



Correlates Of Dyslexia and Academic Variables of Senior Secondary School Students in Port-Harcourt Local Government Area Of Rivers State

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ABSTRACT

The study investigated the Correlates of Academic Variables of senior secondary school Students with dyslexia in Port Harcourt Local Government Area of Rivers State. The study adopted correlational research design. Four research questions guided the study while four null hypotheses were tested in the study. The population of the study consisted of one hundred and sixty-two students with dyslexia (162). The sample of the study consisted of forty-five (45) students with dyslexia. The sample was drawn using simple random sampling technique. Two instruments were used for data collection. They include: "Correlates of Academic Performance Questionnaire (CAPQ). Pearson product moment correlation (PPMC) method was used to answer the research questions, as well as test the null hypotheses at 0.05 level of significance. The findings of the study showed that there is a strong positive relationship between achievement motivation, school phobia, availability of learning/teaching aid and academic Performance of senior secondary school students with dyslexia in Port Harcourt Local Government Area of Rivers State, amongst others. It was recommended that the government should offer scholarships to students with dyslexia that are doing well academically, amongst others.

Keywords: Correlates, Dyslexia and Academic Variables.

INTRODUCTION

The name "dyslexia" comes from the Greek terms "dys" for hard or difficult and "lexia" from the word lexicos, which has to do with words. As a result, dyslexia refers to difficulties or disabilities with words, specifically the inability to decode written material. Dyslexic children are not necessarily physically disabled, but disabled in terms of deciphering words associated with reading, spelling, writing, and even arithmetic even though they had sufficient intellectual capacity and access to schooling (Agomoh & Kanu, 2011). Inaccurate word identification, delayed reading comprehension, and poor spelling are some particular signs. Kooji and Sandra (2013) listed learning disabilities associated with dyslexia to include: dysgraphia, attention deficit disorder, auditory processing disorder and developmental disorder. Different varieties of dyslexia exist, including developmental dyslexia, and acquired dyslexia, also known as alexia. Other types of dyslexia include central dyslexia, which relates to difficulties with, and visual word-form dyslexia, which is associated with problems with the visual recognition of words.

Dyslexia as a learning disability results from minor brain disruptions or damage, especially the central nervous system due to terminated neurological developmental. This causes inflexibility, hyperactivity. Wellington, (2015). Learning can only take place when the cognitive process is fluid, this explains why

learning disabilities like dyslexia affects the academic performance of children exhibiting such symptoms. Eke et al (2018) noted that learning disabilities like dyslexia is not the same as learning problems like: poor sight, hearing deficiencies or poor motor skills. As noted by Eke et al (2018), people with learning disabilities like dyslexia can perform averagely or above average. The issue lies in them not being able to utilize their full potential, which could mean performing at the same level with their classmate or age mate. This is why it is sometimes called “hidden disabilities”. Although this challenge cannot be cured it can be managed for a life time in such a way that would allow the child achieve maximally academically Knight (2021). Waiunihian and Naido (2011), Armstrong & Gary (2014) noted that children with dyslexia may struggle during the preschool years to grasp the concept of alphabetical letters, recognize rhyming patterns in the alphabet and pronounce common words. They may also, suffer word skipping, trouble identifying letters, poor spelling, reading comprehension issues, and more. Many of them thrive in building, engineering, drama, music, storytelling and many other things requiring creativity. They may seem to occasionally lose track of time and what they are doing at the moment. Some may even find it difficult to remain attentive for a period of time. Achilike (2020). All these traits impede their academic performance in school and make them lag behind their age grade in learning activities resulting in poor overall performance.

MacKay (2021) noted that the school can be more dyslexia-friendly by not considering it as a learning problem, but rather a particular learning difference or preference. By portraying it this way, teachers would not see it as a challenge requiring special knowledge, training or skill, but rather persons who require differentiated learning techniques. This would vary from one dyslexic student to the other. It then becomes the responsibility of the teacher to identify which differentiated method best works for each dyslexic student. The conceptualization of dyslexia as a learning preference is paramount in our schools, because the initial idea of dyslexia as a learning difficulty gives the impression that something is wrong with the child, whereas the child just require specialized methods of passing on skills and knowledge that may be different from the generalized method. Many factors have helped improved the academic performance of dyslexic students in. For example exposure to the use of learning or teaching aids have been found to influence the improved performance of students with dyslexia as per the findings of Pathak (2020), Castles and Friedman (2014). Patterson and Pennigton (2012) discovered in their study that an improved school phobia significantly and negatively impacts on the performance of dyslexic pupils to about 15%. This finding was bettered by that of Samuelson and Landberg (2003) whose findings indicate that although environmental factors account for 35% for the academic performance of dyslexic students, psycho-social factors such as: school phobia, self-efficacy significantly predicted their academic performance overall. Borleff (2017) findings indicated that although the poor performance of dyslexic students could be obviously linked to their inability read and write, yet it highly correlated the ability of the teacher in passing on knowledge. This is further agreed upon by the result of Kaluyu & Ooko (2016) findings with linked teaching ability to students’ academic achievement. As per the result of the studies carried out by Rimkute (2013) and Tops (2012), Dyslexic children with achievement motivation do better in their academic than those that are low on achievement motivation.

Statement of the Problem

Dyslexia has an impact on people beyond their capacity for reading and writing. Students who struggle with reading and spelling are unable to complete reading-intensive assignments, which has an impact on their overall academic performance. Additionally, failing academically can exacerbate low teacher competency, school phobia, achievement motivation and availability of learning/teaching aid. Although reading proficiency was thought to be crucial for academic success in school, little study has specifically addressed this issue and how factors such as: teacher competency, school phobia, achievement motivation and availability of learning/teaching aid affects pupils' academic performance. Furthermore, the relationship between dyslexia, teacher competency, achievement motivation, school phobia and availability of learning/teaching aid and academic success received less consideration. Therefore, this paper aimed to highlight some correlates of academic performance of students with dyslexia in senior secondary schools in Port Harcourt Local Government Area of Rivers State.

Aim and Objective of the Study

The general objective of this study was to establish the relationship between dyslexia and academic variables of senior secondary school students in Port Harcourt Local Government Area, Rivers State. The specific objective of this research is to:

1. Find out the relationship between dyslexia and academic performance of students in Port Harcourt Local Government Area of Rivers State.
2. Ascertain the relationship between dyslexia and academic interest of secondary school students in Port Harcourt Local Government Area of Rivers State.
3. establish the relationship between dyslexia and study habit of secondary school students in Port Harcourt Local Government Area of Rivers State

Research Questions

The following research questions guided the study:

1. What is the relationship between dyslexia and academic performance of students with dyslexia in Port Harcourt Local Government Area of Rivers State?
2. What is the relationship between dyslexia and academic interest of secondary school students in Port Harcourt Local Government Area of Rivers State?
3. What is the relationship between dyslexia and study habit of secondary school students in Port Harcourt Local Government Area of Rivers State?

Hypotheses

The following hypotheses will be tested in this study.

1. There is no significant relationship between dyslexia and academic performance of students with dyslexia in Port Harcourt Local Government Area of Rivers State.
2. There is no significant relationship between dyslexia and academic motivations of secondary school students in Port Harcourt Local Government Area of Rivers State.
3. There is no significant relationship between dyslexia and study habit of secondary school students in Port Harcourt Local Government Area of Rivers State

METHODOLOGY

The study adopted correlational research design. This design was used because the study intends to establish the relationship between dyslexia and academic variables of students. The study was carried out in Port-Harcourt Local Government Area, Rivers State. The population of the study consisted of all students in senior secondary school in Port-Harcourt Local Government Area, Rivers State. According to Rivers State Senior Secondary Schools Board (2023), there are 10,564 students in secondary schools in Port-Harcourt Local Government Area. The sample size of the study was 342 drawn using purposive sampling techniques. That is, only students that are identified as dyslexic were involved in the study. The research instruments used for the study were “Dyslexia Screening Questionnaire (DSQ) developed by Advanced Assessment Limited”. DSQ is a screening tool designed to measure risk of disability (i.e. dyslexia) in students. The questionnaire has three subscales, the subscales are as follows, Dyslexia screening test, reading and perceptual difficulties, and writing difficulties. The second instrument was a self-designed instrument titled “Academic Variables Questionnaire (AVQ)” The questionnaire has four subscales measuring the academic performance, motivation, interest and study habits of students. The instruments were validated and tested for reliability using pilot testing through Cronbach Alpha. The reliability coefficient obtained in the study were 0.86, 0.77, 0.84, and 0.77. Two instruments were administered to the respondents. Pearson Product Moment Correlation (PPMCC) was used to provide answers to the research question. The null hypotheses were tested using z-transformation at 0.05 level of significance. When the p-value is less than 0.05, the relationship is “Rejected”. The decision rule;

1.00 Perfect Relationship

0.99-0.70 Very Strong Relationship

0.69-0.60 Strong Relationship

0.59-0.50 Moderate Relationship

0.49-0.30 Low Relationship

0.10-0.29 Very Low Relationship

0.00- No Relationship

RESULTS

Research Question One

What is the relationship between dyslexia and academic performance of students with dyslexia in Port Harcourt Local Government Area of Rivers State?

Table 1: Pearson's Product Moment Correlation Coefficient Analysis on the Relationship between Dyslexia and Academic performance of Senior Secondary School Students

Variable	N	$\frac{\sum Y}{\sum X}$	$\frac{\sum Y^2}{\sum X^2}$	r-val	Rmks
Dyslexia(Y)	342	4034	301271	-0.72	Negative Strong
Academic Performance(X)	342	8092	27494		

Field Survey, 2023.

Result in Table 1 shows that the relationship between dyslexia and academic performance senior secondary school Students with dyslexia in public senior secondary schools in Port Harcourt Local Government Area of Rivers State. The r-value obtained from the analysis was -0.72. This result indicates that there is a strong negative relationship between dyslexia and academic performance of senior secondary students in Rivers State. The implication of this result shows that when students' scores in dyslexia increases there is a corresponding decrease in their academic performance. In other words, the more the chances of dyslexia among students the less their academic performance in public senior secondary schools in Port Harcourt Local Government Area of Rivers State.

Research Question 2: *What is the relationship between dyslexia and academic interest of secondary school students in Port Harcourt Local Government Area of Rivers State?*

Table 2: Pearson's Product Moment Correlation Coefficient Analysis on the Relationship between Dyslexia and Academic Interest of Senior Secondary School Students

Variable	N	$\frac{\sum Y}{\sum X}$	$\frac{\sum Y^2}{\sum X^2}$	r-val	Rmks
Dyslexia (Y)	342	4034	301271	-0.81	(-)Very Strong
Academic Interest (X)	342	2128	16034		

Field Survey, 2023.

Result in Table 2 shows that the relationship between dyslexia and academic interest of senior secondary school Students in public senior secondary schools in Port Harcourt Local Government Area of Rivers State. The r-value obtained from the analysis was -0.81. This result indicates that there is a strong negative relationship between dyslexia and academic interest of senior secondary students in Rivers State. The implication of this result shows that an increase in students' scores in dyslexia leads to decrease in their academic interest. In other words, the more the chances of dyslexia among students the less their academic interest in public senior secondary schools in Port Harcourt Local Government Area of Rivers State.

Research Questions 3: *What is the relationship between dyslexia and study habit of secondary school students in Port Harcourt Local Government Area of Rivers State?*

Table 3: Pearson's Product Moment Correlation Coefficient Analysis on the Relationship between Dyslexia and Study Habits of Senior Secondary School Students

Variable	N	$\sum X$	$\sum X^2$	r-val	Rmks
Dyslexia (Y)	342	4034	301271	-0.62	Negative Strong
Study Habit (X)	342	3105	27494		

Field Survey, 2023.

Analysis in Table 3 shows the relationship between dyslexia and study habits of senior secondary school students in Port Harcourt Local Government Area of Rivers State. The r-value obtained was -0.62. This result implies that there is a strong negative relationship between dyslexia and study habits secondary school students in the study area. The finding indicates that students with higher case of dyslexia would correspondingly have a poor study habit.

Hypothesis 1

There is no significant relationship between dyslexia and academic performance of senior secondary school students in Port Harcourt Local Government Area of Rivers State

Table 4: Significance of the Relationship between Dyslexia and Academic Performance of Senior Secondary School Students

Variable	N	$\frac{\sum Y}{\sum X}$	$\frac{\sum Y^2}{\sum X^2}$	r-val	p-value	Rmks
Dyslexia(Y)	342	4034	301271	-0.72	0.000	Rejected
Academic Performance(X)	342	8092	27494			

Result in Table 4 the significance of the relationship between dyslexia and academic performance of senior secondary school students in Port-Harcourt Local Government Area of Rivers State. The Pearson Product Moment Correlation Coefficient obtained from the analysis was -0.72 which indicates that there is a very strong negative relationship between dyslexia and academic performance of students in Port-Harcourt Local Government Area of Rivers State. Testing the significance of the hypothesis, it was found that the p-value was 0.00 which is less than the level of significance, i.e $p(0.000) < \alpha (0.005)$. Hence the null hypothesis was rejected. This implies that there is a significant relationship between dyslexia and academic performance of senior secondary school students in Port-Harcourt Local Government Area, Rivers State.

Hypothesis Two:

There is no significant relationship between dyslexia and Academic Interest of secondary school students in Port Harcourt Local Government Area of Rivers State.

Table 5: Significance of the Relationship between Dyslexia and Academic Interest of Senior Secondary School Students

Variable	N	$\frac{\sum Y}{\sum X}$	$\frac{\sum Y^2}{\sum X^2}$	r-val	p-value	Rmks
Dyslexia (Y)	342	4034	301271	-0.81	0.00	Rejected
Academic Interest (X)	342	2128	16034			

Table 5 presents the data showing the significance of the relationship between dyslexia and academic interest of senior secondary school students in public senior secondary schools in Port Harcourt Local Government Area of Rivers State. The r-value (-0.81) obtained from the analysis showed that there is a very strong negative relationship between dyslexia and academic interest of students in public senior secondary schools in the area. Testing the hypothesis, it was revealed that the p-value obtained is less than the level of significance i.e $(0.00) < \alpha (0.05)$. Hence, the null hypothesis was rejected. This implies that there is a significant relationship between dyslexia and academic interest of senior secondary school students in Port-Harcourt Local Government Area, Rivers State.

Hypothesis Three

There is no significant relationship between dyslexia and study habits of senior secondary school students in Port Harcourt Local Government Area of Rivers State.

Table 6: Significance of the Relationship between Dyslexia and Study Habits of Senior Secondary School Students

Variable	N	$\sum X$ $\sum Y$	$\sum X^2$ $\sum Y^2$	r-val	P-value	Rmks
Dyslexia (Y)	342	4034	301271	-0.62	0.00	Rejected
Study Habit (X)	342	3105	27494			

Table 6 presents the relationship between dyslexia and the study habits of senior secondary school students in public senior secondary schools in Port Harcourt Local Government Area of Rivers State. The Pearson product moment correlation coefficient obtained was -0.62 indicating that there is a strong negative correlation between dyslexia and study habits. In testing the significance of the relationship, since the p-value is less than the level of significance i.e $(0.00) < \alpha (0.05)$, the null hypothesis is thereby rejected. This result indicates that there is a low positive relationship between teacher competency and the academic Performance of senior secondary school Students with dyslexia in public senior secondary schools in the area. This result shows that students with dyslexia who had low scores in teacher competency had low scores in academic performance in public senior secondary schools in the area.

DISCUSSION OF FINDINGS

Findings from table 1 reveals the relationship between dyslexia and academic performance of senior secondary school students in Port-Harcourt Local Government Area, Rivers State. Based on the Pearson Product Moment Correlation Coefficient (- 0.72) obtained from the analysis, it was found that there is a strong negative correlation between the two variables that were investigated in research question 1. This finding shows that there is a strong negative relationship between dyslexia and academic performance of senior secondary school students. The null hypothesis equally revealed that the identified relationship between the two variables were significant. This implies that the higher the level of dyslexia in a student the lower their academic performance. In other words when there is upward trend of dyslexia in a students, there will be corresponding downward trend in academic performance. The finding is related to Samuelson and Landberg (2003), Patterson & Pennington (2012) who jointly found that there is significant difference in academic achievement of pupils that are dyslexic and those that have no traces of dyslexia. Similarly, the finding is in agreement with Rimkute (2013), Tops (2012), who found a significant relationship between dyslexic adolescents and academic achievement. The further noted that when there is high trace of dyslexia in an individuals, it may lead to reduced performance in academic activities of students. Supporting this view, Armstrong and Squires (2015) posited that those children diagnosed with dyslexia usually experience difficulty in reading because of their impossibility to recognize, decode and spell words. This could result to poor academic performance of dyslexic students. Kaluyu and ooko (2016) has it that there is a negative significant relationship between dyslexia and academic performance of students. That is, the academic performance of students that are diagnosed with dyslexia is lower in comparison with their classmates.

Secondly, the findings of the study revealed that there is a very strong relationship between dyslexia and academic interest of senior secondary school students in Port-Harcourt Local Government Area of Rivers State. The null hypothesis showed there is a significant relationship between dyslexia and academic interest of senior secondary school students. This implies that higher case of dyslexia in students would lead to corresponding decrease in academic interest. The finding agrees with Pathak (2020), Castles & Friedman (2014) who observed a negative significance influence of learning disability and students' interest in academic activities. Therefore, the use of instructional materials is essential to arouse the interest of students with learning difficulty. Armstrong and Squires (2015) posited that dyslexia can influence students self-esteem which could invariably lead to loss of interest in academic activities. When student identified their struggle in learning, then tend to lose interest quickly, because they perceive their disability to be differ from others.

Lastly, the study revealed that there is a strong negative relationship between dyslexia and study habits of senior secondary school students. The null hypothesis that was tested showed that the relationship between the variables was significant. The implication of this finding is that student with higher trace of dyslexia would have reduced or poor study habits. This finding aligns with Armstrong and Squires (2015) who observed that there is adverse relationship between study habits and dyslexia. Students with dyslexia often have problem with reading, memorization among other disabilities, these factors could make dyslexic students develop poor study habits

CONCLUSION

Based on the findings of the study, it was concluded that there is a very strong negative relationship between dyslexia and academic variables of students. In specific, the study revealed that there is a significant negative relationship between dyslexia and academic performance, interest and study habits as academic variables of senior secondary school students in Port-Harcourt Local Government Area, Rivers State.

RECOMMENDATIONS

Based on the findings of the study, the researcher recommends as follows:

1. Government should train classroom teachers on how to identify students with learning difficulties such as dyslexia and the corresponding interventions to enable the students cope in the classroom with instructional delivery. This could help curb high rate of poor academic performance in secondary schools in Port-Harcourt Local Government Area, Rivers State
2. School administrators should encourage teachers utilize captivating instructional materials during instructional delivery. This will enable students with dyslexia to develop interest in classroom activities, which will in turn result to improved academic performance among students with learning disability
3. Guidance counsellors should encourage students with dyslexia to develop good and productive study habits. This would enable students with learning disability to improve significantly in their performance.

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