

OCCUPATIONAL HEALTH AND ACADEMIC PERFORMANCE OF ADULT LEARNERS IN SECONDARY SCHOOLS IN RIVERS STATE

BY

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Abstract

The study investigated occupational health and academic performance of adult learners in secondary schools in Rivers State. Four research questions were raised and four hypotheses tested in the study. Correlation design was adopted in the study as it focused on investigating relationship between dependent and independent variables. Population of the study was all public senior secondary school students who were above 25 years while convenience sampling technique was used to select 126 students who formed the sample size of the study. Instrument used for data collection were questionnaire which consisted of a 15 item questionnaire used for collecting data on the independent variable of the study tagged “Occupational Health Questionnaire” (OHQ) and a 10-item questionnaire was also used for data collection on the dependent variable of the study and titled “Academic Performance Questionnaire” (APQ), both responded to on a four point modified Likert scale of Strongly Agree (SA=4), Agree (A=3), Disagree (D=2) and Strongly Disagree (SD=1). The instruments were face and content validated by three Measurement and Evaluation experts at the University of Port Harcourt while Cronbach Alpha was used to determine the reliability of the questionnaires and yielded an index of 0.79 for OHQ while that of APQ was 0.82. The research questions were answered using simple regression for research questions one to three and multiple regression for research question four while hypotheses one to three were tested using t-test associated with simple regression and hypothesis four was tested using One-Way Analysis of Variance both at 0.05 level of significance. The findings of the study showed that mental health had the greatest effect on the academic performance of adult learners in the schools and this was followed by their social and physical health which all had significant effect. It was revealed that the combined occupational health had a 97.5% effect on the academic performance of the adult learners. The study recommended regular counselling for these learners to sustain their mental health and improve their academic performance in school.

Keywords: *Occupational Health, Academic Performance, Adult, Students, Secondary School*

Introduction

The fact that education is an important tool for social and economic prosperity of individuals and nations has seen a rise in the rate of investment. Individuals irrespective of their age seek out for quality formal education to acquire the skills and knowledge that will be needed for their social and economic needs. This investment takes place across the different levels of education whether at the primary, secondary or tertiary levels. At the secondary level, while majority of the students are teenagers, there are cases of adult learners who are in their twenties and thirties and still seeking for secondary education for several purposes. Secondary education is important in any nation as it prepare beneficiaries as middle level manpower that can be deployed into the different sectors of the economy. The importance of secondary education as a critical tool for knowledge and skill acquisition has seen some adult students enroll in this level of education so as to improve their chances of success in business as well progressing to higher levels of education. However, the fact that some of these students are engaged in one trade or the other often affect their ability to participate actively in classroom activities. Some of these adult learners are either unable to attend school regularly or are unable to discharge their academic responsibilities adequately for several reasons.

The need for adult learners to be healthy across all fronts is important for them to engage in meaningful learning. Field (n.d.) stated that adult learning and their well-being cannot be dissociated and this simply means that these adult learners must be healthy enough irrespective of the kind of occupation they engage in for them to succeed and perform well academically. The demand for secondary education among adult learners may be connected with

the assertion by Aroge and Olaniyi (2020) that education is the industry that produces manpower for the economy of nations and it enhances manpower development and this explains why some of these adult learners go against all odds to get schooled at least to the secondary education level where they can contribute minimally to the economy and the business that they own or run. However, the status of the occupational health of these adult learners is critical for participation and performance in school. The health of the learner whether social, mental or physical is important for engaging in meaningful learning which contributes to optimal academic performance. Bay et al., (2020) alluded to this fact by stating that *social participation in a social climate such as the school system is positively associated with better functional skills, well-being, health-related quality of life, and survival in older people and this two cannot be dissociated*. Adult learners irrespective of their age and type of occupation must therefore attend school in the right health condition in order to perform academically. This study therefore intends to investigate how the occupational health of these adult learners across the different domains affects their academic performance in secondary schools.

Objectives of the Study

The study investigated occupational health and academic performance of adult learners in secondary schools in Rivers State. The specific objectives of the study were to:

1. determine the relationship between mental health and academic performance of adult learners in secondary schools in Rivers State
2. ascertain the relationship between social health and academic performance of adult learners in secondary schools in Rivers State
3. examine the relationship between physical health and academic performance of adult learners in secondary schools in Rivers State
4. find out the relationship between occupational health and academic performance of adult learners in secondary schools in Rivers State

Research Questions

The following research questions guided the study:

1. What is the relationship between mental health and academic performance of adult learners in secondary schools in Rivers State?
2. What is the relationship between social health and academic performance of adult learners in secondary schools in Rivers State?
3. What is the relationship between physical health and academic performance of adult learners in secondary schools in Rivers State?
4. What is the relationship between occupational health and academic performance of adult learners in secondary schools in Rivers State?

Research Hypotheses

The following hypotheses were tested at 0.05 level of significance:

1. There is no significant relationship between mental health and academic performance of adult learners in secondary schools in Rivers State
2. There is no significant relationship between social health and academic performance of adult learners in secondary schools in Rivers State
3. There is no significant relationship between physical health and academic performance of adult learners in secondary schools in Rivers State
4. There is no significant relationship between occupational health and academic performance of adult learners in secondary schools in Rivers State

Literature Review

The quest for secondary education has been on the increase among adult learners like their younger counterparts due to their demand for skills and knowledge that will enable them secure middle level employment or engage in self-employment. However, every learner irrespective of their age are expected to perform optimally academically before they can be given the required certification to proceed to higher levels of education or engage in employment. The academic performance of a student is a prerequisite to graduating or transiting to the next level of education. Academic performance is the measurement of a student's achievement in a subject area and it is criteria for progression in any educational system (Brew et al., 2021). These students must however show

competence through and examination and excel above the set benchmark in order to transit to higher levels of education or graduate into the labour market. The wellbeing of adult learners is important for their academic performance particularly at the secondary level of education where some of these learners are just attempting to build the required numerical and literacy skills needed for higher level learning. The fact that some of these adult learners are involved in one form of occupation or the other can affect their academic performance if not properly managed. The occupational health of these adult learners can influence their academic performance and must be adequately managed in their line of profession in order to improve on their overall educational outcomes.

Occupational health in this case refers to how well an individual is while on the job. Correll (2023) stated that occupational health is that aspect of public health that deals with issues of illness and injury in the workplace. Similarly, Health and Safety Authority (2023) asserted that occupational health focuses on how work affects a person's health and how someone's health affects their work. The occupational health of adult learners is important to teaching and learning as the type of job they engage in can affect their overall wellbeing which can in turn affect their academic life. Similarly, the ability of the adult learner who is already employed to manage all aspects of his or her occupational health has a lot to contribute to their academic life.

The occupational health of a worker focuses on how healthy he or she is, whether physically, socially and mentally. These various domain defines the occupational health of an individual and must be active and well for him or her to engage in any meaningful life activities including schooling. The need for an active and healthy physical life cannot be overemphasized for any adult learner who wants to excel academically. Redondo-Flórez et al., (2022) pointed out that physical activity is a key element that has great impact on academic performance. This is because physical health is important for a learner to engage in motor activities and other learning responsibilities which may require physical effort. Every learner requires physical health to be able to write and perform other practical activities which are related to teaching and learning. Without physical health, it will be almost impossible for any learner to attend school successfully.

The mental health of a learner is also an important aspect that drives critical thinking for engaging in school activities. According to Dekker et al., (2020) one of the major health problem that students particularly in higher levels of education face is the issue of mental health and this has great implications on learning if not properly managed. Waller et al., (2018) stated that most young people suffer mental health problems because of their transition from adolescence into adulthood and this is even more complicated for adult learners who have to also deal with other life challenges particularly those relating to their jobs. According to Lee (2019) the achievement of any learner academically is tied to their mental health and any adult learner who cannot manage their mental job well as a result of their occupation may not be able to deal with school activities which will also affect their performance. The fact that the age of most adult learners is above that of the average class age also pose some social challenge which can affect learning. Some of these adult learners who face other social dilemma occasioned by the kind of occupation that are engaged in may find it difficult if they do not manage their social health properly. It has been established that interpersonal interactions, and self-care, allows fulfillment of valued life activities and social roles (Sau et al., 2015; Tomioka et al., 2016) and these are all essential for engaging with people in any social group including the school system. Adult learners who have good social life may likely perform better academically than those who do not as a result of their ability to interact with others in and outside the classroom. Therefore, adult learners need to learn to manage their occupational health so well such that they are able to participate actively in school and contribute to classroom activities which in the long run will reflect on their academic performance if all other necessary factors such as the management of the school environment and teacher factor are also put in the right perspective.

Empirical Reviews

There are studies that have been conducted to show the connection between occupational health factors and learning outcomes across different levels of education. Redondo-Flórez et al., (2022) investigated the relationship between physical fitness and academic performance in university Students. The study included 261 students with varying physical characteristics. The findings indicated that students with high academic performance had lower diastolic blood pressure (LAPG = 72.44 ± 14.27 ; HAPG = 67.48 ± 13.50 mmHg; $p < 0.01$), insomnia levels due to breathing issues (LAPG = 0.37 ± 0.8 ; HAPG = 0.13 ± 0.42 a.u.; $p = 0.046$), and higher maximum rate of oxygen use during exercise than the LAPG (LAPG = 40.32 ± 6.07 ; HAPG = 47.91 ± 6.89 mL/kg/min; $p < 0.001$). The

study discovered a significant correlation between breathing-related sleeplessness, diastolic blood pressure, and maximum rate of oxygen use during exercise.

The study by Okoroma et al., (2022) centered on the impact of physical infrastructure on adult learners' academic achievement in Rivers State's non-formal and adult education centers. The study used a descriptive survey research design. Using the Krejcie and Morgan sample size determination table, a sample of 210 samples were taken from the 460 individuals in the study population. Information was obtained from respondents using a tool called "Influence of Infrastructural Facilities on Academic Performance of Adult Education Students. A four-point interval scale with the options of Very High Extent, High Extent, Low Extent, and Very Low Extent was used to create and code the questionnaire, which had twenty items. The test-retest approach was used to evaluate the instrument's dependability once it had been properly validated by professionals. The Pearson Product Moment Correlation was used to determine the reliability index, which came out to be 0.79. The z-test of significance was used to evaluate the hypotheses, and averages and standard deviation were used to answer the study questions. The findings indicate that educational facilities have a significant impact on students' academic achievement.

Furthermore, Balanay et al., (2014) conducted a study with the aim of assessing college students' exposure to occupational health and safety hazards while they are working. Participants in the study had to be older than 17 years old, and 1,147 of these students made up the study's sample. The study's findings indicated that the majority of respondents mentioned exposure to loudness at work and coming into contact with hot objects or liquids. Working students suffered injuries at employment in 20% of cases; some were serious enough to prevent students from returning to their regular activities for more than three days (30%) or necessitate medical attention (44%). Injuries ($P = 0.05$) and near-misses ($P < 0.01$) at work were far more common in males than in women. After adjusting for gender and age, the likelihood of an injury was linked to near-misses (AOR = 5.08, $P < 0.01$) and coworker injuries (AOR = 3.19, $P < 0.01$). Employers provided half of the workers with personal protective equipment (PPE) and the majority (77%) got worker safety training. Similarly, Kotzé and Massyn (2018) examined factors that predict academic success in an adult education program at a South African business school. A sample of 207 adult education students aged 25 and above who were enrolled in the first year of an undergraduate degree at a business school in South Africa was used for the study. According to the study, cognitive skills—especially verbal reasoning—were a more reliable indicator of academic performance for these adult learners than personal competencies. Also, Ndlovu and Moyo (2013) examined the variables influencing adults' success in Nkulumane-Emganwini Area adult and continuing education. Out of the 420 kids enrolled in the four schools in Nkulumane-Emganwini, a random sample of 40 pupils was chosen. The research tool that was employed was the questionnaire. Attendance and academic self-concept are strongly positively correlated with performance, according to research findings. Age and learning preferences were also found to have an impact on performance, although income and marital status had no discernible effect. These studies established that there are factors related to occupation of adult learners that can influence their academic achievement across different levels of education.

Methodology

The study engaged correlation design. The population of the study was all public senior secondary school students who were above 20 years. Convenience sampling technique was used to select 126 students who formed the sample size of the study. Questionnaire having two sections which were Section A used for gathering data on the demographic variables of the study and the Section B which contained the questionnaire items was used for data gathering. The instruments used for data collection was a 15 item questionnaire used for collecting data on the independent variable of the study. A 10-item questionnaire was also used for data collection on the dependent variable of the study and they were both responded to on a four point modified Likert scale of Strongly Agree (SA=4), Agree (A=3), Disagree (D=2) and Strongly Disagree (SD=1). The independent variable questionnaire was tagged "Occupational Health Questionnaire" (OHQ) and that of the dependent variable titled "Academic Performance Questionnaire" (APQ). The instrument was face and content validated by three Measurement and Evaluation experts at the University of Port Harcourt. Cronbach Alpha was used to determine the reliability of the questionnaire and the average index for OHQ was 0.79 while that of APQ was 0.82 which showed that the instruments were reliable. The research questions were answered using simple regression for research questions one to three and multiple regression for research question four. Hypotheses one to three were also tested using t-test associated with simple regression while hypothesis four was tested using One-Way Analysis of Variance both

at 0.05 level of significance.

Results

Answer to Research Questions

Research Question One: What is the relationship between mental health and academic performance of adult learners in secondary schools in Rivers State?

Table 1

Simple Regression Analysis of the Relationship Between Mental Health and Academic Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Remark
1	.663 ^a	.440	.435	8.11206	Moderate and positive relationship

a. Predictors: (Constant), Mental_Health

Table 1 indicated that the value of r was 0.663 and this implied that there was a moderate and positive relationship between mental health and academic performance of adult learners in secondary schools in Rivers State. Similarly, the value of r^2 of 0.440 indicated that 44% ($0.440 * 100$) of academic performance was accounted for by mental health of adult learners in secondary schools in Rivers State while the remaining percentage was accounted for by other factors.

Research Question Two: What is the relationship between social health and academic performance of adult learners in secondary schools in Rivers State?

Table 2

Simple Regression Analysis of the Relationship Between Social Health and Academic Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Remark
1	.456 ^a	.208	.201	9.64642	Moderate and positive relationship

a. Predictors: (Constant), Social_Health

Table 2 showed that the value of r was 0.456 and this meant that there was a moderate and positive relationship between social health and academic performance of adult learners in secondary schools in Rivers State. Also, the value of r^2 of 0.208 showed that 20.8% ($0.208 * 100$) of academic performance was accounted for by social health of adult learners in secondary schools in Rivers State while the remaining percentage was accounted for by other factors.

Research Question Three: What is the relationship between physical health and academic performance of adult learners in secondary schools in Rivers State?

Table 3

Simple Regression Analysis of the Relationship Between Physical Health and Academic Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Remark
1	.342 ^a	.117	.110	10.18506	Low and positive relationship

a. Predictors: (Constant), Physical_Health

Table 3 revealed that the value of r was 0.342 and this indicated that there was a low and positive relationship between physical health and academic performance of adult learners in secondary schools in Rivers State. In the same manner, the value of r^2 of 0.117 implied that 11.7% ($0.117 * 100$) of academic performance was accounted for by physical health of adult learners in secondary schools in Rivers State while the remaining percentage was accounted for by other factors.

Research Question Four: What is the relationship between occupational health and academic performance of adult learners in secondary schools in Rivers State?

Table 4

Multiple Regression Analysis of the Relationship Between Occupational Health and Academic Performance
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Remark
1	.987 ^a	.975	.974	1.74213	High and positive relationship

a. Predictors: (Constant), Social_Health, Physical_Health, Mental_Health

Table 4 pointed out that the value of r was 0.987 and this meant that there was a high and positive relationship between occupational health (mental, social and physical) and academic performance of adult learners in secondary schools in Rivers State. In the same manner, the value of r² of 0.975 revealed that 97.5% (0.975 * 100) of academic performance was accounted for by occupational health of adult learners in secondary schools in Rivers State while the remaining percentage was accounted for by other factors.

Test of Hypotheses

Ho₁: There is no significant relationship between mental health and academic performance of adult learners in secondary schools in Rivers State

Table 5

t-test Associated with Simple Regression of no Significant Relationship Between Mental Health and Academic Performance

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Decision
		B	Std. Error	Beta			
1	(Constant)	34.286	3.400		10.083	.000	Rejected
	Mental_Health	1.954	.198	.663	9.865	.000	

a. Dependent Variable: Academic_Performance

Table 5 revealed the significance level of 0.000 was less than the p-value of 0.05 and the value of t-value of 10.083 was above the value of t-crit. of 1.96 and as such, the null hypothesis was rejected and the alternative hypothesis accepted revealing that there is a significant relationship between mental health and academic performance of adult learners in secondary schools in Rivers State.

Ho₂: There is no significant relationship between social health and academic performance of adult learners in secondary schools in Rivers State

Table 6

t-test Associated with Simple Regression of no Significant Relationship Between Social Health and Academic Performance

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Decision
		B	Std. Error	Beta			
1	(Constant)	46.133	3.770		12.236	.000	Rejected
	Social_Health	1.279	.224	.456	5.701	.000	

a. Dependent Variable: Academic_Performance

Table 6 showed the significance level of 0.000 was less than the p-value of 0.05 and the value of t-value of 12.236 was above the value of t-crit. of 1.96 and as such, the null hypothesis was rejected and the alternative hypothesis accepted showing that there is a significant relationship between social health and academic performance of adult learners in secondary schools in Rivers State.

Ho₃: There is no significant relationship between physical health and academic performance of adult learners in

secondary schools in Rivers State

Table 7

t-test Associated with Simple Regression of no Significant Relationship Between Physical Health and Academic Performance

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Decision
	B	Std. Error	Beta			
1 (Constant)	98.961	7.931		12.478	.000	Rejected
Physical_Health	-1.581	.391	-.342	-4.049	.000	

a. Dependent Variable: Academic_Performance

Table 7 indicated the significance level of 0.000 was less than the p-value of 0.05 and the value of t-value of 12.478 was above the value of t-crit. of 1.96 and as such, the null hypothesis was rejected and the alternative hypothesis accepted indicating that there is a significant relationship between physical health and academic performance of adult learners in secondary schools in Rivers State

Ho₄: There is no significant relationship between occupational health and academic performance of adult learners in secondary schools in Rivers State

Table 6

One-Way Analysis of Variance (ANOVA) of no Significant Relationship Between Occupational Health and Academic Performance

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.	Decision
1	Regression	14193.218	3	4731.073	1558.821	.000 ^b	Rejected
	Residual	370.274	122	3.035			
	Total	14563.492	125				

a. Dependent Variable: Academic_Performance

b. Predictors: (Constant), Social_Health, Physical_Health, Mental_Health

Table 8 showed that at a significance value of 0.000 which was less than the p-value of 0.05 and an F-value of 1558.821, the null hypothesis was rejected and this showed that there was a significant relationship between occupational health and academic performance of adult learners in secondary schools in Rivers State.

Discussion of Findings

The findings of the study showed that there was a moderate and positive relationship between mental health and academic performance of adult learners in secondary schools in Rivers State and that there is a significant relationship between mental health and academic performance of adult learners in secondary schools in Rivers State. The mental health of a learner whether old or young is important for learning to take place. Across all organizations, people need to be mentally healthy so as to be able to carry out their day-to-day activities effectively and this is not different in the school environment where some of these adult learners belong. These adult learners need to be in the right psychological state so that they can concentrate in class and benefit from teaching and learning. This means that anything that can result to worry, stress, depression and anxiety must be avoided at all cost as this can affect their performance in class. Balanay et al., (2014) identified that some of these related issue often makes some students not to be able to return to school while others must seek for medical attention and this is because mental issues control the major part of man’s life and must be healthy enough for him or her to participate in any academic activity and to also perform well.

The result of the study established that there was a moderate and positive relationship between social health and academic performance of adult learners in secondary schools in Rivers State. It was also revealed that there is a significant relationship between social health and academic performance of adult learners in secondary schools in Rivers State. The result of this study establishes that a good social health also makes reasonable contribution to the academic performance of adult learners. This agree with the result of the study by Kotzé and Massyn (2018)

which found that attendance and academic self-concept are strongly positively correlated with performance. This means that if adult learners have good social lives both within and outside the school, it will reflect on their academic life. Otherwise, it will be difficult for these adults to engage in any meaningful academic activities. The social health of these adult learners relates to their ability to interact with other people and in this process, they may even get support that will enable them perform well academically.

Findings from the study pointed out that there was a low and positive relationship between physical health and academic performance of adult learners in secondary schools in Rivers State and that there is a significant relationship between physical health and academic performance of adult learners in secondary schools in Rivers State. However, physical health has the least effect on academic performance of adult learners when compared with the others. This suggests that these learners may need more of their mental health and social health than physical health to engage in academic activities. This study provides some facts, as there are some of these adult learners who have physical impairments but compete well with their other abled counterparts as long as they have the right mental and social health. However, this will require ensuring that other physical resources are available to support learning so that the right result can be derived. Okoroma et al., (2022) alluded to this finding as it was shown in their study that educational facilities have a significant impact on students' academic achievement and as such, this kind of physical support must be available in schools to support learning especially among adult learners.

The result of responses from the respondents indicated that that there was a high and positive relationship between occupational health (mental, social and physical) and academic performance of adult learners in secondary schools in Rivers State and that there was a significant relationship between occupational health and academic performance of adult learners in secondary schools in Rivers State. This means that academic performance of adult learners can be better enhanced if they are in the right mental, social and physical health all combined. This finding agrees with the result of the study by Redondo-Flórez et al., (2022) which showed that those with high academic performance in school are those with lower diastolic blood pressure, lower insomnia, and higher maximum rate of oxygen use during exercise. This simply mean that adult learners who have all round health have the prospect of performing better academically than those who do not and as such, their occupational health must be given priority if they must excel academically in school.

Conclusion

It was concluded based on the findings of the study that occupational health across all of its dimensions were significant to the academic performance of adult learners. However, the mental health of these workers had the highest effect on the academic performance of the adult learners and this was followed by their social health before their physical health. This simply implies that the overall health of the adult learners was essential to their academic performance but their mental health made more contribution to their academic performance and was more critical to their academic achievement than other aspects such as their social and physical health.

Recommendations

The following recommendations draw from the findings of the study:

1. Adult learners should be provided opportunity for regular counselling so as to minimize incidences of stress, depression and anxiety which can have negative influence on their mental health and their academic performance in the long run. Counselling services will enable them to get professional assistance to remain in the right frame of mind for their academics.
2. Social groups should be created for adult learners in schools where they can interact with one another as well as engage in social activities that will promote their chances of academic success such as engaging in field trips, team work and other collaborative learning activities.
3. Adequate learning materials should be provided for adult learners in the right quality and quantity as this will help make learning more meaningful for them as well as contribute to improved academic performance in their various schools.

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