

Original Research Article

Dyslexia, Reading Difficulty as Correlates of Psychological Problems among Junior Secondary School Students

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Abstract

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The main interest of the study was correlate dyslexia, reading difficulty and psychological problems among junior secondary school students Imo State. The study was guided by five specific objectives, five research questions and four hypotheses. The design of the study was correlational research design. The sample size was 442 (262 males and 180 females) students with dyslexia identified using two stage sampling technique drawn from a population of 2211 JS 11 students. Two research instruments were validated and employed for data collection. The stability of the instruments were determined using Pearson's Product Moment Correlation Coefficient which gave reliability indices of 0.73 and 0.82 for Dyslexia Identification Scale for Students (DISS and Psychosocial Problem of Dyslexia Questionnaire (PPDQ). The internal consistency of the items was determined using Cronbach Alpha method which yielded reliability indices of 0.77 and 0.85 for the DISS and PPDQ. The researchers and four well briefed research assistants administered the instruments. The data were analyzed using Pearson Product Moment Correlation to answer research questions, while Linear and Multiple Regressions were used to test the hypotheses at .05 level of significance. It was found that there is a moderate manifestation of Dyslexia among the junior secondary students in Imo State and Dyslexia to a significant extent correlates to psychosocial problems of junior secondary school students. The study also found that Gender to a significant low extent correlates to psychosocial problems among junior secondary schools students. Among the Educational Implications of the finding was that it would help teachers identify problems associated with dyslexia. When teachers identify the problems associated with dyslexia, they would be able to understand and effectively manage and accommodate the changing mood of students caused by stereotypes associated with dyslexia. It would help to know why some students feel inferior and shy at times before their mates. Based on the findings, it was recommended that teachers observe their students properly in order to identify the dyslexics and other learning disabled. This is to enable them know which measure, teaching methods and teaching styles to utilize for them as well as to carry everyone along in the classroom.

Keywords: Dyslexia, Correlate, Psychosocial, Problems and Junior Secondary School Students, Reading Difficulty

INTRODUCTION

One of the primary functions of schooling is to ensure that the child acquires literacy and numeracy skills. The school also educates the learners on other needed skills by the society. Many children find schooling interesting

while some develop anxiety, fear and may not adjust well. Some experience challenges in learning the letters of the alphabets, associating sounds with letters that represent them, identifying or generating words, or counting

syllables in words (phonological awareness); dividing words into individual sounds (phonemic awareness) and so on (Ikediashi, 2012). The students with such problems can be said to have a reading disorder or impairment. Children that are afraid and nervous about studying and schooling may be suffering from learning disabilities. A careful observation and diagnosis of these children might indicate that they are suffering from dyslexia.

According to International Dyslexia Association (IDA, 2014), dyslexia is a specific learning disability that is neurobiological in origin. It is characterized by difficulties with accurate and fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficiency in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. The term 'dyslexic' is used to refer to those who have a distinctive learning disability (Scott, 2009). They perform poorly than their cognitively matched peers as established by cognitive assessment (Scott, 2009; Scowling, 2013). Usually those who are called dyslexic are diagnosed with this condition by an educational psychologist prior to their fourteenth birthday (Scott, 2009; Snowling, 2013).

Much of research in this area has been carried out in the United States, with many individuals found to be "Learning Disabled" (Riddick, 2009; Burden, 2008). The British Psychology Association (2010) advances that dyslexia occurs when accurate and fluent word reading and spelling develops poorly or with great difficulty despite suitable learning opportunities; that is, learning opportunities which are efficient for many learners. Scientists believe dyslexia is caused by a neurological difference in the brain and results from a neurological problem in the left side of the brain where several regions located in the brain's left side have the responsibility for controlling the task of reading and writing (Snowling, 2013). Dyslexia is a type of learning disorder. Learning disorders are sometimes called learning difficulties or learning disabilities. Learning disorders describe a group of disorders known by inadequate development of specific academic, language and speech skills. The five main types of learning disorders are reading disorders (Dyslexia), mathematics disorders (dyscalculia), written expression disorders (Dystrophic), fine motor skills disorders and information processing disorders (Amesbury, 2006).

This work concentrated on the reading disorder called, Dyslexia. The researchers chose this reading disorder because it is one of the emerging problems students face in school especially in this part of the world. The researchers also chose to study junior secondary school students because dyslexia may not be dictated in the early years of schooling, like in the primary school, (Martin, 2008). It may however become more pronounced when the child enters secondary school. The child may become unmotivated and develop a dislike for school.

The child's interest in school may become jeopardized if the problem remains unrecognized, unmanaged or untreated. This may also account for the numerous cases of secondary school drop-outs in Nigeria and in Imo State precisely. This work is undertaken to sensitize on what dyslexia is capable of doing in a child's life and advocating for researchers to delve into this area of students' problems with the purpose of finding a lasting management or a probable solution to it.

This disability can be challenging for a person to learn at the same pace as someone who does not have reading disability. People with reading disorders have trouble performing specific types of skills if left to figure things out by themselves (Ikediashi, 2010). However, reading difficulties have no gross effect on the intelligence of an individual. Generally, children who are tagged reading disabled may have impairment in the acquisition, retention and processing of information. Standardized tests place them well below their intelligence quotient range in their area of difficulty (Mortimore, 2008). Children with reading disability have difficulty interpreting letters and words (dyslexia). They are unable to record and decode the sounds (phonetic structure). This condition reduces accuracy and has difficulty in reading and may impact on the psychosocial function of the student. Of all students with specific learning disorders, 70 to 80% have difficulty in reading (Igbo, 2010). Reading disorders can have an effect on any part of the reading process such as fluency and word recognition or both word decoding and reading rate. One gets more worried when this interference in the academic achievement of children linger up to secondary school level of education.

Education at secondary school level is assumed to be the bedrock and the foundation towards higher knowledge at tertiary institutions. It is an instrument that can be used to achieve a speedy economic, social, political, technological, scientific and cultural development in the country. Unfortunately, there has been a poor achievement of students at this level. The academic achievements of students have been a worrisome concern not only to parents and students but to the entire society (Epunam, 2009). The academic achievement of a person is referred to as the learning outcome of that person. Academic achievement or (academic) performance is the outcome of education that is the degree a learner, teacher or institution has achieved their educational goals (Ward & Ward, 2006). Academic achievement is commonly measured by examinations or continuous assessment but there is no general agreement on how it is best tested or which aspects is most important-procedural knowledge such as skills or declarative knowledge (Ward & Ward, 2006). In California, for instance, the achievement of schools is measured by the Academic Performance Index, (Martin 2008). In Nigeria, the academic achievement of students is measured by the administration of both teacher made

test and standardized tests (Isangedighi and Ogomake, 2010). The achievement of students could be measured by their scores in different school subjects. A learner that finds it difficult to read, that is a learner with dyslexia, will be underachieved in academics. Thus, there should be an early diagnoses and intervention to help such children so that they will excel in their academics. Hence, the need for this type of study.

Reading is a cognitive process which entails decoding symbols to arrive at meaning. It entails building meanings of words (Ayedun, 2014). Reading is pertinent and essential for efficient academic functioning and it determines the achievement of the aim and objective of teaching and learning. However, a learner that is deficit in this pertinent skill is limited in exploiting the opportunities for an effective academic excellence. Sadly, however, as decisive as reading is to teaching and learning, researchers have found that underachievement in reading retards effective academic growth among learners all over the globe (Adebayo, 2009). Nigeria is faced with the problem of underachievement in reading. For instance, it has been established to be a national problem (Okedara, 2007).

Many efforts have been made to address this problem. Some interventionists have viewed it from the angle of socio-psychological factors relating to the learners' background while others have looked at the students reading habits as a factor and others have focused on the readability of the text as a prime factor that determines reading efficiency or inefficiency (Ezeahurukwe, 2010). Ayodele (2009) opined that the methodology of teaching of reading coupled with poor learning environment in most Nigeria's secondary schools has hitherto yielded nothing to enhance the needed reading requirements of today's academic demands. This has resulted in the major crisis being witnessed in the school certificate results on English Language examinations of any form (Ayedun, 2014). Thus, researches to combat the challenges posed by underachievement in English reading comprehension among students at the basic level of education have continued unabated; yet, the problem is still persisting with continued increase in yearly failure rates in major English Language examinations (Ayedun, 2014). As important as reading is, a student who is unable to read fluently at the basic level of education may need close tutoring and help.

Again, it is often remarked that students' achievements in many school subjects have always been below expectation (Johanna, 2013). The trend of poor achievements in different school subjects in Imo State has been confirmed by the Examination Development Centre (EDC) Reports for the years: 2013, 2014, 2015, 2016 and 2017. These reports show that students' achievements were poor in many subjects. For instance, the Examination Development Centre in Imo State, (Junior School Certificate Examination) reports of 2013, 2014, 2015, 2016 and 2017 indicated that only 27.99%,

29.27%, 31.28%, 52.94%, 63.00% respectively of the students who wrote the examinations obtained five credits including Mathematics, English language and Basic science which are the basic subjects and requirements for admission into Senior Secondary School (EDC, 2013 – 2017). These uninspiring achievements in examinations are causes for concern.

He further advanced that poor teaching techniques, phobia for reading, poor reading habits by students among others contribute to their failure in examination.

The study by Nwachukwu (2014) on gender and secondary school students' performance in English Language in Imo State advanced that students fail in English Language based on poor comprehension, poor study habits and attention deficit disorder but did not mention dyslexia. This research work focuses on dyslexia as a correlate of reading difficulty and psychosocial problems among junior secondary school students. It is in a bid to find solutions to the scourging causes of failures in examinations that necessitated the need to embark on this research. This research is therefore filling the gap in literature on the causes of dyslexia and reading difficulty by examining the influence of psychosocial factors on students academic achievement and proffering solution to the problem.

Psychosocial refers to the interrelation of psychological and social behaviour of an individual (Erlbaum and Vaughn, 2011). Psychosocial also means the psychological and social aspects of someone, (Medical Dictionary, 2016). Psychological problems of the dyslexics are problems of academic self-concept, self-esteem, depression, and so on because academic, psychological and social failure early in their school career, influences their self-perceptions negatively (Elbaum and Vaughn, 2011). Learners with learning difficulties (focus on dyslexia) may have negative perceptions of their academic abilities or social skills, when comparing themselves to their peers. Psychological problems include problems of: self-perception, self-esteem, self-concept, self-worth, anxiety, depression, social interaction, (Elias, 2007). Psychological problems are part of daily life for every student and individual but for individuals who have reading disability, this can be challenging and frustrating in many ways. Psychosocial construct of an individual refers to skills of self-awareness, self-perception, and control of impulsivity, working and associating cooperatively and caring about oneself and individuals around for a successful process of self-development (Muola, 2010). Elias (2007) is of the view that, psychosocial awareness is the ability to understand, manage, and express the social and emotional aspects of an individual in ways that will advance the successful management of the life tasks of a person. Different researches suggest that psychological and social problems of dyslexics are suggestive of serious adaptive problems in students' teenage years and later in adult life (Elbaum and Vaughn, 2011). Many

researchers, like Muola, (2010) and Glazzard, (2010) after their studies are of the opinion that dyslexia, an academic learning difficulty is accompanied by social and emotional challenges (Hoskins, 2015). The study of dyslexia and its social and emotional effects is traced from 1980's.

At present the main evidence on the psychosocial impacts of dyslexia come from personal interaction and individual's life histories (Ryan and Deci, 2008). Educationalists many times see the academic side of a learning difficulty but fail to see psychological damages caused by this difficulty in their lives (Peleg, 2011). Ryan and Deci (2008) argue that, subsequently, however these difficulties were neglected, and for some years, only the academic and cognitive aspects of dyslexia were studied. There are gaps in research in Nigeria regarding the selected area of research as some of the available researches are on awareness of dyslexia prevalence in Nigeria children. Special education is integrating but progressing at a low speed and effective inclusive education is rare in Nigeria. So this research will be helpful in a unique area of research (dyslexia) in Nigeria so that future education of these learning including their psychosocial problems like self-perception, self-esteem, anxiety and even emotional needs can be recognized and managed so as to enhance their academic skills and sustain their interest in school.

Some researchers like (Peleg, 2011; Eissa, 2010) tend to suggest that dyslexia has the potentials of determining the psychosocial problems of students. When the learner constantly experience negativity, failure and anxiety, there is a shutdown of psychosocial systems. (Brenitz, 2008). Studies were carried by Elbaum and Vaughn (2011) which examined difference between students with and without reading disability across multiple domains of functioning and their academic failure and the effect on students' global self-esteem and adjustment. The study showed that, students with learning disabilities have lower levels of academic achievement and psychosocial difficulties compared to students without learning disabilities.

A large body of research like Shaywitz (2013) and Gibson and Kendall (2010), have described psychosocial needs of learners with dyslexia. Many of the studies have maintained that despite the learning disabilities label, those students have a positive self-concept about their academic skills. Bataineh and Gwanmh (2008) discovered that students with learning disabilities considered themselves as utilizing appropriate strategies in the areas of writing, reading, spelling and maths as being competent in those areas, they also rated their academic performance as average to above average. Bear and Minke (2006) advanced that learners with learning disabilities did not see themselves to be academically below their peers. However, other research works have discovered that dyslexics have lower self-concept, particularly in regard to their academic

achievement. For example, green (2014) found that 9th through 12th grade students with learning disabilities felt worse about their general intellectual ability and their self-esteem than did students without learning disabilities. In a related research, Gibson and Kendall (2010) found that adolescents with developmental dyslexia had lower self-worth and lower perceived competence in scholastic domains than students without disabilities. Valles (2009) found in comparative study that students with learning disabilities were less accepted by their peers, had lower self-esteem, and often feel lonelier when compared with their counterparts. Many studies have argued that despite the lower self-concept in students with learning disabilities in the intellectual domain, the students maintain positive feelings of global self-worth. For example, bear and Minke (2006) saw no differences in global self-worth between students with and without learning disabilities.

A factor that is suspected to impact with dyslexia as a correlate of psychosocial problems and achievement of students is gender. According to Ezeh (2013), gender refers to one's subjective feeling of 'maleness' and 'femaleness' irrespective of one's sex. It is generally classified into masculine or feminine and concerned with the attitudes, behaviours, values relative power, influence, roles and expectation (femininity and masculinity) that society ascribes to the two sexes on the differential basis. Research on gender differences and psychosocial and self-perception problems has also yielded conflicting data. A study by Shaywitz (2013), found that the schools identified more than four times as many second grade (8 years old) boys as girls being dyslexic and more than twice as many third grade boys as girls were said to have reading problems. However, when the researchers independently tested the children, they found equal numbers of boys and girls in both grades with reading difficulties. In the past, gender was thought to affect dyslexics' perception of self, with boys scoring higher than girls on this type of measure (Riddick, 2006). However, current literature does not agree to this view. Contrary to this finding, Passe (2006) found that coping behaviours differed between teenage dyslexic males and females, with females utilizing more emotional and avoidance-based coping, giving rise to moderate depression and lower general and academic self-esteem than their male peers. This suggests the need to investigate further on the extent dyslexia could have relationship with psychosocial and reading difficulty of secondary school students; especially in Imo State where the academic achievement of students in the Senior Secondary Certificate Examination (SSCE) is declining steadily.

The need for the study becomes more compelling when one considers the fact that dyslexia forms one of the masking issues that militate against the reading culture of many students in Nigeria. This disorder leads to poor performance of students, negative self-perception of

their academic abilities, social skills and drop-out of some students from school (Igbo, 2010). There is substantial and growing international research into teacher recognition and support for dyslexic learners in government-owned secondary schools/mainstream schools. Comparatively, the understanding of teachers' attitudes and beliefs around learning difficulties and how severe the impact is on students are limited in Nigeria.

Operationally, many Nigerians and classroom teachers have minimal knowledge and understanding of dyslexia. The lack of widespread recognition of the disability may mean that families will continue to encounter difficulties in having their child assessed/having the diagnosis of dyslexia recognized, and consequently having their child helped in schools. The typical difficulties experienced like delay in reading development and the memorization of whole words may be attempting to correct the literacy predicament through memorization and drill. A well-researched study could contribute to the understanding of where teachers are currently situated in terms of knowledge and support of dyslexia and in devising strategies that may improve the education of dyslexic students. The adoption of learning strategies unique to dyslexia, and the endorsement accomplishments in oral, visual or other areas, as signposts of achievement could have a significant influence on educational outcomes for students.

Statement of the Problem

The problem of reading difficulty has generated concerns from parents, teachers, counselors and researchers over the years. The term 'dyslexia' has been described by Rudolph Berlin as 'word blindness' since 1887 (Moats and Dakin, 2011). Since then, the problem of dyslexia has been seen among many children in the primary and secondary schools alike. This issue of dyslexia has been militating against the effective learning of students for ages. In America, the American Dyslexia Association (ADA) offer training and support for the dyslexics and in Britain, the British Dyslexia Association (BDA) do the same coupled with the fact that there are special schools for this set of students where they are taught and their difficulties well managed using individualized methods Kendeou, Savage and Van den Broek (2009). The reverse is the case in Nigeria where most teachers, even some researchers are yet to know the prevalence of dyslexia among pupils/students. Nigeria is confronted with the biting effects of underachievement in reading. Again, it has been established to be a national problem in Nigeria (Okedara, 2007). It is also estimated that 12 million Nigerians are living with learning disability, especially dyslexia and out of that number; four million are children (Adesulu, 2014).

In Nigeria, there are no provisions for special schools where children that have this problem are well taught

using individualized methods. Again, the problem is more pronounced in this contemporary age because majority numbers of teachers are unaware (Okedara, 2007) of this scourging problem of reading among students. A learner, who is deficit in this all important skill, is already limited in exploiting available opportunities for a successful academic excellence. A learner who is unable to read fluently at age 12 may have need for close tutoring and monitoring and probably a dyslexia diagnosis so as to improve his learning experience and psychosocial adjustment in school. An experienced teacher by way of careful observation can easily detect dyslexia and offer help rather than labeling the student as lazy, uneducable, blockhead, which makes them to pass through psychosocial problems of shame and depression et cetera.

In Nigeria the academic achievement of students in both Junior secondary and Senior Secondary Certificate Examinations are declining steadily coupled with the fact that some educators are still unfamiliar with the term 'dyslexia' which is one of the masking problems that militate against the effective reading and academic achievement of many Nigerian children. The extent dyslexia correlates with the psychosocial problems and achievement of Nigerian students who operate in different socio-cultural circumstances is yet to be well investigated and established. Therefore, the problem of this study put in a question form is: To what extent does dyslexia and reading difficulty correlate with psychosocial problems and achievement of students in the junior secondary schools in Imo State?

Objectives of the Study

The objectives of the study were to:

1. Find out the extent of dyslexia manifestations among junior secondary school students in Imo State.
2. Determine the correlation between dyslexia and psychological problems among junior secondary school students.
3. Find the relationship between dyslexia and social problems among junior secondary school students.
4. Investigate the influence of effect of gender in the correlation between dyslexia and psychological problems among junior secondary school students.
5. Find the influence of gender in the correlation between dyslexia and social problems among junior secondary school students.

Research Questions

The following questions were answered to guide the study.

1. What is the extent of dyslexia manifestations among junior secondary school students in Imo State?

2. What correlation exists between dyslexia and psychological problems among junior secondary school students?
3. To what extent does dyslexia relate with social problems among junior secondary school students?
4. What is the influence of gender in the correlation between dyslexia and psychological problems among junior secondary school students?
5. What is the influence of gender in the correlation between dyslexia and social problems among junior secondary school students in Imo State?

Hypotheses

The following null hypotheses were formulated and tested at 0.05 levels of significance.

Ho1: There is no significant relationship between dyslexia and psychological problems among junior secondary school students.

Ho2: There is no significant correlation between dyslexia and social problems among junior secondary school students.

Ho3: There is no significant influence of gender in the correlation between dyslexia and psychological problems among junior secondary school students in Imo State.

Ho4: There is no significant influence of gender in the correlation between dyslexia and social problems of junior secondary school students in Imo State.

METHOD

The study adopted a correlational research design. Ali (2013) opined that a correlational design is a form of research design that involves collecting data on two or more variables and computing them to find the correlation coefficient or the extent of linear relationship or association that exists between the two or more variables. The major purposes of correlational design are: to explore relationships between variables and to predict scores on one variable from research participant's scores on other variables. Correlational design was therefore suitable for this study in that it enabled the researchers establish the relationship that exists among dyslexia reading difficulty and psychosocial problems as well as achievement of students.

The targeted population of this study consisted of 2211 junior secondary class two students with dyslexia. They were selected from 119 public secondary schools in Owerri Education Zones 1 and 2 of Imo State in 2017/2018 session. The 2211 dyslexia students were made up of 1312 males and 899 females. To identify the dyslexics, the researchers conducted a preliminary initial survey initial and subsequently, conducted the main/complete research. The researchers made use of Dyslexia Identification Scale for Students (DISS) to

identify the students with dyslexia in public secondary schools. The students that scored 60 point and above in the DISS were identified as being dyslexic. Therefore, the choice of students with dyslexia in public secondary schools was motivated by the need to find out the extent dyslexia serves as a correlate of psychosocial problems and achievement among junior secondary school students, as a way to provide students with information about the relationship between dyslexia, psychosocial problems and achievement among students.

The sample for this study comprised of 442 (262 males and 180 females) identified students with dyslexia using multi-stage sampling technique. Initially simple random sampling technique was used to draw two education zones (Owerri Education Zones one and two) in Imo State. Purposive sampling technique was used to draw 35 schools with up to ten students with dyslexia. Proportionate stratified sampling technique was used to draw 20% of the total population of JSS2 students with dyslexia. The use of 20% was in line with Ali's (2013), recommendation which indicated that when the population is large up to 2000, about 5 to 20% could be used for the study.

Two research instruments were developed for use in collecting the data.

Development of the Instruments

Dyslexia Identification Scale for Students (DISS)

A 20-item Dyslexia Identification Scale for Students (DISS) was developed by the researchers.

The Dyslexia Identification Scale for Students (DISS) comprised of two sections: Section A is the personal data of the students and instruction to the respondents. It includes parental educational background, sex of the respondents and so on. Section B required students to fill the instrument as it relates to them. The Dyslexia Identification Scale for Students (DISS) items were based on a four (4) point rating scale of Very High Extent (VHE – 4), High Extent (HE -3) Low Extent (LE – 2), and Very Low Extent (VLE -1). This instrument was used separately to identify the subjects for the study. The negative items were reversely scored. Students who had a mean scored of 2.5 and above were considered dyslexics while students who scored below 2.4 were not considered dyslexics.

Psychosocial Problems of Dyslexia Questionnaire (PPDQ)

The researchers through reviewed literature and adaptation from Scholastic Competence Subscale from the Self-Perception Profile for Children by Harter, 1998, developed a 30 – item Psychosocial Problem of Dyslexia

Questionnaire (PPDQ). The Psychosocial Problems of Dyslexia Questionnaire (PPDQ) was filled by the identified dyslexic students. The instrument comprised two sections: Section A is the personal data of the students and instruction to the respondents. The identified dyslexia students provided all the necessary information. Section B has two clusters. Cluster A contains items on psychological problems of dyslexics while Cluster B comprised items on social problems of dyslexics. The items in clusters A and B were based on a four (4) point rating scale of Very High Extent (VHE -4), High Extent (HE - 3), Low Extent (LE -2), Very Low Extent (VLE 1). The negative items were reversely scored and psychological problems of Dyslexia Questionnaire (PPDO).

The Dyslexia Identification Scale for Students (DISS) were subjected to face validation in order to ascertain their relevance in the present study. In view of this, the instruments were given to three experts from Educational Psychology, Guidance and Counseling; and Measurement and Evaluation Departments, all from Michael Okpara University of Agriculture, Umudike. The validators checked the suitability of language, its clarity, relevance of items to the study and total coverage in addressing research questions; bearing in mind the purpose of the study. Their corrections and suggestions helped to strengthen the face and content validity of the instrument.

The Dyslexia Identification Scale for Students (DISS) and Psychosocial Problems of Dyslexia Questionnaire were subjected to trial testing through test retest method using 30 JSS 2 students in Okigwe Education Zones of Imo State which were different in location from the selected Zones of the study. The instruments were administered to students and after two weeks interval; the instruments were re-administered to the same students. The stability of the instruments was determined using Pearson's Product Moment Correlation Coefficient which gave reliability indices of 0.73, 0.82 for the DISS and PPDQ respectively. The internal consistency of the items was determined using Cronbach's Alpha method after single administration which yielded reliability indices of 0.77 and 0.85 for the DISS and PPDQ respectively. Cronbach's Alpha method was used since the instruments were not dichotomously scored.

The researchers administered the validated instrument PPDQ with the help of four research assistants briefed by the researcher so as to facilitate the study and coverage of the scope. Four hundred and forty-two sets of the instrument were administered to the sampled secondary schools in the zone through direct delivery and recovery method. The essence of direct delivery and recovery method is to ensure a high percentage of recovery of the copies of the instruments. The researchers briefed the research assistants on how to administer correctly the instruments. The respondents were also given proper instruction on how to answer the item questions in the

instrument. At the end of the data collection, 424 copies of the instruments were retrieved and collated which represents 96% retrieval rate.

The data which were obtained through the administration of the PPDQ were analyzed using real limit of numbers to answer research question 1, Pearson's (r) Product moment correlation to answer research questions 2 to 5 while linear and multiple regressions were used to test the null hypotheses at 0.05 levels of significance. In deciding on the extent of dyslexia manifestations in research question, the real limits of numbers were utilized for decision making as follows: Very High Extent = 3.50 – 4.00, High Extent = 2.50 – 3.49, Low Extent = 1.50 -2.49, and Very Low Extent = 1.00 – 1.49. In using Pearson's (r) product moment correlation, the decision rule was that $\pm 0.00-0.20$ = very low relationship; $\pm 0.21-0.40$ = low relationship; $\pm 0.41-0.60$ = \pm moderate relationship; $\pm 0.61-0.80$ = high relationship; $\pm 0.81-1.00$ = very high relationship was used in the interpretation. The instrument with which the data was collected has four points' responses scale. The null hypotheses of significant difference was accepted if the p-value was equal or greater than alpha value of .05 but rejected if the p-value was less than the alpha value of .05 level of significance.

RESULTS

The results of the descriptive and inferential analyses were presented in Tables as follows.

Research Question 1

What is the extent of dyslexia manifestation among junior secondary school students in Imo State?

Data for answering research question 1 are presented in Table 1.

Data in Table 1 indicate that the cluster mean value of all the 20 items is 3.22 which is within the real limit of 2.50 to 3.49. This indicates that there is a moderate manifestation of Dyslexia among junior secondary school students in Imo State. The standard deviation of all the 20 items ranged from .50 to 1.11, which showed that the respondents were not too far from the mean and opinion of one another in their responses on the moderate extent of Dyslexia manifestation among junior secondary school students in Imo State.

Research Question 2

What correlation exists between dyslexia and psychological problems among junior secondary school students?

Table 1. Mean Rating for the extent of Dyslexia Manifestations among Junior Secondary School Students

S/N	Items	X	SD	Remark
1	Reading at the age of six was somewhat a difficult task for me	3.57	.70	VHE
2	Reading for my class when I was in primary four was difficult	3.54	.71	VHE
3	I find it difficult to understand a reading material very well	3.39	.70	HE
4.	I do not read without being corrected by anyone	3.45	.50	HE
5.	I have been corrected by my class teachers especially over incorrect pronunciation of words	3.30	.68	HE
6.	I always miss some lines while reading	3.15	.66	HE
7.	I mispronounce certain words with more than one syllable	3.24	.83	HE
8.	I do not read very fast	3.54	.90	VHE
9.	I do not know how to look for point fast in a passage	3.39	.96	HE
10	I often get distracted while reading	3.24	.70	HE
11.	I do not see written/printed words clearly	2.96	1.04	HE
12.	I do not always see what is written on the board from my seat	2.63	.60	HE
13.	I have been corrected severally on the right pronunciation of some words	3.21	.64	HE
14.	I cannot spell words that are multi-syllable	3.09	.76	HE
15.	If I narrate a story, I can't really write it	3.46	.84	HE
16.	I often omit some letters while writing some words I ought to spell correctly	3.27	.76	HE
17.	I have been asked by my teacher to change my writing	2.60	1.11	HE
18.	I have been told by some of my teachers and students that my writing is legible	2.78	.54	HE
19.	I get nervous when asked to read for my class	3.18	.63	HE
20.	I do not enjoy writing dictation in English language class	3.45	.79	HE
	Cluster Mean	3.22	.76	HE

Key: Very High Extent (VHE -4), High Extent (HE -3), Low Extent (LE-2), and Very Low Extent (VLE 1)

Data for answering research question 2 are presented in Table 2.

Data in Table 2 indicate a correlation coefficient (r) of .92 which is positive and within the coefficient limit of $\pm 0.81 - 1.00$. This indicates that Dyslexia to a positive very high extent correlates to psychological problems among junior secondary school students.

A Corresponding hypothesis formulated to further address the research question is

Hypothesis 1

There is no significant relationship between dyslexia and psychological problem among junior secondary school students Imo State.

Table 2. Correlation Matrix of Dyslexia and Psychological Problems among Junior Secondary School Students

		DISS	PPD
DISS	Pearson Correlation	1	.921*
	Sig. (2-tailed)		.000
	N	424	424
PPD	Pearson Correlation	.921*	1
	Sig. (2-tailed)	.000	
	N	424	424

DISS = Dyslexia Identification Scale for Students, PPD = Psychological Problems of Dyslexia. Correlation is significant at the 0.05 level (2-tailed).

Table 3. Linear Regression Analysis of Dyslexia and Psychological Problems among Junior Secondary School Students in Imo State

Model	Sum of squares	Df	Mean Square	F	Sig.
Regression	9.443	1	9.443	174.870	.000
Residual	22.842	423	.054		
Total	11.132	424			

Df = degree of freedom, F = F-calculated, Correlation is significant at the 0.05 level (2-tailed).

Table 4. Correlation Matrix of Dyslexia and Social Problems among Junior Secondary School Students

		DISS	SPD
DISS	Pearson Correlation	1	.788*
	Sig. (2-tailed)		.000
	N	424	424
SPD	Pearson Correlation	.788*	1
	Sig. (2-tailed)	.000	
	N	424	424

DISS = Dyslexia Identification Scale for Students, PPD = Social Problems of Dyslexia. *. Correlation is significant at the 0.05 level (2-tailed).

Data in Table 3 show that the calculated F-value of 174.870 has a p-value of .00 which is less than the alpha value of .05. This means that there is a significant relationship between dyslexia and psychological problems among Junior Secondary School Students in Imo State was rejected.

RESEARCH QUESTION 3

The research question of this study was:

To what extent does dyslexia relates with social problems among Junior Secondary School Students?

Data for answering research question 3 are presented in Table 4.

Data in Table 4 indicate a correlation coefficient (r) of .79 which is positive and within the coefficient limit of $\pm 0.61 - 0.80$. This indicates that Dyslexia to a positive very high extent correlates to social problems among junior secondary school students.

Table 5. Linear Regression Analysis of Dyslexia and Social Problems among Junior Secondary School Students in Imo State

Model	Sum of squares	Df	Mean Square	F	Sig.
Regression	6.522	1	6.522	50.953	.000 ^b
Residual	54.144	423	.128		
Total	10.497	424			

Df = degree of freedom, F = F-calculated, Correlation is significant at the 0.05 level (2-tailed).

Table 6. Correlation Matrix of the Influence of Gender in Dyslexia and Psychological Problems among Junior Secondary School Students.

		PPD	Gender
PPD	Pearson Correlation	1	.214
	Sig. (2-tailed)		.232
	N	424	424
Gender	Pearson Correlation	.214	1
	Sig. (2-tailed)	.232	
	N	424	424

PPD = Psychological Problems of Dyslexia. Correlation is significant at the 0.05 level (2-tailed).

The research question was further subjected to more inferential statistics of Linear Regression Analysis and this hypothesis two

Hypothesis 2

There is no significant relationship between dyslexia and social problem among junior secondary school students Imo State

Data for testing hypothesis 2 are presented in Table 5. Data in Table 5 show that the calculated F-value of 50.953 has a p-value of .00 which is less than the alpha value of .05. This means that there is significant relationship between dyslexia and social problems among Junior Secondary School Students in Imo State. Therefore, the hypothesis of no significant relationship between dyslexia and social problems among Junior Secondary School Students in Imo State was rejected.

Research Question 4

What influence of gender in the correlation between dyslexia and psychological problems among junior secondary school students?

Data for answering research question 4 are presented in Table 6. Data in Table 6 indicate a correlation coefficient (r) of .21 which is positive and within the coefficient limit of $\pm 0.21 - 0.40$. This indicates that gender influences to a positive low extent in the correlates between dyslexia

and psychological problems among junior secondary school students.

The research question was further subjected to inferential statistics of regression analysis which gave rise to hypothesis 3.

Hypothesis 3

There is no significant interaction effect of gender in the correlation between dyslexia and psychological problem among junior secondary school students Imo State.

Data for testing hypothesis 4 are presented in Table 7. Data in Table 7 show that the calculated F-value of 84.357 has a p-value of .00 which is less than the alpha value of .05. This means that there is significant influence of gender in the correlation between dyslexia and psychological problems among Junior Secondary School Students in Imo State. Therefore, the hypothesis of no significant influence effect of gender in the correlation between dyslexia and psychological problems among Junior Secondary School Students in Imo State was rejected.

Research Question 5

What is influence of gender in the correlation between dyslexia and social problems among Junior Secondary School Students in Imo State?

Data for answering research question 3 are presented in Table 8. Data in Table 8 indicate a correlation coefficient

Table 7. Regression Analysis of Influence of Gender in the Correlation between Dyslexia and Psychological Problems among Junior Secondary School Students Imo State.

Model	Sum of squares	Df	Mean Square	F	Sig.
Regression	9.447	2	4.724	84.357	.000 ^b
Residual	23.632	422	.056		
Total	11.132	424			

Df = degree of freedom, F = F-calculated, Correlation is significant at the 0.05 level (2-tailed).

Table 8. Correlation Matrix of the Influence of Gender in Dyslexia and Social Problems among Junior Secondary School Students

		Gender	DISS	SPD
Gender	Pearson Correlation	1	.214	-.080
	Sig. (2-tailed)		.231	.659
	N	424	424	424
DISS	Pearson Correlation	.214	1	-.624*
	Sig. (2-tailed)	.231		.000
	N	424	424	424
SPD	Pearson Correlation	-.080	.624*	1
	Sig. (2-tailed)	.659	.000	
	N	424	424	424

DISS = Dyslexia Identification Scale for Students, SPD =Social Problems of Dyslexia. *. Correlation is significant at the 0.05 level (2-tailed).

Table 9. Regression Analysis of Influence of Gender in the Correlation between Dyslexia and Social Problems among Junior Secondary School Students in Imo State.

Model	Sum of squares	Df	Mean Square	F	Sig.
Regression	6.552	2	3.276	25.007	.000 ^b
Residual	55.282	422	.131		
Total	10.497	424			

Df = degree of freedom, F = F-calculated, Correlation is significant at the 0.05 level (2-tailed).

(r) of .21 which is positive and within the coefficient limit of $\pm 0.21 - 0.40$. This indicates that gender influence to a positive low extent in the correlates between dyslexia and social problems among junior secondary school students. It further shows a correlation coefficient (r) of -.62 which is negative and within the coefficient limit of $\pm 0.61 - 0.80$. This indicates that social problems to a negative high extent correlate to dyslexia. It could be concluded that the influence of gender in the correlation between dyslexia and problems among junior secondary school students is to a positive low extent.

A corresponding hypothesis formulated to further address the research question was

Hypothesis 4

There is no significant influence of gender in the correla-

tion between dyslexia and social problems of junior secondary school students in Imo State. Data for testing hypothesis 5 are presented in Table 9.

Data in Table 9 show that the calculated F-value of 25.007 has a p-value of .00 which is less than the alpha value of .05. This means that there is significant influence of gender in the correlation between dyslexia and social problems among Junior Secondary School Students in Imo State.

Therefore, the hypothesis of no significant influence of gender in the correlation between dyslexia and social problems among Junior Secondary School Students in Imo State was rejected.

DISCUSSION ON FINDINGS

The finding of the study revealed that there was a moder-

ate manifestation of Dyslexia among the junior secondary students. This confirms the suspicion of the researchers that motivated them into this study believing that Dyslexia could be among the junior secondary student psychological problems. It corroborates the fact that Dyslexia involves the inability to read, understand, pronounce and write well. This finding is in line with Motimore (2008) who noted that this disorder (dyslexia) involves inability of a child to read, comprehend, write, organize his or her thoughts, and present them in a sequential manner in appropriate time and place he or she finds himself or herself. Besides, Awang (2009) studies the degree and the demographic factors and the study showed that the dyslexic students concerned really faced reading problem because 58-62% of them exhibited 32 characteristic of dyslexia.

This finding is not surprising and it goes to land credence to the fact that students' achievements in many school subjects have always been below expectation and this has been confirmed by the Examination Development Centre (EDC) Reports for years: 2013, 2014, 2015, 2016 and 2017. These reports show that students/achievements had been poor in many subjects. Of course, a learner that finds it difficult to read, that is a learner with dyslexia, will be underachieved in academics. Thus, there should be an early diagnosis and intervention to help such children so that they will excel in their academics. That one of the motivation of this study. As at date there is substantial and growing research into teacher recognition and support for dyslexia learners in government-owned secondary schools. Comparatively, the understanding of teachers' attitude and beliefs around learning difficulties and how severe the impact is on students are limited in Nigeria, (Igbo, 2010).

Many Nigerians and classroom teachers have minimal knowledge and understanding of dyslexia. The lack of widespread recognition of the disability may mean that families will criticize the encounter difficulties in having their child assessed/having the diagnosis of dyslexia recognized, and consequently having their child helped in schools. A situation where the dyslexia is dictated early and the child moves on to write any external examination the result may be poor performance. This may be responsible to the poor performance recorded by some students in their external examinations.

The finding further showed that Dyslexia to a significant positive very high extent correlates to psychological problems among junior secondary schools students. Among the psychological problems faced by dyslexic students are nervousness, anxiety, depression, frustration, low self-esteem, isolation, etc. These characteristics are in line with Herwitt (2009), peleg (2011) and American psychiatric Association (2018) who associated dyslexia to the following problem: anxiety, anger, depression and low esteem. The finding disagrees with finding by Tam and Hawkins (2012) which examined the self-concept and depression levels of students with

dyslexia in Singapore and found out that students with dyslexia, in Singapore, did not tend to have low academic self-concept or feel depressed when they compared themselves with their peers without dyslexia. Instead, they possessed some protective factors, such as positive global self-worth, and positive self-concept on athletic abilities and social acceptance. Contrary to Tam and Hawkins(2012) and in line with the study, Eissa (2010) who carried out a study on psychosocial and Behavioural problems associated with Dyslexia in Tanzania observed that Dyslexic adolescents suffered from internalizing and externalizing symptoms, withdrawal, somatic complaints, anxiety and depression, social problems, thought problems, aggression and delinquent behaviours.

The result also revealed that Dyslexia to a significant positive high extent correlate to social problems among junior secondary schools student. The finding is in line with coleman, et al.(2008) who noted that individuals with learning disorder especially dyslexia, many times have the challenge of fatigue, sleeplessness, low self-esteem, more fighting with friends and feeling different from peers. It also corroborate Reid (2009) who noted that learners with dyslexia usually have to visit psychologist and other specialists indicating that they are different and they may feel stigmatized or labeled as a result of this. Also in line with findings are Peer (2011, 2006) and Lapkin (2015) who noted that one of the worse aspects of being dyslexic is the vicious circle caused by stress. Learners with dyslexia need to cope with chronic stress because they try to do their best but continue to disappoint the people close to them, whereas they long to receive recognition and approval from their peers, to be accepted for who they are and not be evaluated as being lazy when they have put so much effort into doing their work. To an extent the findings related to Brown (2008) on a study of the relationship among self-concept, reading attitude and reading comprehension in second grade readers in Newfoundland America, who found out significant relationship between parent relations' self-concept, reading self-concept, general school self-concept, total academic self-concept, and total self-concept and reading attitude, but not for peer relation' self-concept and total non-academic self-concept and reading attitudes.

The result also indicated that gender influenced to a significant positive low extent in the correlation between dyslexia and psychological problems among junior secondary students in Imo State. This finding contrasts the finding of Eissa (2010) on psychosocial and Behavioural problems associated with Dyslexia in Tanzania, which revealed that dyslexia has negatively influenced the self-esteem of the students from parents with both high and low educational attainment and caused them to feel different from others with poor school achievement and lower feelings of wellbeing without gender differences.

The findings further indicated that gender impacts to a

significant positive low extent in the correlation between dyslexia and social problems among junior secondary school students in Imo State. The finding is in line with Lucid (2013) who maintained that although dyslexia seems to be more prevalent amongst males than females, the exact ratio is unknown: the most commonly quoted figures are between 3:1 and 5:1. Also Alexander-passe' (2016) noted that studies have typically found that boys have more negative attitudes to reading and possess more negative reading self-concept than girls. On the contrary, Kelly and Norwich (2004) which examined how learners with moderate learning difficulties in both mainstream and special schools see themselves, i.e. their positive, negative and mixed self-perception in Australia, showed that most students were aware of their learning difficulties and felt mainly negative about their difficulties with no significant gender differences.

CONCLUSION

Learning disorder describe a group disorders characterized by inadequate development of specific academic, language and speech skills. Among the various kinds of learning disorders is Dyslexia. Dyslexia also known as reading disorder is evident when accurate and fluent word reading and spelling develops very incompetently or with great difficulty despite appropriate learning opportunities; that is, learning opportunities which are effective for the great majority of children. It is one of the most common problems students face in school especially in this part of the world. Dyslexia can go without being dictated in the early years of schooling but become more pronounced when the child enters secondary school. The child's interest in school may become jeopardized if the problem remains unrecognized, unmanaged or untreated. This may also account for the numerous cases of secondary school drop-outs in Nigeria and in Imo State precisely. This situation becomes an issue because it has been militating against the effective learning of students. In advanced counties such as America and Britain, there are special schools for this set of students where they are taught and their difficulties well managed using individualized methods. Regrettably, the reverse is the case in Nigeria where the issue of dyslexia is not well known by many people yet, one in eighty persons is affected by dyslexia. Because of this, there are no provisions for special schools where children that have this problem are well taught using individualized methods. Consequently, the academic achievement of students in both Junior Secondary and Senior Secondary Certificate Examinations in Nigeria are declining steadily.

It was in a bid to cover this gap that the researchers embarked on this study to unravel the relationship and the strength of such relationship between dyslexia, the psychosocial problems and achievement of Nigerian

students who operate in different socio-cultural circumstances. Dyslexic students can be assisted to learn to read and write with appropriate instructional strategies and educational support. An important aspect of dyslexia is for school to develop a plan with the parents of dyslexics to meet their challenges. The study findings indicated that there was a moderate manifestation of dyslexia, among the junior secondary school students, Dyslexia to a significant positive very high extent correlate to psychological problems and so on.

Educational Implication of the Findings

The findings of this study have education implications to students, parents, teachers, psychologists and guidance counselors, curriculum planners and textbook authors, Non-governmental organizations, the government and researchers when published. If the findings of this study on the extent to which dyslexia correlates with psychosocial problems and reading difficulty of students in the junior secondary schools in Imo state is accessed and made known to the public, there would be sufficient knowledge on how to understand why dyslexic students have difficulties with single-word reading and spelling. It would also help to know why some students feel inferior and shy at times before their mates and why some students couldn't continue in their education. Hence, bringing about a decrease in secondary school dropout. Again, parents would understand the causes of dyslexia and the relationship between dyslexia, psychosocial problems and reading difficulty of their children. It would also enable them to identify children with dyslexia so as to look for early intervention.

The findings of this study would help teachers identify problems associated with dyslexia. When teachers identify the problems associated with dyslexia, they would be able to understand and effectively manage and accommodate the changing mood of students caused by stereotypes associated with dyslexia. There has been always a persisted prevalent belief among the teachers that if a student cannot learn, there is nothing a teacher can do to make him learn. This attitude is not realistic as the learner also places their failure to learn on their teachers. The findings would help them to know how best to teach students with dyslexia. The findings would help to understand the extent of manifestation of dyslexia in schools and the need to assist the dyslexic students to cope with the psychological and social problems encountered by such students. The findings would also help to understand and effectively manage the changing mood of the students caused by stereotypes associated with dyslexia.

The study would help the curriculum planners to develop modules that would meet the students' relationship needs and psychosocial needs of these set

of students. It would also provide knowledge on how best to plan and implement appropriate learning skills that should be used in the classroom and as well ensure that personal competence characteristics such as self-confidence, knowing one's strength and weakness, self-control of emotions, trustworthiness and commitment are enshrined in the school syllabus that is developed for learning by the students. The findings of the study would help the curriculum planners understand the perceptions of student and teachers regarding dyslexia.

The results of the study would help textbook authors have a wider scope of the knowledge about the emotions that can influence students' academic life and its changing challenges. The findings would as well provide a platform that will academically assess issues which affect the school operations through writing.

Special bodies like Non-governmental organizations should focus attention to this group of people that have not received much attention in Nigeria on how to better and enhance their reading and general academic lives. Researchers should develop skills that would enable them monitor the trend of manifestation of dyslexia and the relationship between dyslexia and psychosocial problems as well as reading difficulty of students and proffer solutions to the trending problem.

RECOMMENDATIONS

Based on the findings and conclusions of the study, the following recommendations were made

1. Teachers in general should study and observe their students properly in order to identify amongst them the dyslexics and other learning disabled. This is to enable them know which measure, teaching methods and teaching styles to use for them as well as to carry everyone along in the classroom.
2. Where dyslexic students cannot be separated from brighter ones, teachers of such classes should exhibit patience and teach other students how to accommodate one another.
3. There should be special dyslexia programs, caring environment, early identification, on-time interventions, school and home partnership in order to help the dyslexics.
4. Parents of the dyslexic should open up, treat them with care and not seeing them as a burden but help them at home where necessary, as well as present them for proper guidance and counseling.
5. All students at their early secondary school stage should be subjected to therapy to determine whether they have dyslexia or not before facing the senior secondary level.
6. Teachers, parents and even peers and classmates should stop labeling the dyslexic students negatively so

as to avoid the feeling of depression, anger and other psychosocial problems.

7. The government, non-governmental organizations and school administrations should provide adequate special facilities and structures for dyslexic students, since dyslexic students perform better and not feel isolated when not mainstreamed.

8. Curriculum planners and developers should develop modules that are befitting for all students, taking into consideration the dyslexics.

9. Special or professional teachers should be assigned to teach the dyslexics in their special schools.

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