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Occupational Hazard As Predictor Of Teachers Task Performance In Public Secondary Schools In Anambra State

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ABSTRACT
The main purpose of the study was to determine the predictive value of occupational hazard on teachers' task performance in public secondary schools in Anambra state. Two research questions guided the study and two hypotheses were tested at 0.05 level of significance. The correlational research design was adopted for the study. The population for this study consisted of 7,027 teachers from 267 public secondary schools in Anambra State. A sample of 786 teachers was selected using a multi-stage sampling procedure. Two instruments; Questionnaire on Occupational Hazards (QOH) and Teachers Task Performance Questionnaire (TTPQ) were used to collect data for the study. The instrument was subjected to face and construct validation. The application of Cronbach Alpha reliability method yielded co-efficient values of 0.82 and 0.86 for cluster 1 and 2 respectively with an overall reliability coefficient of 0.84 for QOH and reliability coefficient of 0.87 for TTPQ. Simple regression was used to answer the research questions and test the hypotheses. The result of the study revealed that physical and biological hazards negatively predict teachers' task performance in public secondary schools in Anambra state. Furthermore, the finding of the study revealed that physical and biological hazards is a significant predictor of teachers' task performance in public secondary schools in Anambra state. Based on these findings, the researcher recommended among others that Anambra State Ministry of Education in conjunction with the Post Primary Schools Service Commission (PPSSC) should invest in improving classroom ergonomics and facilities to minimise physical hazards that can impede teachers' comfort and effectiveness.
Keywords: Occupational Hazards, Physical Hazards, Biological Hazards, Teachers Task Performance

INTRODUCTION

Teachers are important stakeholders in secondary schools globally. This is because teachers are the professionals that facilitate the implementation of the curriculum. Paschal and Mkulu (2020) stated that teachers play important roles in promoting the quality of education. Watti (2018) stated that teachers are professional educators whose primary role in formal education is to educate, teach, guide, lead, train, assess and evaluate students. The attainment of the teaching-learning goal is majorly in the hands of teachers who are required to utilize their skills in preparing and planning their lessons, managing their classes and assessing their students. Therefore, their performance is critical to the realization of school goals. The performance of secondary school teachers significantly affects their institution's effectiveness in preparing qualified students for the future by reinforcing the teaching and learning process, aligning with national goals and curriculum completion.

Teachers task performance is defined as the extent to which teachers' carryout their primary duty of teaching and the extent to which they conduct themselves professionally (Odunayo, 2024). In a similar vein, Koko and Uzoho (2023) defined teachers' task performance as teachers' commitment to their task. Nwite (2016) further elaborated that teachers task performance has to do with the holistic activities of the teacher which involves their judiciousness in lesson preparation, disciplining of their students, evaluating learning outcome, active participation in school activities such as planning school extra-curricular and assisting school administrator. Teachers' task performance is defined as the level to which teachers carryout their expected roles and responsibilities in achieving educational goals. Sadly, in the carrying out these duties, teachers are faced with occupational hazards that affect teachers' task performance.

Occupational hazards are the risks associated with work processes, environments, or situations that can lead to adverse health effects or injuries. Rassi (2022) defined occupational are any workplace conditions that jeopardize employees' health. This broad definition includes chemical, biological, psychosocial, and physical hazards. Okpako and Amadi (2015) further refined this by describing occupational hazards as risks specific to certain types of employment or workplaces, which can either be dormant or present with varying degrees of risk. Vita and Abraham (2019) stated that teachers are faced with occupational hazards like physical hazard, biological hazard, chemical hazard, psychosocial hazard and ergonomic hazards which affects their productivity at work. This research paper focus on physical and biological hazards.

Physical hazards in schools refer to ergonomic conditions or situations that can cause harm, injury, or illness to students, staff, and visitors. These hazards can arise from various sources, including the physical environment, equipment, and even behaviours of individuals within the school setting. Vita and Abraham (2019) opined that physical hazards are any source of potential harm or adverse health effects on individuals. This includes situations that can lead to injury, such as unsafe environments or equipment (Rassi, 2022). Rassi further opined that physical hazards are any source of potential damage, harm, or adverse health effects on someone or something within the workplace, including schools as educational workplaces. Physical hazards can include slips, trips, and falls; exposure to extreme temperatures; noise; and hazardous materials. Arop et al. (2018) revealed a significant relationship between physical hazard management, psychological management, environmental hazard management, noise hazard management and teachers job effectiveness in terms of punctuality, classroom management, instructional delivery, lesson evaluation, dressing and record keeping respectively. Just like physical hazards, biological hazards is another form of occupational hazard.

Biological hazards, often referred to as biohazards, encompass various biological substances that pose risks to human health, particularly in environments like schools (Okpako & Amadi, 2015). These hazards can stem from microorganisms, toxins, and other biological agents that may cause infections or diseases. Biological hazards are organisms or products of organisms that present a health risk to humans. In the context of schools, this includes exposure to bacteria, viruses, fungi, and other pathogens that can affect students and staff (Rassi, 2022). Papavasileiou et al. (2020) reported that biological hazards affects teachers feeling of safety and impacts on their task performance. However, the predictive value of physical and biological work hazards have not been empirically proven in public secondary schools in Anambra State. It is against this background that the researcher investigated sought to determine if occupational hazard is a predictor of teachers' task performance in public secondary schools in Anambra state.

Statement of the Problem

Teachers are essential in fulfilling curriculum requirements and achieving school goals. Their role is central to the academic, personal and social development of students. The success of educational programmes heavily relies on teachers' dedication and effective task performance. However, recent developments in public secondary schools in Anambra State appear to pose challenges to the fulfilment of curriculum goals.

Field observations by the researcher indicate that in some schools, teachers are increasingly experiencing health issues that lead to frequent absenteeism. The researcher observed that some teachers arrive late to school on the excuse of honouring medical appointments. These issues potentially impact teachers' task performance, reducing the instructional time available for students, which could subsequently affect students' academic outcomes. This concern has motivated the

researcher to examine if occupational hazards is a predictor of teachers' task performance in public secondary schools in Anambra State.

Purpose of the Study

The main purpose of the study was to examine if occupational hazards is a predictor of teachers' task performance in public secondary schools in Anambra State. Specifically, the study to:

1. ascertain the predictive value of physical hazards on teachers' task performance in public secondary schools in Anambra State.
2. investigate the predictive value of biological hazards on teachers' task performance in public secondary schools in Anambra State.

Research Questions

The following research questions guided the study:

1. What is the predictive value of physical hazards on teachers' task performance in public secondary schools in Anambra State?
2. What is the predictive value of biological hazards on teachers' task performance in public secondary schools in Anambra State?

Hypotheses

The following null hypotheses were tested at 0.05 level of significance:

1. Physical hazards does not significantly predicts teachers' task performance in public secondary schools in Anambra State.
2. Biological hazards does not significantly predicts teachers' task performance in public secondary schools in Anambra State.

METHODOLOGY

The study adopted the correlational research design. The study was carried out in Anambra state which is one of the thirty-six (36) states of the Federal Republic of Nigeria, located in the South-Eastern part of Nigeria. The population for this study consisted of 7,027 teachers from 267 public secondary schools in Anambra State. A sample of 786 teachers was selected using a multi-stage sampling procedure. Two instruments; Questionnaire on Occupational Hazards (QOH) and Teachers Task Performance Questionnaire (TTPQ) were used to collect data for the study. The instruments were subjected to face and construct validation. For the face validation, the instruments were validated by three experts in the Faculty of Education, Nnamdi Azikiwe University, Awka. On the other hand, construct validated was carried out with the help of Principal Component Analysis approach with Kaiser-Meyer-Olkin (KMO) as a measure of sampling adequacy to construct the Principal Component Analysis. The coefficient value of 0.84 was obtained. Furthermore, the instruments were subjected to a pilot test on 20 principals in public secondary schools in Enugu State. The application of Cronbach Alpha reliability method yielded co-efficient values of 0.82 and 0.86 for cluster 1 and 2 respectively with an overall reliability coefficient of 0.84 for QOH and reliability coefficient of 0.87 for TTPQ.

The instruments were administered by the researcher with the help of three research assistants who are teachers in public secondary schools. The instruments were administered to the respondents on the spot and retrieved after completion. In cases where it was impossible to retrieve the instruments immediately, appointment on the date of retrieval was made. This lasted for two weeks. Simple regression was used to answer the research questions and test the hypotheses. The decision rule will be based on the following guidelines Price et al (2017) provided:

Correlation Coefficient	**Interpretations**
Plus (+) or minus (-) 0.00 to 0.20	Very Low Relationship
Plus (+) or minus (-) 0.20 to 0.40	Low Relationship
Plus (+) or minus (-) 0.40 to 0.60	Moderate Relationship
Plus (+) or minus (-) 0.60 to 0.80	High Relationship
Plus (+) or minus (-) 0.80 and above	Very High Relationship

While positive coefficient (+) indicate positive prediction between the variables, negative coefficient (-) indicates negative prediction between the variables. In testing the null hypothesis, in interpreting the values of the null hypothesis, when p-value is less than or equal to .05 ($p \leq .05$), the

null hypothesis was rejected. On the other hand, when the p-value is greater than .05 (p >.05), the null hypothesis was rejected, meaning that there is no significant relationship between the variables.

Results

Research Question One: *What is the predictive value of physical hazards on teachers' task performance in public secondary schools in Anambra State?*

Table 1: Summary of Simple Regression Analysis on the Predictive Value of Physical Hazards on Teachers' Task Performance in Public Secondary Schools in Anambra State

	Unstandardized β	Std. Dev. B	Standardized β
Constant	38.147	5.245	
Physical hazard	.481	.312	-.624
R	-.624		
R^2	.523		
Adj. R^2	.511		

The summary of the simple regression analysis as shown in Table 1 indicated that physical hazard highly predict teachers task performance in public secondary schools in Anambra State as shown by the regression coefficient (R = -.624). The coefficient of determination (R^2), .523, showed that the explanatory power of the variable was highly strong. This implies that 52% of the variations in teachers' task performance in public secondary schools in Anambra State were accounted for by the variations in physical hazard. The adjusted R^2 supports the statement that the explanatory power of physical hazard is highly strong in determining the teachers' task performance in public secondary schools in Anambra State. However, the standardized beta weight (β = -.624) showed that physical hazard is a negative predictor of teachers task performance in public secondary schools in Anambra State.

Research Question Two: *What is the predictive value of biological hazards on teachers' task performance in public secondary schools in Anambra State?*

Table 2: Summary of Simple Regression Analysis on the Predictive Value of Biological Hazards on Teachers' Task Performance in Public Secondary Schools in Anambra State

	Unstandardized β	Std. Dev. B	Standardized β
Constant	28.156	4.367	
Biological Hazards	.638	.411	-.604
R	-.604		
R^2	.534		
Adj. R^2	.543		

The summary of the simple regression analysis as shown in Table 2 indicated that biological hazards negatively predict teachers task performance in public secondary schools in Anambra State as shown by the regression coefficient (R = -.604). The coefficient of determination (R^2), .534, showed that the explanatory power of the variable was high. This implies that 53% of the variations in teachers' task performance in public secondary schools in Anambra State were accounted for by the variations in physical hazard. The adjusted R^2 supports the statement that the explanatory power of biological hazard is highly strong in determining the teachers' task performance in public secondary schools in Anambra State. However, the standardized beta weight (β = -.604) showed that biological hazard is a negative predictor of teachers task performance in public secondary schools in Anambra State.

Hypothesis One

Physical hazards does not significantly predicts teachers' task performance in public secondary schools in Anambra State.

Table 3 Summary of Simple Regression Analysis on the Predictive Value of Physical Hazards on Teachers' Task Performance in Public Secondary Schools in Anambra State

		Unstandardized β	Std. Dev. β	Standardized B	t-value	p-value
Constant		38.147	5.245		29.213	0.001
Physical hazard		.481	.312	-.624	30.322	0.001
R	-.624					
R^2	.523					
Adj. R^2	.511					
F	38.431					0.001

The summary of the test of significance of simple regression analysis as shown in Table 4 revealed that the simple regression coefficient (R) is -0.604 while the R^2 is 0.523 and Adjusted R^2 is 0.511. The F-ratio associated with the regression is 38.431 and the t-value is 30.322. Furthermore, the P-value of 0.000 is less than 0.05 level of significance. This means that the effect of physical hazard on teachers' task performance in public secondary schools in Anambra State is statistically significant. Therefore, physical hazard significantly predicts teachers' task performance in public secondary schools in Anambra State. Thus, the null hypothesis was rejected.

Hypothesis Two

Biological hazards does not significantly predicts teachers' task performance in public secondary schools in Anambra State.

Table 4: Summary of Simple Regression Analysis on the Predictive Value of Biological Hazards on Teachers' Task Performance in Public Secondary Schools in Anambra State

		Unstandardized β	Std. Dev. β	Standardized β	t-value	p-value
Constant		28.156	4.367		19.005	0.001
Biological hazard		.638	.411	-.604	29.243	0.001
R	-.604					
R^2	.534					
Adj. R^2	.543					
F	46.212					0.000

The summary of the test of significance of simple regression analysis as shown in Table 4 revealed that the simple regression coefficient (R) is -0.624 while the R^2 is 0.534 and Adjusted R^2 is 0.543. The F-ratio associated with the regression is 46.212 and the t-value is 29.243. Furthermore, the P-value of 0.001 is less than 0.05 level of significance. This means that the effect of biological hazard on teachers' task performance in public secondary schools in Anambra State is statistically significant. Biological hazard significantly predicts teachers' task performance in public secondary schools in Anambra State. Thus, the null hypothesis was rejected.

DISCUSSION

The finding of the study showed that physical hazard is a negative predictor of teachers' task performance in public secondary schools in Anambra State. The finding of the study indicate that physical hazards would negatively affect teachers' task performance in public secondary schools in Anambra State. The finding of the study is in agreement with Vita and Abraham (2019) who revealed that physical hazards adversely affects the health of teachers. Rassi (2022) stated that physical hazards are any source of potential damage, harm, or adverse health effects on someone or something in the

workplace. Furthermore, finding of the study further revealed that physical hazard significantly predicts teachers' task performance in public secondary schools in Anambra State. This finding is in line with Arop et al. (2018) who reported that physical hazards affects the task performance of teachers in secondary schools.

The finding of the study showed that biological hazard is a negative predictor of teachers' task performance in public secondary schools in Anambra State. The finding of the study indicate that biological hazards would negatively affect teachers' task performance in public secondary schools in Anambra State. This study implies that in schools where teachers are exposed to biological hazards, the task performance of teachers are negatively impacted. This finding is in line with Papavasileiou et al. (2020) who reported that biological hazards affects teachers feeling of safety and impacts on their task performance. Okpako and Amadi (2015) noted that biological hazards cause infections or diseases which might negatively affect teachers' task performance. Furthermore, finding of the study further revealed that biological hazard significantly predicts teachers' task performance in public secondary schools in Anambra State. This finding is in line with Papavasileiou et al. (2020) who reported that biological hazards causes diseases which negatively impacts teachers' performance.

CONCLUSION

Based on the findings of the study, the researcher recommended among others that occupational hazards negatively predicts teachers' task performance in public secondary schools in Anambra State. The finding of the study revealed that physical hazards and biological hazards negatively affects teachers' task performance in public secondary schools in Anambra State. It is therefore imperative that measures are put in place to improve the work environment to enhance teachers' task performance.

RECOMMENDATIONS

The following recommendations were made based on the findings of the study:

1. The Anambra State Ministry of Education in conjunction with the Post Primary Schools Service Commission (PPSSC) should invest in improving classroom ergonomics and facilities to minimise physical hazards that can impede teachers' comfort and effectiveness.
2. Secondary school principals should implement regular health and safety inspections and sanitation practices to reduce exposure to biological hazards, thereby promoting a healthier work environment and supporting teachers' task performance.

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