



Knowledge of dyslexia amongst primary school teachers in rivers state

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Abstract

This study evaluated the knowledge of dyslexia amongst primary school teachers in Phalga Rivers State and their present ability to recognize early signs of dyslexia. A sample of 200 teachers drawn from 2005 primary school teachers in Phalga Rivers State was used in the study. A reviewed likert 4point scale questionnaire was used and analyzed using means, standard deviation and Z test for research questions and hypothesis respectively. This study revealed that primary school teachers in Phalga Rivers State did not have adequate knowledge of dyslexia and did not have adequate knowledge of the early signs of dyslexia. Based on these findings, it is recommended that in-service training be organized for serving teacher to equip them with the knowledge of dyslexia.

Keywords: Dyslexia, Specific learning disability, teacher's knowledge

Introduction

Background to the Study

A lot of pupils are faced with different degrees and types of difficulties in their studies. Most times they are not bold enough to talk about their struggles with their teachers or parents. A number of pupils have specific learning disabilities. Specific learning disabilities represent a number of learning difficulties that pupils go through in their academic pursuit. Ugwu, (2015)^[38] views Learning disability as a neurological condition that affects individual's ability to process, store, and reproduce information. This is to say that learning disabilities are disabilities which are neurological in nature, and has to do with cognition. Pupils with learning disabilities have poor; reception, recognition, organization, storage, retrieval and reproduction of information.

Succinctly put, at contact with most information, pupil with specific learning difficulty do not receive, recognize, store, decode and reproduce such information on demand. Thus it is imperative to deduce that information transiting from the senses to the brain may encounter some difficulties or may be distorted. Specific learning disabilities include; dyslexia, dysgraphia, and dyscalculia, Prominent among specific learning disabilities is dyslexia. Dyslexia is learning disability that basically affects how pupils read. It is simply put difficulty in reading. According to Ugwu (2015)^[38], dyslexia is a severe problem in learning to read with normal proficiency despite conventional instruction, proper motivation, intact senses, normal intelligence and freedom from gross neurological deficit. Thus dyslexia is a language based disability and results from poor decoding ability; this according to Bender, (2001) affects more than half of pupils with learning disabilities.

Pupils with dyslexia may be able to read, but reads at a level lower than expected for their age and level of study. Their proficiency in reading is poor and sometimes below average depending on the severity of the disability. This difficulty in reading is irrespective of required motivation from both teachers and learning environment. For a pupil to be labeled Dyslexic, such pupil's senses are intact and functions

maximally. This also means that pupils diagnosed for dyslexia are not at the same time diagnosed for mental retardation, health impairments and behavioral or emotional disturbances. Thus a pupil is labeled dyslexic when these impairments and disturbances are carefully ruled out (John-Adubasin 2018).

Over the years, teachers have shown concern over pupils who are intelligent, normal, and healthy but at the same time struggle with reading, spelling and writing. Reading and spelling difficulties are key features in the concept of dyslexia. The International Dyslexia Association posits that an estimated 15-20% of the world's population experience at least one symptom of dyslexia or the other (IDA, 2007). Some researchers conducted study in Britain, America and Sweden and their findings indicate that 30-52% of prison inmates in these countries are dyslexic (Elias, 2014)^[32]. This finding is very important, this is to say that as much as at least one out of every seven persons in the world shows one symptom of dyslexia or the other, and a hand full of the population of British, American and Swedish prisoners are dyslexic. So also, Washburn, Erin, Joshi, Malatesha, Binks-Cantrell & Emily, (2011)^[41] assert that one out of every five persons in the United States of America show one or more symptoms of dyslexia, thus one fifth of Americans show symptoms of dyslexia. This makes it a problem to be taken seriously by the educational system whose responsibility it is to combat this phenomenon with the required and necessary force. An earlier survey by the researcher showed that one out of every three children in public primary schools in phalga Rivers State showed at least one symptom of dyslexia and have a reading disability.

The question on the lips of parents and teachers have always been why is it so easy for some pupil to read, solve mathematical problems, spell and write effectively while some other pupils of same age and in same class struggle endlessly to achieve a pass grade on any reading, math, spelling and writing tasks?. The greater Part of this problem has been how to effectively understand these disabilities and subsequently manage them. To this end lots of researches

have been carried out and are ongoing into these learning disabilities with the aim of understanding the etiology, epidemiology and management of these learning disabilities. Unfortunately for pupils living with dyslexia the most popular examination structures are based on time limit which pupil must adhere to, and demands speed and high levels of literacy (Mortimore & Crozier, 2006 in Elias, 2014) ^[27, 32]. This makes it difficult for dyslexic pupil to achieve as much as their counterparts who are not dyslexic. Pupils with dyslexia are continuously seen as failures or performing below average in virtually all academic evaluations. There are lots of misconceptions about dyslexia amongst teachers and wider society. These misconceptions and myths include; dyslexics see words backward, Left handed people are more likely to be dyslexic, dyslexics are not intelligent, dyslexics are lazy and stupid, dyslexia is gender relative, common to boys only, dyslexia can be cured using an eye tracking exercise, dyslexics cannot read, dyslexics have mental problem. These misconceptions have adverse effect on how dyslexia and dyslexics should be managed (Wadlington & Wadlington, 2005) ^[39].

A teacher can only offer what he has. Rose (2009) ^[36] asserts that the quality of an educational system is the product of its teachers. The quality of the teachers, their general knowledge, competence, level of intelligence and knowledge of the subjects they teach affects the quality of pupils the educational system produces. This also implies that teacher's knowledge of dyslexia is very important in the diagnosis, management and support offered to pupils living with dyslexia. A teacher with adequate knowledge and awareness of dyslexia is required to teach or support pupils with dyslexia. This is necessary as most classes have pupils with different needs both intellectual or learning need and physical disabilities, thus the teachers knowledge of these specific need areas and availability of support system within the educational system will impact coping for these pupils. Inclusive education which was initiated as a means of educating children with different levels of disability in the same class room in public school is prominent in our Nigerian educational system (Obi, 2006 in Ugwu 2015) ^[31, 38]. Inclusion saddles the teacher with the responsibilities of acquiring expertise and adequate knowledge of the special need area of these pupils which they will encounter at one stage of their career or the other. But most teachers do not have the necessary skills to assist learner of different educational needs. Consequently, Rose (2009) ^[36] agreeing with Hayes (2000) ^[10] posits that teachers need more and adequate training to be able to shoulder the enormous task of special needs pupils, especially dyslexics.

The fact that pupils living with dyslexia perform poorly in regular class room setting makes it imperative that they would require additional assistance and support from their teachers or other specialists, caregivers or tutors with adequate training for dyslexics. It takes only a teacher equipped and trained with adequate knowledge of dyslexia to give proper diagnosis which is foremost to proffering solution and support. Teachers may not give appropriate diagnoses of dyslexia but may observe some of its characteristics. Thus teacher's knowledge of specific learning disability and ability to support pupils with these learning needs exacts an important influence on what dyslexics are able to learn. This implies that for the educational system to achieve its aims and objective especially as it relates to the dyslexic pupil, it needs teachers who are both knowledgeable

about dyslexia and also know why they need to apply such knowledge in handling dyslexics (Rose, 2009) ^[36]. On the same note Carreker, Joshi & Gooden, (2010) ^[4] is of the view that development of literacy skills and good knowledge of how to confidently and effectively teach literacy (reading, Writing and spelling) is important as it enables teacher to identify areas of pupils struggle and offer required assistance. For effective support, there is need for the class size not to be large to enable teacher pay closer attention to dyslexic's specific learning needs.

Ade-Ojo (2011) ^[1] agreeing with Kerr, (2001) ^[20] posits that lack of adequate information, training and support available to teachers and pupils creates a kind of learned helplessness which determines the level of assistance and support such teacher can offer to the dyslexic pupil. Teachers are concerned about the failure rate of some pupils and have expressed their helplessness to meet the needs of these pupils because they are not adequately equipped with knowledge and training to enable them offer required assistance to these pupils with special need or learning disability (Hayes, 2000) ^[10]. Some have also claimed responsibility for the pupils' failure (kataoka, Van Kraayenoord & Elkins, 2004) ^[15]

The first point of call in accessing teacher's knowledge of specific learning disability and dyslexia is from the modules with which teachers are trained for teaching. Teacher training programs should include modules that cover special need education, this will equip teachers with knowledge of specific learning needs and subsequently empower them to offer necessary assistance to special needs pupils. Research has shown that many teachers training programs in Africa do not offer modules that present the realities of these disabilities to pre service teachers or teachers in training (Robuck, 2007) ^[35]. Some In service teachers have not given adequate attention to these disabilities to propel them to further studies in these areas of special needs, neither have schools or the various ministries of education provided in service training to equip already qualified teachers with adequate skills and knowledge in order to support pupils with specific learning disabilities (Nkabinde, 1993) ^[29]. Regular training and retraining of in service teachers is a very necessary step to improving success of pupils with learning disabilities. A study on success of pupils with specific learning disabilities reports that pupils made huge success in subjects of teachers who had good knowledge of the pupils learning challenges (Karande, Mahajan & Kulkarni 2009) ^[14]. Teachers perceived consciousness, or understanding and recognition of the concept of dyslexia is very important in the teaching and learning environment. The fact that dyslexia is a confusing terminology for some teachers makes it even more difficult to differentiate between pupils who have low or below average IQ and dyslexics (Wadlington, Jacob & Bailey, 1996)

Statement of the Problem

Learning disabilities especially dyslexia has been misunderstood over the years. Even while it is observed that some pupils have real struggles with reading and spelling, some teachers are still ignorant of the underlining factors behind this learning disability labeled dyslexia. This lack of wide spread recognition or awareness of this disability called dyslexia amongst teachers accounts for some of the difficulty in proper assessment, diagnosis and subsequent support given to these pupils. The persistent difficulties experienced by poor readers will make them get frustrated as their grades

begin to continuously fail with the accompanying difficulty they experience with school work. These difficulties with school task if not attended to may cause the pupil to experience a catalogue of emotional and psychological problems which will further jeopardize the success of such pupil and lead to so juvenile delinquencies

So far there has not been much formal training organized to equip teachers with adequate knowledge of this special need area conceptualized as dyslexia, most importantly as regards the fact that there is no formal support given to pupils living with dyslexia in Rivers State. As a result, pupils living with dyslexia have carried on their studies with all the attending frustrations and some teachers have remained ignorant of this phenomenon. This study is therefore structured to investigate the knowledge of dyslexia amongst primary school teachers in Rivers State.

Aims and objectives of the study

The objective of this study is to investigate the concept of dyslexia and its knowledge amongst primary school teachers in PHALGA, Rivers State. In specific terms, this study intends to;

1. Find out the extent of knowledge of dyslexia amongst primary school teachers in PHALGA, Rivers State.
2. Find out the ability of primary school teachers in PHALGA, Rivers State to identify the early signs of dyslexia amongst the pupils.

Research Questions

The following research questions guided this study;

1. What is the extent of knowledge of dyslexia amongst primary school teachers in PHALGA, Rivers State?
2. To what extent are primary school teachers in PHALGA, Rivers State able to identify the early signs of dyslexia?

Hypotheses

The following hypotheses were formulated for this research. The findings were tested at 0.5 level of significance.

1. There is no significant difference between the mean ratings of male and female primary school teachers' knowledge of dyslexia in PHALGA, Rivers State.
2. There is no significant difference between the mean ratings of male and female teachers on their ability to identify the early signs of dyslexia amongst primary school pupils in PHALGA, Rivers State.

Research methodology

The design for this research is survey design. This design is appropriate as it provided techniques that helped the researcher to investigate teachers' knowledge of dyslexia.

Population of the Study

The for this study is made up of 455 males and 1550 female primary school teachers Totaling 2005 in 57 public primary schools in Port Harcourt local government area (PHALGA) Rivers State. (Statistics at Post Primary Schools Board as at April 2015)

Samples and Sampling Techniques

This study adopted Random Sampling. A simple random sampling technique was used to get the sample size of this study. Ten government primary schools in Port Harcourt Local Government Area of Rivers State were randomly selected and a total of 200 teachers from these schools were used in the study.

Instrument for Data Collection

The instrument used in this research is a self-made questionnaire of teachers' knowledge of dyslexia (TKD), review of related literature and personal interview/discussions. Respondents were to respond to the questionnaire using the 4 point modified likert scale of Strongly Agree (SA), Agree (A), and Disagree (D) and Strongly Disagree (SD) respectively.

Validity of the Instrument

The construct and content validity of the instruments for this study was determined using split alpha for the internal consistency of the items. Two copies of the instrument were given to experts in the department of educational psychology and statisticians to ascertain its suitability for the research and to standardize the instrument for face (external) and content validity.

Reliability of the Instrument

A Test retest method was used to measure the stability of the instrument. This instrument was administered twice. After the first administration, the researcher reshuffled the questions and re administered the questionnaire within an interval of 3 weeks. This made the respondents to respond to the same questions afresh, and not just a repetition of previously answered questions.

Data Analysis

The data collected for this study was analyzed using mean for the research questions and Z-test to test the hypothesis.

Results and discussion.

Research Question 1. What is the level of awareness of dyslexia amongst primary school teachers in Rivers State?

Table 1: Analysis of Mean ratings of male and female teachers on the awareness of dyslexia amongst primary school teachers in Rivers State.

| S. No. | Awareness of dyslexia amongst primary school teachers in Rivers State | Male Teachers | | | Female Teachers | | |
|--------|---|---------------|-----------------|----------|-----------------|-----------------|----------|
| | | \bar{x} | Rank | Decision | \bar{x} | Rank | Decision |
| 1 | Dyslexia affects reading and spelling fluency. | 2.7 | 3 rd | Agreed | 2.93 | 5 th | Agreed |
| 2 | Dyslexics have poor attention span. | 2.7 | 3 rd | Agreed | 3.00 | 3 rd | Agreed |
| 3 | Dyslexia can be inherited. | 2.8 | 1 st | Agreed | 3.03 | 1 st | Agreed |
| 4 | Dyslexia is caused by low socio-economic status. | 2.8 | 1 st | Agreed | 3.03 | 1 st | Agreed |
| 5 | Dyslexics are not intelligent. | 2.7 | 3 rd | Agreed | 2.97 | 4 th | Agreed |
| | Aggregate | 2.74 | | Agreed | 2.99 | | Agreed |

Note: 2.50 and above = agreed and below 2.50 = disagreed.

The data in table 1 showed the mean ratings of male and female teachers in the knowledge of dyslexia amongst

primary school teachers in Rivers State. For male teachers all the items ranging from 1 to 5 have mean scores 2.7, 2.7, 2.8, 2.8, and 2.7 respectively greater than the criterion mean of 2.5. Also for the female teachers all the items, 1 to 5 have mean scores 2.93, 3.00, 3.03, 3.03, and 2.97 respectively greater than the criterion mean of 2.50. The aggregate means of 2.74 for male teachers and 2.99 for female teachers, both being above the criterion mean, showed they agreed that: the level of awareness of dyslexia amongst primary school

teachers in Rivers State is very low, dyslexia affects reading and spelling fluency. Dyslexics have poor attention span, dyslexia can be inherited, dyslexia is caused by low socio-economic status and that dyslexics are not intelligent.

Research Question 2. What is the extent teachers can identify early warning signs of dyslexia in primary schools in Rivers State?

Table 2: Analysis of Mean ratings of male and female teachers on the extent teachers can identify early warning signs of dyslexia in primary schools in Rivers State.

| S. No. | Identification of early warning signs of dyslexia Rivers State | Male Teachers | | | Female Teachers | | |
|--------|--|---------------|-----------------|----------|-----------------|-----------------|-----------|
| | | \bar{x} | Rank | Decision | \bar{x} | Rank | Decision |
| 6 | If the child has poor handwriting and motor skills. | 2.57 | 4 th | Agreed | 2.38 | 4 th | Disagreed |
| 7 | If the child has pronunciation problems. | 2.67 | 1 st | Agreed | 2.41 | 3 rd | Disagreed |
| 8 | If the child has confusion with ordering of letters. | 2.64 | 2 nd | Agreed | 2.60 | 1 st | Agreed |
| 9 | If a child does not answer questions in class. | 2.53 | 5 th | Agreed | 2.37 | 5 th | Disagreed |
| 10 | If a child hates school. | 2.59 | 3 rd | Agreed | 2.58 | 2 nd | Agreed |
| | Aggregate | 2.60 | | Agreed | 2.47 | | Disagreed |

The data in table 2 showed the mean ratings of the extent teachers can identify early warning signs of dyslexia in primary schools in Rivers State. For the male teachers all the five items listed (items 6, 7, 8, 9 and 10) have total mean scores of 2.57, 2.67, 2.64, 2.53 and 2.59 respectively which are higher than the criterion mean of 2.50 and were regarded to be positively related to the extent teachers can identify early warning signs of dyslexia in primary schools in Rivers State. For the female teachers two out of the five items listed (items 8 and 10) have mean scores of 2.60 and 2.58 respectively which are higher than the criterion mean of 2.50 and were regarded to be positively related to the extent teachers can identify early warning signs of dyslexia in primary schools in Rivers State while items 6, 7, and 9 with mean scores of 2.38, 2.41 and 2.37 were considered negatively. The aggregate mean of 2.60 for the male teachers

showed that they have agreed that to large extent teachers can identify early warning signs of dyslexia in primary schools in Rivers State. While the aggregate mean of 2.47 which is below the criterion mean showed that they disagreed, saying that teachers cannot identify early warning signs of dyslexia in primary schools in Rivers State. Even if the child has pronunciation problems; if the child has confusion with ordering of letters. If a child does not answer questions in class and even if a child hates school, to the female teachers it does not mean that they are dyslexic.

Presentation and analyses of data to test hypotheses

Hypothesis 1 (H₀₁): There is no significant difference between the mean scores of male and female teachers on the awareness of dyslexia amongst primary school teachers in Rivers State.

Table 4: z-test analysis on the difference between the mean ratings of male and female teachers on the awareness of dyslexia amongst primary school teachers in Rivers State.

| Variable, Teachers | N | \bar{x} | SD | Df | P | α | Decision |
|--------------------|-----|-----------|------|-----|-------|----------|-----------------------------|
| Female Teachers | 155 | 14.27 | 2.71 | 199 | 0.115 | 0.05 | H ₀₁ is Accepted |
| Male Teachers | 46 | 15.00 | 2.84 | | | | |

The data in table 4 showed that the p (201) value of 0.115 through SPSS is greater than the criterion mean value of 0.05 alpha level of significance for 199 degrees of freedom. Since the p-value is greater than the criterion mean value, the null hypothesis is accepted. Therefore there is no significant difference between the means of male and female teachers on

the awareness of dyslexia amongst primary school teachers in Rivers State.

Hypothesis 2 (H₀₂): There is no significant difference between the mean ratings of male and female teachers on the extent teachers can identify early warning signs of dyslexia in primary schools in Rivers State.

Table 5: z-test analysis on the difference between the mean ratings of male and female teachers on the extent teachers can identify early warning signs of dyslexia in primary schools in Rivers State.

| Variable, Teachers | N | \bar{x} | SD | Df | P | α | Decision |
|--------------------|-----|-----------|------|-----|-------|----------|-----------------------------|
| Female Teachers | 155 | 13.87 | 2.10 | 199 | 0.467 | 0.05 | H ₀₂ is Accepted |
| Male Teachers | 46 | 13.61 | 2.29 | | | | |

The data in table 5 showed that the p (201) value of 0.467 through SPSS is greater than the criterion mean value of 0.05 alpha level of significance for 199 degrees of freedom. Since the p-value is greater than the criterion mean value, the null hypothesis is accepted. Therefore there is no significant difference between the mean ratings of male and female teachers on the extent teachers can identify early warning

signs of dyslexia in primary schools in Rivers State.

Implication of findings

This study bordered around the knowledge of dyslexia amongst primary school teachers in rivers state. Its major objectives were to find out the extent of primary school teachers knowledge of dyslexia, their ability to identify early signs of dyslexia. It derived the following implications;

Teachers' knowledge of dyslexia

From the findings of this study, the aggregate means of 2.74 for male teachers and 2.99 for female teachers, both being above the criterion mean showed that knowledge of dyslexia amongst primary school teachers in Rivers State is low. This is deduced from their responses to the items which tested their knowledge of dyslexia in research question 1 and hypothesis 1. In earlier studies conducted in South Africa, Netherlands, USA, UK, on the knowledge of dyslexia amongst teachers, findings are that teachers had good and adequate knowledge of dyslexia. But other studies conducted in some African countries especially Bosnia, Herzegovina and Montenegro showed that the knowledge of dyslexia amongst teachers is low. The findings of this study tend to agree with the findings from most African countries that the knowledge of dyslexia amongst primary school teachers is low (Nkabinde, 1993; Rose, 2009; Lynette, 2013; Rebecca, 2014) [29, 36, 25, 32].

This finding has significant implication for students as well as teachers in the academic environment. Having deduced that the teacher's knowledge and expertise is necessary to effectively manage teaching and learning experiences of the pupil, it is pertinent to say that a teacher who has poor or lacks adequate knowledge of dyslexia may not offer the best support to the struggling and consequently frustrated student living with dyslexia. What this means is that the pupil living with dyslexia will be unconsciously made to learn under very unsupportive environments which cannot bring to bear the abilities of the dyslexic pupil but which only showcases his weakness.

Worse of it, the pupil living with dyslexia is expected to perform or compete equally with other pupils who do not have this learning disability or be regarded as a failure or no-do-well by the class teacher who is seemingly ignorant of the specific learning disability of the pupil. The dyslexic pupil by reason of the teachers' lack of adequate knowledge of dyslexia is misjudged and mismanaged. Thus such pupil is denied the right to proper learning conditions or assistance, which results in poor academic achievements or performance especially in tasks that involve reading and spelling, which are key features of this disability.

Teachers' ability to identify early signs of dyslexia.

The findings from this study indicate that male teachers showed ability to identify the early signs of dyslexia. This is deduced from their responses to items in research question 2 and hypothesis 2. The teacher's ability to identify the early signs of dyslexia is related to their knowledge of dyslexia. Though the teachers were able to identify some signs that point to dyslexia, the fact remains that without adequate knowledge of dyslexia; teachers may not correctly diagnose or identify symptoms that show that a pupil is at risk of developing dyslexia.

Inability to identify earlier signs of dyslexia implies that children will go with these at risk symptoms and eventually become failures in the academic field. In the meanwhile, if these symptoms are identified earlier, it offers the teacher the opportunity to refer such child or pupil for proper dyslexia assessment and tests. And if confirmed that a child is dyslexic, such pupil is given proper and necessary assistance which will make him learn at this pace and achieve maximally.

Various Literature and study show that most teachers in USA, Netherland and the United Kingdom have good knowledge

of the early signs of dyslexia. This varied significantly from the present study (Davis 2009; Elias 2014) [32]

Recommendation

The following recommendations are made after considering the findings and implications of the study.

1. A review of the course content of the curriculum for teacher training institutions is highly recommended. This is because the teachers training institutions or university are the places where teachers are prepared for teaching. Courses covering dyslexia should as a matter of urgency be made compulsory for all teachers in training.
2. Government should invest in the provision of trained and certified specialist tutors who will be posed with the task of assisting regular class room teachers with the diagnosis and support for pupils living with dyslexia. These specialists can offer remedial classes for struggling dyslexics. The establishment of a special need unit will be of immense help to the dyslexic pupil
3. Government should also provide required facilities and tools to ensure that proper assessment and assistance is made available to the dyslexic as the need arises.
4. In-service training should be provided for serving teachers. This will equip the serving teachers with skills to diagnose, assist and support dyslexics.
5. The services of trained counsellors are highly needed to provide emotional support and counselling to the dyslexic who may be experiencing fleets of frustration.

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