

**TEACHERS' PERCEPTION OF THE PREVALENCE OF DYSLEXIA
AMONG PRIMARY SCHOOL PUPILS IN ABAKALIKI
METROPOLIS, EBONYI STATE, NIGERIA: PSYCHOLOGICAL
IMPLICATIONS ON ACADEMIC PERFORMANCE.**

Achilike Beatrice Adanna (Ph.D)
Department of Educational Foundation,
Ebonyi State University, Abakaliki

Abstract

This study examined teachers' perception of prevalence of dyslexia among *primary school children in Abakaliki metropolis Ebonyi State Southeast Nigeria and its attendant psychological implications on the academic achievement of the children. The study employed descriptive survey research design. The population consists of 1,878 primary school teachers from both public and private schools drawn from 40 schools, Yaro Yamane formula was used to determine the sample size of 330. A checklist which was in line with the research questions outlined for the survey on the diagnostic tests of dyslexia on memory, spelling, vision and reading skills together with the respective behavioural disorders associated with each symptoms and its attendant psychological effects on the academic performance of dyslexic children were constructed and used in gathering information from the respondents. Data collected were analyzed using percentages, frequency and charts. The results showed the prevalence of dyslexic symptoms in the area with 36.3% attributed to reading disorder. Findings also revealed that prejudiced stigmatization, humiliation, negative self esteem and frustration are the psychological implications on dyslexic children with poor perception of dyslexia among teachers (71.2%). The study recommended among others that there should be orientation of teachers on the best teaching styles that will aid dyslexic pupils.*

Keywords: Teacher's, Perception, prevalence, dyslexia, primary school pupils, academic performance.

Introduction

The term dyslexia is often used to mean disabilities with reading. Dyslexia is a reading disorder characterized by trouble with reading irrespective of normal intelligence. Major observable features of dyslexia may include difficulties in spelling words, reading quickly, writing words, pronouncing words when reading aloud and understanding what one reads. These difficulties are involuntary and children with their disorder have a normal desire to learn. Dyslexia is the most common subtype of learning disabilities with prevalence ranging from 5-10%. Dyslexia is not a sign of low intelligence or laziness, it is also not due to poor vision, it is a common condition that affects the way the brain processes written and spoken language. Dyslexia is primarily associated with trouble reading. It is a neurobiological disorder that cannot

be outgrown in children. It is a lifelong condition with a lot of psychological implications on children's academic performance as struggles with reading and other issues can lead to frustration and low self esteem. The stress of dealing with school work by dyslexic children can make them lose the motivation to keep trying and this has concomitant aftermaths on their academics performances. Handler, Sheryl and Fierson (2011), opined that researchers have yet to pin point what causes dyslexia. However, they do know that genes and brain differences might influence a child's chances of having dyslexia. Here are possible causes of dyslexia according to Handler (2011).

- **Genes and heredity:** Dyslexia often runs in families. If one's child has dyslexia, there's a chance that it may transcend his or her lineage. About 40 percent of siblings of children with dyslexia may have the same reading issues. Also, as many as 49 percent of parents of children with dyslexia may have it too. Scientists have also found several genes associated with reading and language processing issues.
- **Brain anatomy:** Having dyslexia does not mean that a child is not bright. In fact, many people with dyslexia have above average intelligence but their brain may look different from the brain of people who do not have dyslexia. For instance, the planum temporale is an area of the brain that plays a role in understanding language. It is typically larger in the dominant hemisphere (the left side of the brain for right handed people) than in the right hemisphere. However, if a child has dyslexia, the planum temporale is probably about the same size on both the left and right sides of the brain.
- **Brain activity:** To be able to read, human brains have to translate the symbols it sees on the page into sounds. Then those sounds have to be combined into meaningful words. Typically the areas of human brains responsible for language skills work in a predictable way. But if a child has dyslexia, those areas do not work together in the same way.

Dyslexia is thought to have two types of causes. One related to language processing and another to visual processing. It is considered a cognitive disorder, not a problem with intelligence. However, emotional problems often arise because of it. The National Institute of Neurological Disorders and Stroke definition describes characteristics of dyslexia as "difficulty with phonological processing (the manipulation of sounds), spelling, and/or rapid visual verbal responding". This has a nexus with the cerebellar theory of dyslexia which proposes that impairment of cerebellum-controlled muscle movement affects the formation of words by the tongue and facial muscles resulting in the fluency problems that are characteristics of some dyslexic. The cerebellum is also involved in the automatization of some tasks such as reading. The fact that some dyslexia children have motor task and balance impairments has been used as evidence for a cerebellar role in their reading difficulties. However, the cerebellar theory is not supported by controlled research studies.

Dyslexia is often accompanied by several learning disabilities, but it is unclear whether they share underlying neurological causes. According to Kooij, and Sandra, (2013), these associated, or comorbid, disabilities include:

- a. *Dysgraphia: A disorder* which primarily expresses itself through difficulties with writing or typing, but in some cases through difficulties associated with eye-hand coordination and direction or sequence-oriented processes such as typing knots or carrying out repetitive tasks. In dyslexia, dysgraphia is often multifactorial, due to impaired letter-writing automaticity, organization and elaborative difficulties, and impaired visual word forming which makes it more difficult to retrieve the visual picture of words required for spelling.
- b. *Attention deficit hyperactivity disorders:* characterized by problems paying attention, excessive activity or taking action without forethought. Dyslexia and ADHD commonly occur together.
- c. *Auditory processing disorder:* A listening disability that affects the to process auditory information. This can lead to problem with auditory memory and auditory sequencing. Many people with dyslexia have auditory processing problem and may develop their own logographic cues to compensate for this type of deficit. Sally & Bernett. (2013). Auditory processing skills could be the primary shortfall in dyslexia.
- d. *Developmental coordination disorder:* A neurological condition characterized by marked difficulty in carrying out routine tasks involving balance, fine-motor control, kinesthetic coordination, difficulty in the use of speech sounds, problems with short-term memory and organization.

Dyslexia as a disability in children affects their learning process with psychological implication on the overall academic performance of these children. Some of the psychological problems of dyslexia include prejudice, stigmatization and lack of serials academic challenge to such children.

For effective identification of dyslexia in children Davies, (1992) highlighted the following 37 common traits in dyslexia.

a. Vision, Reading and Spelling

- Complains of dizziness, headaches or stomach aches while reading;
- Confused by letters, numbers, words, sequences or verbal explanation;
- Reading or writing shows repetitions, additions, transpositions, omissions, substitutions and reversal in letters, numbers and/or work;
- Complains of feeling or seeing non-existent movement while reading, writing or copying;
- Seems to have difficulty with vision, yet eye exams do not reveal a problem;
- Extremely keen sighted and observant or lacks depth perception and peripheral vision;
- Reads and rereads with little comprehension;
- Spells phonetically and inconsistently;

- b. Hearing and Speech.**
 - Has extended hearing, hears things not said or apparent to others, easily distracted by sounds;
 - Difficulty putting thoughts into words, speaks in halting phrases, leaves sentences incomplete, stutters under stress; mispronounces long words or transposes phrases, words and syllables when speaking.
- c. Writing and motor skills**
 - Trouble with writing or copying; pencil grip is unusual, handwriting varies or is illegible;
 - Clumsy, uncoordinated, poor at ball or team sports, difficulties with fine and/or gross motor skills and tasks, prone to motion sickness;
 - Can be ambidextrous and often confuses left/right, over/under.
- d. Maths and Time Management**
 - Has difficulty telling time, managing time, learning sequenced information or tasks, or being on time.
 - Computing maths shows dependence on finger counting and other tricks, knows answers, but can't do it on paper.
 - Can count, but has difficulty counting objects and dealing with money.
 - Can do arithmetic, but fails word problems, cannot grasp algebra higher math.
- e. Memory and cognition**
 - Excellent long-term memory for experiences, locations and faces.
 - Poor memory for sequences, facts and information that has not been experienced.
 - Thinks primarily with images and feelings, not sounds or words (little internal dialogue)
- f. Behavior, health, development and personality**
 - Extremely disorderly or compulsively disorderly.
 - Can be class clown, trouble maker, or too quiet;
 - Had unusually early or late developmental stages (talking, crawling, walking, tying shoes);
 - Prone to ear infections, sensitive to foods, additives, and chemical products;
 - Can be an extra deep or light sleeper, bedwetting beyond appropriate age.
 - Unusually high or low tolerance for pain;
 - Strong sense of justice, emotionally sensitive, strives for perfection.
 - Mistakes and symptoms increase dramatically with confusion, time pressure, emotional stress, or poor health;

Children with dyslexia present a wide range of challenges which has a direct bearing on their academic performance. Usually dyslexic appears bright, highly intelligent and articulate but they are unable to read, write or spell at grade level. They are ignorantly labeled lazy, dumb, careless, immature, "not trying hard enough" by teachers. Some of them are high in IQ, yet may not test well academically, may

test well orally but not written. Majority are talented in art, drama, music, sports, mechanics, storytelling, sales, business, designing, and building or engineering. Some of these dyslexics seem to “zone out” or day dream often; they also get lost easily or lose track of time. They have difficulty sustaining attention; seem “hyper” or “day dreamer” and all these characteristics affect their psychological disposition towards studies with attendant effects on academic performance.

This study therefore seeks to investigate the symptoms and behavioural patterns of primary school children with dyslexia in Abakaliki Metropolis as perceived by primary school teachers in Ebonyi State, southeast Nigeria with the view of x-raying its concomitant effects on their overall academic performance, its interventional strategies for effective diagnosis as well as creating a paradigm shift vis-a-vis its awareness among the teachers and parents in the study area.

Statement of the Problem

Most primary school teachers in Nigeria seem to be oblivious of neurobiological disorders in pupils. They tend to handle neurobiological disorders with unprofessional interventional strategies with grave implications on children with such disorders. This ignorance is integrally due to lack of professional training and retraining of teachers on such disorders.

Studies have shown that children with dyslexia are at high risks for academic underachievement or failure despite having average intellectual abilities. In most primary schools in Abakaliki metropolis, teachers seem to restrict their activities in the classroom to direct instruction and indoctrination of the pupils without being able to observe the students closely to identify their academic problems and try to mediate in their situations, (Achilike & Achilike, 2016). This could be attributed to the fact that some teachers lack basic qualifications and skills in education while some go into teaching profession just to eke out a living without having the interest of the pupils at heart.

Dyslexia is a very big threat that seems not to have been effectively researched and handled by teachers, educationists and government in most developing countries. Furthermore, majority of the primary school teachers in the study area do not have background knowledge that some poor academic performance put up by some pupils are linked with dyslexia.

Based on the foregoing, it is in the interest of this study to access teachers' perception of dyslexia in primary schools in Abakaliki metropolis of Ebonyi State South east Nigeria for diagnosis and also bring to the fore the academic challenges faced by dyslexic children thereby proffering appropriate interventional strategies in managing the disorder in children.

Purpose of the Study

The study examined dyslexic symptoms and behaviours among primary school children in Abakaliki metropolis of Ebonyi state south east Nigeria and its effects on the academic performance of the children. Specifically, the study intends to

- i. To investigate the awareness of teachers of the existence of dyslexia among primary school children in Abakaliki metropolis, Ebonyi State South East Nigeria.
- ii. Find out the psychological effects of dyslexia on the academic performance of the pupils.
- iii. Identify children exhibiting symptoms of dyslexia in primary school setting in Abakaliki metropolis Ebonyi State, Nigeria.

Research questions

To guide this survey, the following research questions were formulated

- (i) What are the perceptions of primary school teachers in Abakaliki Metropolis, Ebonyi State as regards the symptoms of dyslexia among the children they teach?
- (ii) What are the psychological effects of dyslexia on the academic performance of primary school pupils in Abakaliki Metropolis, Ebonyi State south east Nigeria?
- (iii) What are the symptoms/signs of dyslexia among primary school children in Abakaliki metropolis, Ebonyi State?

Methodology

This study used descriptive research design of survey type. The population consists of 1878 primary school teachers in Abakaliki metropolis, Ebonyi State. The researcher statistically determined the sample size using Yaro Yamane's formula to be 330 primary school teachers from both public and private schools drawn from 40 schools. The respondents' teaching experiences ranges from 2-20 years. A checklist which was in line with the research questions outlined for the survey on the four diagnostic tests and symptoms associated to dyslexia namely memory, spelling, vision and reading skills together with the respective behavioural disorders associated with the ineffective use of teachers awareness of dyslexia was constructed and used in gathering information from the respondents. The checklist was constructively criticized and validated by two (2) research experts in measurement and evaluation and their constructive criticism and amendments, were effected on the final copy. The researcher also used oral interviews to supplement the data obtained via the use of checklist. For a clearer appreciation of the symptoms of dyslexia, the researcher during the survey asked the respondents to rate the component behavior symptoms associated with the four hall mark skills affected by dyslexia in accordance with dyslexic common traits explained by Davies, (1992) as follows:

(a) Memory and Cognition

- Thinks primarily with images and feelings not sounds or words;
- Excellent long-term memory for experiences, locations and faces;
- Poor memory for sequences, facts and information that has not been experienced.

(b) Spelling

- Confused by letters, numbers, words sequences or verbal explanations;
- Spells phonetically and inconsistently;

- Reading or writing shows repetitions, additions, transpositions, omissions, substitutions and reversals in letters numbers and/or words.

(c) **Visions**

- Complains of feeling or seeing non-existent movement while reading, writing or copying;
- Seems to have difficulty with vision, yet eye exams do not reveal a problem;
- Extremely keen sighted and observant or lacks depth perception and peripheral vision.

(d). **Reading**

- complains of dizziness, headaches, or stomach aches while reading
- Reads and rereads with little comprehension.

The survey lasted for the period of five months and data collected/gathered was analyzed using percentages. 40% and above was used as a criteria for evaluating the respondents information on the basis of acceptance and below 40% as rejection.

Results

Research question 1

What are the perceptions of primary school teachers in Abakaliki Metropolis, Ebonyi State as regards the symptoms of dyslexia among the children they teach?

Table 1: Perception of Primary School teachers on symptoms of dyslexia among pupils.

S/N	Reponses	Frequency	(%)
1	Fully aware of dyslexia signs in primary school pupils in Abakaliki metropolis	55	16.6
2	Quite unaware of dyslexic signs in pupils	235	71.2
3	Partially aware of dyslexic signs	35	12.1
	Total	330	100

Table 1 shows that 16.6% of the respondents are fully aware of dyslexia signs in primary school pupil , 71.2% of respondents are unaware of the signs of dyslexia in children they teach while 12.1% acknowledged partial awareness of the symptoms and concept of dyslexia.

Research question 2

What are psychological effects of dyslexia on the academic performance of primary school pupils in Abakaliki metropolis.

Table 2: Psychological Effect of Dyslexia on pupils' performance

S/N	Responses	Frequency	(%)
1	Dyslexics have poor self esteem	110	33.3
2	Hide or cover up weaknesses	20	6.0
3	Easily frustrated and emotional about school reading or testing with attendant stigmatization	90	27.2

4	Seem to “zone out” or day dream often	20	3.0
5	Drop out from school	6	1.8
6	Dyslexics make mistakes and symptoms increases dramatically	3	0.9
7	Difficulty in putting thoughts into words	8	2.4
8	Labeled lazy, dumb, careless and immature.	5	1.5
9	High emotional sensitivity	33	1.0
10	Experiences humiliations and pressure	4	1.2
11	Thinks primarily with images and feelings not sounds or words	10	3.0
12	Unusually high or low tolerance for pain	4	1.2
13	Loss of motivation	14	4.2
14	Confused by letters, numbers, words, sequences or verbal explanations	13	3.9
	Total	330	100

In table 2 above, 33.3% of the respondents acknowledge teaching dyslexics with poor self-esteem. (6.0%), (27.2%), (3.0%), (1.8%), (0.9%), (2.4%), (1.5%), (1.0%), 1.2%), (3.0%), 1.2%), (4.2%), (3.9%) reported covering of weakness with ingenious compensatory strategies, frustrations, day dreaming, making mistakes, difficulty in putting thoughts into words, laziness, high emotional sensitivity, humiliation, thinking with images, unusually high or low tolerance for pain, loss of motivation and confusion as psychological implications of dyslexia in the study area respectively).

Research question 3

What are the symptoms/signs of dyslexia among primary school children in Abakaliki metropolis, Ebonyi state? Table 3 shows the percentages values of the responses.

Table 3: Dyslexia symptoms among primary school pupils

S/N	Responses on Dyslexia symptoms in pupils	Frequency	(%)
1	Memory and cognition dyslexic disorder	80	24.2
2	Spelling disorder	90	27.2
3	Vision – visual disorder	40	12.1
4	Reading disorder	120	36.3
	Total	330	100

In table 1, 24.2% of the participants accounting for 80 out of the 330 teachers sampled agreed encountering pupils with poor memory for sequences, facts and information that has not been experienced; 27.2% (90 out of 330) admitted encountering pupils battling with spelling disorder, 12.1% (40 out of 330) reported visual problems and 36.3% (120 out of 330) said they have encountered pupils with reading disorder.

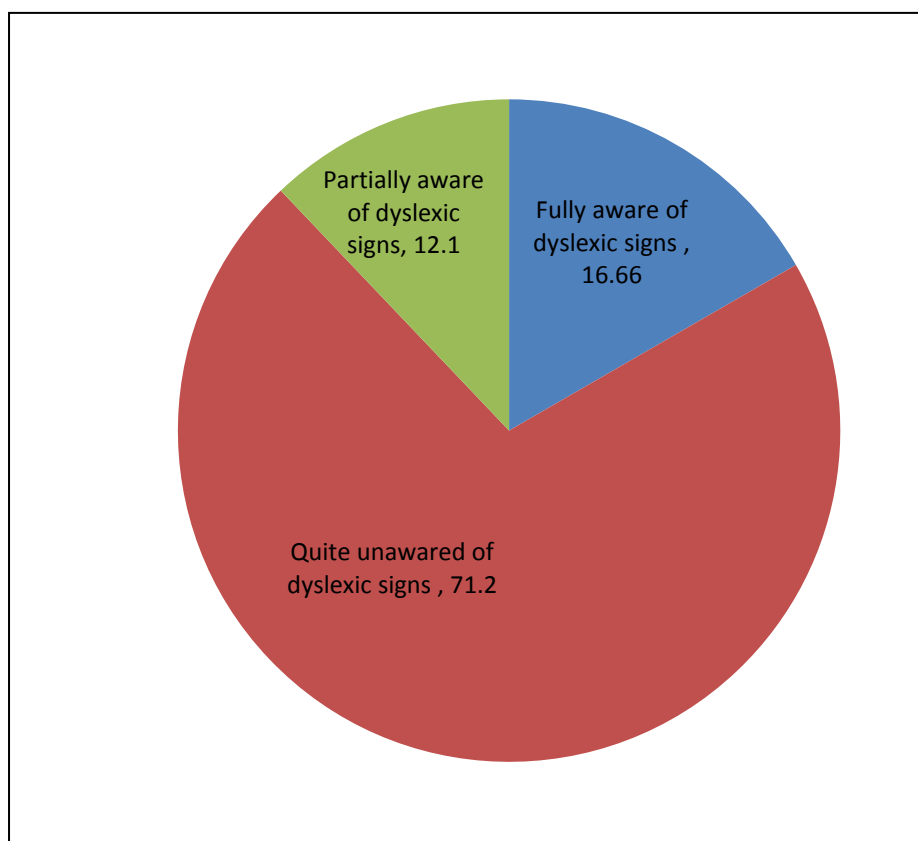


FIG. 1: Chart showing result of research question one.

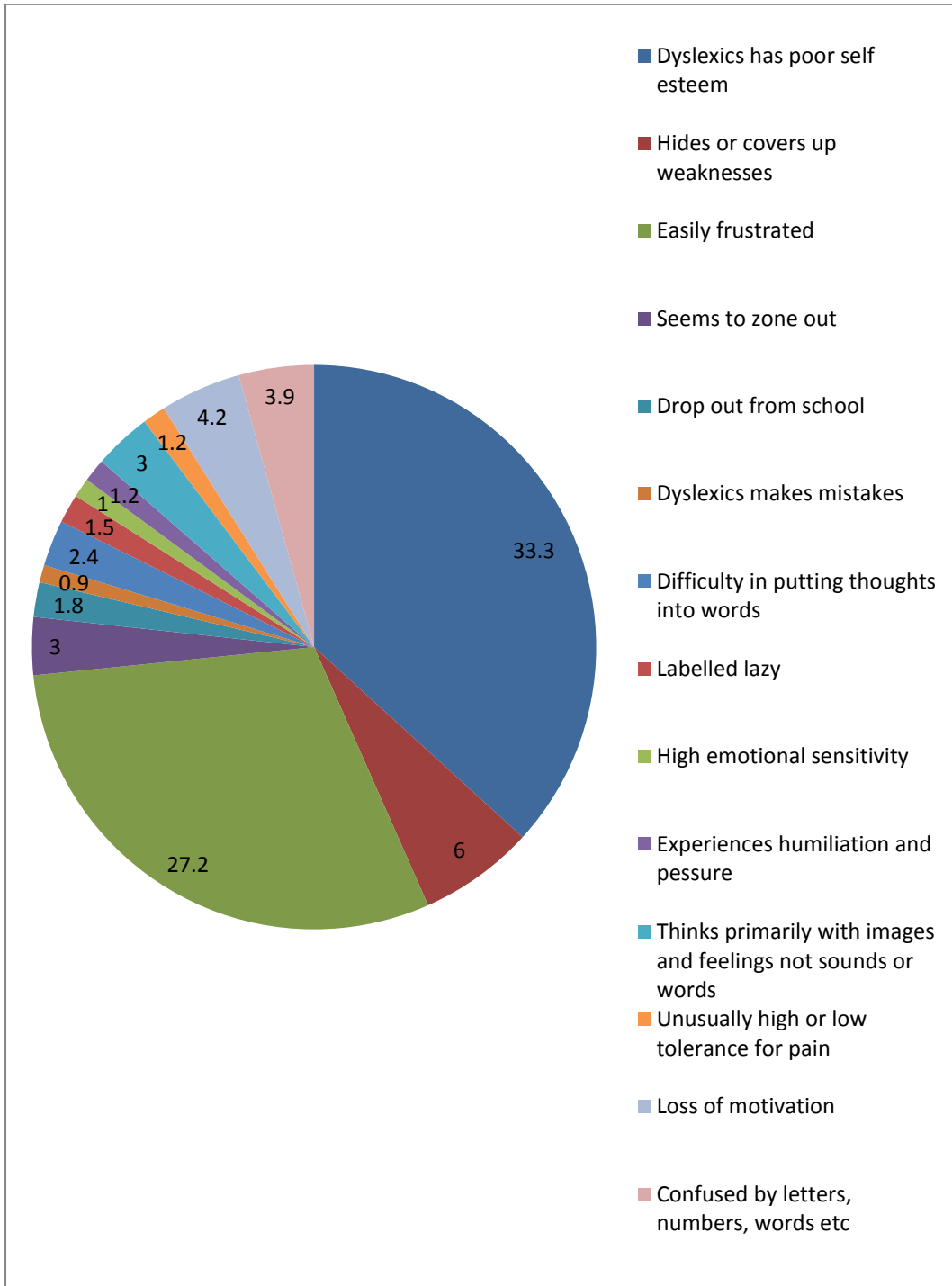


FIG. 2: Chart showing result of research question two.

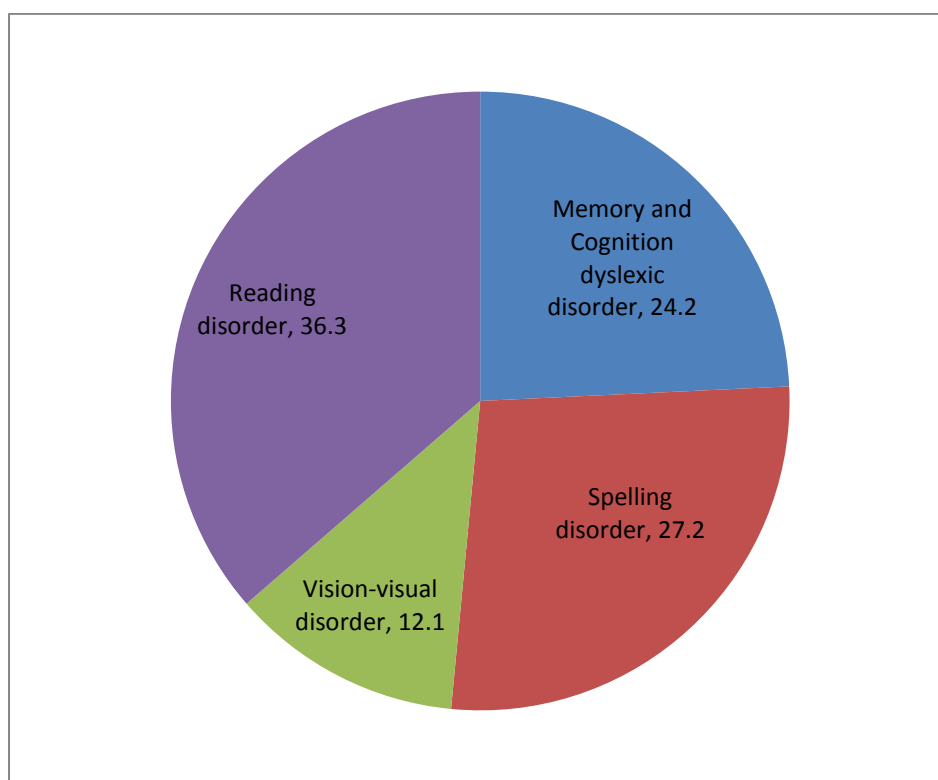


Fig. 2: Chart showing result of research question three

Discussion of findings

Findings from table 1 showed that 71.2% of the teachers in the study area are oblivious of the concept, signs/symptoms of dyslexia in children they teach be. This poses a serious challenge in the adaptation and implementation of interventional strategies that will help the dyslexics. 12.1% of the respondents admitted partial awareness of the symptoms of dyslexia while 16.6% of the sampled population agreed the awareness of the learning disorder with their years of teaching experience in the study area. This findings agreed with that conducted in Sweden by Johanna Gronblad (2013), who stated that teachers get too little in service training from their employer about dyslexia and reading difficulties. In addition the teachers need to become more familiar with what reading strategies are and what new learning assisting materials can do with students with dyslexia.

Similarly, results showed that 33.3% of the respondents reported negative self-esteem. This implies that dyslexics in the study area are prone to poor self-esteem orchestrated by prejudiced stigmatization and humiliation from teachers and classmates. This has concomitant negative effects on the academic performance of dyslexia in the study area. This finding agreed with that of Blackwell, Trzesniewske

& Dweck (2007), who opined that mindset is a crucial attitude for both students and teachers in terms of academics. They upheld that a student's attitude about learning is a moderately robust predictive factor of academic achievement; this implies that pupils affected by negative self-esteem courtesy of dyslexia will not do very well in academics. 27.2% of the respondents reported frustration and emotional problems with reading. This means that about 90 out of 330 sampled respondents submitted that they evaluated emotional problems in pupils with perceived dyslexia. This has a terrible effect on the psychological disposition of such children which in turn affects their academic performance. This concurs with the findings of Undheim (2009), who submitted that students with dyslexia often have emotional problems with being different from other students in the school.

3.0% of the respondents agreed that dyslexia tends to day dream often. This indicates the "zone out" syndrome of dyslexics; they easily get lost easily or losses track of time. This induces difficulty in sustaining attention which makes them "hyper" or "day dreamers".

Other psychological aftermaths of dyslexia in the study area as revealed in table 2 include loss of motivation, high emotional sensitivity, difficulty in putting thoughts in words, humiliation and pressure from teachers and classmates as well as school drop out on extreme cases.

On the symptoms of dyslexia, results from table 3 showed that 24.2% of the sampled population reported the preponderance of children with memory and cognition problems associated with dyslexia in the study area. They reported excellent long-term memory for experience, locations and faces in those children but reoccurrence of poor memory for sequences, facts and information that has been experienced. This indicates that about 80 out of the 330 respondents agreed that primary school pupils in the study area who are dyslexics experience memory and cognition impairment. They think primarily with images and feelings and not with sounds or words. Also, 27.2% of the respondents reported spelling disability in pupils they teach. These attributes are clear symptoms of dyslexia. Thus, means that about of 90 teachers out of the 330 sampled concur that they have had dealings with children experiencing confusion using letters, numbers, words, sequences or verbal explanation. Consequently, these children are faced with reading and writing predicaments, with repetitions, transpositions, omissions, substitutions and reversals in letters and numbers. Respondents also admitted visual disorder in children found with memory and speech disorders. This shows a link between the dyslexic symptoms in the study area with attendant implications of difficulty with vision, dizziness, headaches and lack of depth perception and peripheral vision.

36.3% of the respondents attested having encountered pupils with reading disability peculiar and crystal clear symptom of dyslexia. This shows that dyslexics in the study area had problems with their reading skills. In general, dyslexia is diagnosed on the basis of tests or an evaluation used to measure a person's learning characteristics. The profile of these children in the study area shows a drastic decline in their learning abilities and process. This finding supports that of Ronald, (1992)

and Emily Lapkin (2015) that upheld that children with dyslexia has trouble with writing or copying and reading.

Summary and Conclusion

In the end, this paper has raised the awareness that not only the teachers but the whole society need to gain more knowledge of dyslexia to avoid misdiagnosis and to work for inclusions in schools, making all students/pupils feel equal in school for the long term. It also highlighted that there is a lack of school-based research vis-à-vis dyslexia. Although research fields of psychology and medicine are publishing articles on what however their information and conclusions disagree about the diagnosis of dyslexia.

Dyslexia is not a disease or an identifiable physical condition. Rather, it is a learning style that usually can be accessed through a profile that shows whether the child has a typical pattern of strengths and weaknesses, coupled with assessment to rule out other possible causes of symptoms such as vision or hearing. Educational psychologist in most developing countries, Nigeria inclusive may not be licensed and versed in the prognosis, diagnosis cum identification of learning disabilities such as dyslexia. This study x-rayed the prevalence of dyslexia among primary school pupils in Abakaliki metropolis, Ebonyi State Nigeria; psychological implications on learning and teachers awareness of the disorder, and made recommendations. Further research and knowledge are needed in this field and preferably in the teaching area.

Recommendations

There are abundant scientific evidences supporting the existence of dyslexia and its detrimental impacts on individual if adequate interventional procedures are not used. Based on the findings on this survey on the prevalence of dyslexia among primary school pupils in Abakaliki metropolis, the following recommendations are made:

1. Primary school teachers in Ebonyi State should be given compulsory training on management of learning disabilities in children such as dyslexia. Training on the effective use of multiple sensory techniques lesson plan and the use of ICT/assistive software in classrooms can help dyslexic children. Research has also proven that there are different ways of teaching that can help people with dyslexia succeed. If teachers are thoroughly groomed to that effect, positive results will be achieved in terms of diagnosis of dyslexia in the study area.
2. Educational psychologists should be licensed and trained to diagnose dyslexia. Through the use of compensation strategies, therapy and educational support, dyslexic individuals can learn to read and write.
3. Government should launch awareness campaign via the electronic media in order to sensitize the public about the disorder. Parents stand to benefit a lot from such awareness campaign.
4. There is some evidence that the uses of specially tailored fonts may help with dyslexia. This can be experimented in the study area.

5. Diagnosis of learning disabilities should be made a routine in primary schools in Abakaliki metropolis and Ebonyi State at large. This will help in the identification of dyslexics as well as proffering adequate international support to help them succeed.

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