilitate early detection and diagnosis of diseases and other medical conditions in order to provide or link up prompt intervention to reduce school-age morbidity and mortality. This invariably requires a concerted effort of health personnel, teachers, parents, and the government.<sup>23</sup> Bringing a child's condition to the attention of parents and authorities through performance of periodic health appraisal on all school children, continuous alertness over the health needs of pupils in class as well as initiating specific screening procedures to identify faltering growth and development is one of the key roles of school teachers under school health service.<sup>21</sup> Sadly however, none of the teachers examined could describe and/ or identify pupils with any learning disability despite having frequent contact with the pupils. Awareness of learning disabilities was also found to be deficient among primary school

teachers in southern Nigeria,<sup>24</sup> and in Tanzania.<sup>12</sup> Contrarily, previous studies from Ile-Ife, Nigeria,<sup>19</sup> twin cities of Hyderabad and Secundrabad in India,<sup>25</sup> and Israel<sup>26</sup> reported that primary school teachers were well aware of various aspects related to learning disabilities. The awareness of learning disabilities or lack of it in Nigeria may not be unconnected with the neglect suffered by the programme in the country.<sup>27</sup>

Despite the deficiency observed in the teachers 'awareness of learning disabilities in this study, majority of the teachers assessed were paradoxically found to have positive attitude towards children with the condition. This finding is not consistent with empirical literature suggesting that increases in knowledge are associated with greater influences of attitudes on behaviour.<sup>28</sup> The bizarre finding may perhaps have occurred from social desirability. Thus, good knowledge of the various aspects of learning disabilities and its management among primary school teachers is pivotal to the way and manner affected children are identified and promptly treated. Maintenance of 'Healthy school' is necessary for achieving goals 3 and 4 of sustainable development goals of good health and well-being, and quality education.<sup>29</sup>

### Limitations

The study encountered few limitations: it was limited only to Kano metropolis and as such subject to selection bias as other areas outside the metropolis were excluded; the prevalence of learning disability could not be assessed because teachers were randomly selected, since study was not limited to head teachers or teachers that are custodians of students information. The study was conducted only in public and private primary schools within Kano metropolis and as such findings may not be generalizable to all settings of primary schools.

### CONCLUSION

Although about half of the teachers could link lack of progression of pupils in class to some probable medical condition(s), none of them could identify specific learning disabilities. Paradoxically, majority of the teachers were found to have positive attitude towards pupils with learning disabilities. In view of the findings of this study, it is recommended that the ministries of health and

education should work closely with development partners and interested researchers to resuscitate school health programme. In the interim, in-service training and regular capacity building updates should be organized for all primary school teachers.

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## ERRATUM

A mistake was made in volume 9 issue 2 of KJMS article number 4 pages 64 where the title read: PRESCRIPTION PATTERN OF FIRST LINE HAART REGIMEN AMONG TREATMENT-NAÏVE HIV-INFECTED ADULTS AND ADOLESCENTS AT A TERTIARY HOSPITAL IN NORTH EASTERN NIGERIA

<sup>1</sup>Mishemi, F.M., <sup>1</sup>Ikuanaye, N.A., <sup>2</sup>Uthman G.S.

It should please read:

PRESCRIPTION PATTERN OF FIRST LINE HAART REGIMEN AMONG TREATMENT-NAÏVE HIV-INFECTED ADULTS AND ADOLESCENTS AT A TERTIARY HOSPITAL IN NORTH EASTERN NIGERIA

<sup>1</sup>Mishemi, F.M., <sup>1</sup>Ikunaiye, N.Y., <sup>2</sup>Uthman G.S.

The error is highly regretted.