

# Effects of Workplace Built Environment on Employee Performance: a Case Study of Nsukka local Government Secretariat Complex Enugu State, Nigeria

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## Abstract

The study ascertained the effects of workplace-built environment on employee performance in Nsukka local Government Secretariat Complex Enugu State, Nigeria. The study adopted a descriptive survey design. The population was made up of 132 respondents which comprises of 8 Heads of Departments and 124 members of staff in Nsukka local Government Secretariat Complex Enugu State, Nigeria. Due to the manageable size of the population, the entire population was used as the sample. A Questionnaire was used in answering the research questions. The Reliability of the instrument was subjected to Cronbach's Alpha reliability method to determine the internal consistency which yielded a coefficient of 0.84. Data collected was analyzed using mean and standard deviation to answer research questions. Decision on research questions were taken based on real limits of numbers. For the test of significance, the probability (p) value was used in comparison with the alpha value of 0.05, and at 90 degrees of freedom (df). The study found that Factors of workplace-built environment like indoor air quality, noise level, room spacing, room temperature and room lighting has significant negative impact on employees' level of productivity in the organization. The study recommends that Enugu state and Nsukka LGA should map out programmes for provision of good workplace-built environment to increase productivity, promote occupational safety and health of workers. This can be done by renovating old offices in the secretariat complex building and remodeling old offices to meet up latest state of the art designs in the construction industry.

**Keywords:** workplace-built environment, employee performance, indoor air quality, noise level, room spacing, room temperature and room lighting.

## 1. Introduction

The efforts and performance of employees is the heartbeat of any organization because their performance greatly affects the success or failure of any organization. Employee performance according to Awan, (2015) is defined as how well a person executes their job duties and responsibilities. Employee performance as defined by Khaled and Okasheh (2017) is the quality, quantity and efficiency of work done by an individual over a given period of time for an organization or a company. Employee performance is a measure of how an employee fulfils the duties of their role and behaves within a workplace. Mohamad, (2021) noted that a great difference can be noted with the slightest of change in the employees' performance. An exceptional

performance leads to great output while poor performance leads to poor output of the organization. Crucial measures must be taken for meeting the end goals on the organization. The employees' performance is influenced by behavioural constituents in workplaces and the workplace-built environment (Bushiri, 2017).

Work environment comprises the totality of forces, actions and other influential factors that are potentially contending with the employee's activities and performance. Workplace built environment according to Okasheh, (2017) involves the physical geographical location as well as the immediate surroundings of the workplace such as a construction site or office building. Workplace built environment

according to Yingjun, (2019) typically involves the physical structures where people work and other factors relating to the place of employment such as the quality of the air, noise level and benefits of employment such as free child care or unlimited coffee, or adequate parking. Workplace built environment includes physical infrastructure where people work such as physical facilities (roads, airports, utility supply systems, communication systems, water and waste disposal systems etc.), and the services (water, sanitation, transport, energy) flowing from those facilities. It is the environment where people work together for achieving organization objectives. It means systems, processes, structures and tools and all those things which interact with employees and affect in positive or negative ways on employees' performance.

The physical environment at work is critical to employees' performance, satisfaction, social relations and health. It is generally understood that the physical design of offices and the environmental conditions at work places are important factors in organizational performance (Agba, Akwara, and Idu, 2013). There are key factors in the employee's workplace built environment that impact greatly on their level of motivation and performance. Badayai (2012) classified five main factors within the workplace built environment which may have great impact on employee's performance; indoor air quality, noise level, room spacing, room temperature and room lighting. The air in the workplace built environment especially its components can play a considerable function in relation to the work behaviour, specifically job performance. Indoor air quality is the air quality within and around buildings and structures (Tran, Park, & Lee, 2020). As indicated by Quesada-Molina, and Astudillo-Cordero, (2023), indoor air quality is very significant to the health, comfort, and job performance among employees. Indoor contamination levels frequently exceed open air levels and most of the time workers might spend up to 90% of time alone inside (Griffin, Scanion, & Reynolds, 2023). Most possibly perilous indoor air pollutants are radon, asbestos, inorganic material, environmental tobacco smoke, organics, biological and non-ionizing radiation. Other pollutants such as odours and dusts can cause critical discomfort and feelings of unwillingness that may lead to a reduction

in productivity and job performance. Noise level can also affect workers performance.

Noise defined as unwanted sound, is the most common complaint in offices workplace. Noise level is the assessment of the how the audio output within and outside the building affects the occupants. Many researchers indicate that noisy places and exposing employees to such conditions can affect their job performance quality. A study by Patel and Patel, (2021), study showed that assignments needed reading comprehension and memories are the most sensible to noise, especially noise sources related to workers' conversations. Noise can distract office workers more likely when workers do not have control of the noise source and it is unpredictable. The raised noise in the workplace is caused by common office equipment such as PCs, printers, phones, copiers, heating and air conditioning unites, and conversations of office workers. Utin and Hermina, (2019) found that significant noise sources in workplace built environment include individuals arriving/departing, keyboard sounds, and ventilation equipment while conversations and PC/printer beeping sounds were accounted for to be the most irritating by majority of the study respondents. Space in the workplace built environment is another factor that could affect employee performance.

The actual physical layout of an office is highly important when it comes to maximizing productivity among employees. The individual workstation that is too crowded and restricted, may lead to stress, pressure and other psychological effect. An individual employee may feel unstable and have lack of freedom and motivation, which may lead to a very stressful environment, which can also decrease the quality of the job performance. According to Assaf, and Alswalha, (2013), space components like office furniture comprises of desks chairs, the filing system, shelves, drawers, etc., have a specified part to play in the productivity and the efficiency of the employees and the suitable functioning of any office. Also, one of the most essential things to be guaranteed is whether the workplace furniture is ergonomic or not. Ergonomic office furniture guarantees that every worker gels well with the things around him, like chairs, desks, PC arrangement and even environmental factors (Mewomo, Toyin, Iyiola, & Aluko, 2023). Effective temperature indicates how hot or cold the environment makes employees to feel.

Good room temperature can increase productivity or reduce stress in workers as it can play notable role in workplace environment. Shah, Fahlevi, Rahman, Akram, Jamshed, Aljuaid, and Abbas, (2023) stated that high temperatures can affect employee's performance, particularly duties required on cognitive, physical, and perceptual duties. High temperatures within the workplace built environment can have a direct impact on health and lead to heat stress and heat exhaustion. Researchers also discovered that exposure to natural light in an office space can impact employees' quality of life. The amount of light needed in the workplace depends on the kind of tasks being performed, either outdoors or indoors, or when they are performed, in the day, or at night. Okanya, Asogwa and Ike (2021) stated that people spend mostly, fifty percent of their lives within indoor environments, which deeply influence their mental status, actions, abilities and also their performance. Good results and increased output is assumed to be the result of better workplace built environment. Better physical environment of office can boost the employees' morale and improve their productivity (Perfect Pollucon Services, 2023). Hence the effect of workplace-built environment in achieving set target for the organization must be in adequate condition. This is in respect of workers in public institutions especially those in Nsukka local Government Secretariat Complex Enugu State, where the issue of unproductive nature of employees is compounded with the poor nature of the workplace built environment.

The state of affairs within the Nsukka local Government Secretariat Complex does not compete favourably with other offices in the surrounding neighbourhood. Chukwuemeka, Ugwuanyi, Ndubuisi-Okolo and Onuoha, (2014) reports that there is non-availability of some necessary office facilities like air condition, rugs or tiles, while poor ventilation in some of the department in the complex is a common feature. Some offices and departments look depressing and unstimulating. Some of them have no louvers, light and some with uncompleted roofs. Some of the offices within the complex are characterized with dirty and scattered environment, most of the departments have small floor space with materials, tables, chairs, papers, files and other things scattered here and there. Some offices were furnished without due regard to the office spacing and workers morale (Bolatito & Ibrahim, 2014). Some of these

facilities have poor spacing which makes the office to look small and dark. It is known from workers view point that the work of accounting, typing, paper works and other documentation of data/records needs good quality of light because of visual discrimination involved. As a result of non-availability of good work built environment, the performance of employees is in a declining state (Otinche, 2014). The state of affairs in the complex has resulted to negative attitude by the employees which is inimical to the progress and accomplishment of the organization's set objective.

## 1.1 Statement of the Problem

The local government is the third tier of government that is established by law and is saddled with the power, authority and responsibility to manage, govern and make laws at the local level of a country. The need for the establishment of local government in Nigeria came out of the quest to deliver certain basic services that are instrumental for survival of the people at the grassroots level. Also, the creation of local government stems from the need to facilitate developments at the grassroots because it plays a crucial role in ensuring the effectiveness and provision of public goods to the vast rural population. Every local government varies in size and structure with their administrative complex usually situated in the heart of the town where members of the community can easily have access to it for easy service delivery. Similarly, the Nsukka Local Government Secretariat Complex is also situated in the heart of Nsukka town at the Government Reserved Area (GRA). The secretariat complex, houses many departments with staff/employees who work for the local government. The performance of employees in the complex is a significant asset for sustaining productivity level and performance of employees at work. Unfortunately, reports suggest that the main workplace built environment of the complex is considered unhealthy and unsafe.

The state of affairs within the Nsukka local Government Secretariat Complex does not compete favorably with other offices in the surrounding neighborhood. Reports shows that there is non-availability of some necessary office facilities like air condition, rugs or tiles, while poor ventilation in some of the department in the complex is a common feature. Some offices or departments look depressing and unstimulating. Some of them have no louvers,

light and some with uncompleted roofs. Some of the offices within the complex are characterized with dirty and scattered environment, most of the departments have small floor space with materials tables, chairs, papers, files and other things scattered here and there. Some offices were furnished without due regard to the office spacing and workers morale. Some of these facilities have poor spacing which makes the office to look small and dark. It is known from workers view point that the work of accounting, typing, paper works and other documentation of data/records needs good quality of light because of visual discrimination involved. As a result of non availability of good workbuilt environment, the performance of employees is in a declining state. The state of affairs in the complex has resulted to negative attitude by the employees which is inimical to the progress and accomplishment of the organization's set objective. These problems inspired the need to find out the Influence of Workplace Built Environment on Employee Performance: a Case Study of Nsukka local Government Secretariat Complex Enugu State, Nigeria.

## 1.2 Purpose of the Study

The purpose of the study was to find out the effects of workplace built environment on employee performance: a case study of Nsukka local Government Secretariat Complex Enugu State, Nigeria. Specifically, the study sought to determine how;

3. Indoor air quality affects employee performance in Nsukka local Government Secretariat Complex Enugu State, Nigeria.
4. Room spacing affects employee performance in Nsukka local Government Secretariat Complex Enugu State, Nigeria.
5. Room lighting affects employee performance in Nsukka local Government Secretariat Complex Enugu State, Nigeria.

## 1.3 Research Questions

The following research questions guided the study:

3. How does indoor air quality affect employee performance in Nsukka local Government Secretariat Complex Enugu State, Nigeria?
4. How does room spacing affect employee performance in Nsukka local Government Secretariat Complex Enugu State, Nigeria?

5. How does room lighting affect employee performance in Nsukka local Government Secretariat Complex Enugu State, Nigeria?

## 1.4 Hypotheses

The following null hypothesis was tested at 0.05 level of significance:

3. There is no significant difference in the mean responses of Heads of Departments and members of staff on the how the indoor air quality affects employee performance in Nsukka local Government Secretariat Complex Enugu State, Nigeria.
4. There is no significant difference in the mean responses of Heads of Departments and members of staff on how the room spacing affects employee performance in Nsukka local Government Secretariat Complex Enugu State, Nigeria.
5. There is no significant difference in the mean responses of Heads of Departments and members of staff on how the room lighting affects employee performance in Nsukka local Government Secretariat Complex Enugu State, Nigeria.

## 2. Methodology

The study adopted a descriptive survey design. Descriptive survey research design is used for those studies which aim at collecting data and describing in a systematic manner the characteristics, features or facts about a given population (Nworgu, 2015). This study was carried out in Nsukka local Government Secretariat Complex Enugu State, Nigeria. The population was made up of 132 respondents which comprises of 8 Heads of Departments and 124 members of staff in Nsukka local Government Secretariat Complex Enugu State, Nigeria. Due to the manageable size of the population, the entire population was used as the sample.

A 29-item Questionnaire was used in answering research questions. The title of the Questionnaire is: Questionnaire on Influence of Workplace Built Environment on Employee Performance (Q.I.W.B.E.E.P). The questionnaire was made up of two parts. Part 1 which elicited information from the respondents on their demographic data, and Part 2 which was made up of three clusters. Clusters A elicited information on how indoor air quality affects employee performance in Nsukka local Government

Secretariat Complex Enugu State, cluster B elicited information on how room spacing affects employee performance in Nsukka local Government Secretariat Complex Enugu State while, Section C sought information on how room lighting affects employee performance in Nsukka local Government Secretariat Complex Enugu State. The clusters were structured on a five point likert response options of Strongly Agree (SA), Agree (A), Undecided (UD), Disagree (D) and Strongly Disagree (SD). The instrument was validated by three experts. The experts' comments and suggestions were used in modifying the questions and items. The Reliability of the instrument (Q.I.W.B.E.E.P) was subjected to Cronbach's Alpha reliability method to determine the internal consistency which yielded a coefficient of 0.84. This shows that the instrument was reliable.

The administration and retrieval of the Q.I.W.B.E.E.P questionnaire was carried out by the researchers with the help of two research assistants. One hundred and thirty-two copies of the questionnaires were administered on Heads of Departments and members of staff of Nsukka local Government Secretariat Complex Enugu State, which were retrieved within one week after administration. Data collected was analyzed using mean and standard deviation to answer research questions. Decision on research questions were taken based on real limits of numbers. Thus, mean rating of 3.50 and above were considered

as agreed, while items with mean rating below 3.50 were considered as disagreed. Consequently, any item with a mean range of 0.50 – 1.49 was interpreted as strongly disagree, any item with a mean value ranging from 1.50-2.49 was regarded as disagree, any item with a mean value ranging from 2.50-3.49 was regarded as agree, while an item with a mean value of 3.50 and above was interpreted as strongly agree. For the test of significance, the probability (p) value was used in comparison with the alpha value of 0.05, and at 90 degree of freedom (df). If any item has a probability value greater than 0.05 ( $P > 0.05$ ) it will be concluded that there is no significant difference in the mean responses of the respondents.

### 3. Results

Data for answering research questions 1 to 3 were presented in table 1 to 3

**Research Question 1:** How does indoor air quality affect employee performance in Nsukka local Government Secretariat Complex Enugu State, Nigeria?

**Table 1:** Mean responses and t-test analysis of Heads of Departments and members of staff on how indoor air quality affects employee performance in Nsukka local Government Secretariat Complex Enugu State, Nigeria.

N= 132

S/N	Items:	X <sub>G</sub>	SD <sub>G</sub>	X <sub>1</sub>	SD <sub>1</sub>	X <sub>2</sub>	SD <sub>2</sub>	t-cal	Sig (2-Tailed)	Rmks Ho
1	I enjoy working in my office because it is properly ventilated.	3.39	1.16	2.99	1.13	4.98	1.19	0.03	D	NS
2	I do not like to work in my office because it is poorly ventilated.	4.13	0.92	4.14	0.91	4.11	0.93	0.13	SA	NS
3	I enjoy working and spending time in the office because I have not witnessed any case of dust, bad smell or smokes within my working environment.	4.44	0.62	4.47	0.60	4.40	0.63	0.46	SA	NS
4	Frequent dusts and smokes in my neighborhood hinder me from effectively performing my office duties.	4.49	0.90	4.54	0.97	4.44	0.97	0.48	A	NS
5	I enjoy spending long hours in my office to work because it is equipped with an air conditioner.	2.29	0.57	3.49	0.57	4.48	0.57	0.07	D	NS



6	I enjoy spending long hours in my office to work because it is equipped with a ceiling fan/standing fan.	4.56	0.50	4.56	4.55	0.50	0.50	0.05	A	NS	
7	I do not like spending long hours in my office to work due to lack of a functioning air conditioner.	4.37	0.73	4.38	4.37	0.74	0.74	0.05	SA	NS	
8	I do not enjoy spending long hours in my office to work because it does not have a functioning ceiling fan/standing fan.	4.37	0.89	4.40	4.33	0.96	0.96	0.34	SA	NS	
9	Bad odors from faulty facilities like soak away and toilets gives me discomfort in the office.	4.44	0.50	4.43	4.44	0.50	0.50	0.50	SA	NS	
10	I have not felt any discomfort or fallen ill due to poor ventilation within my working environment.	4.47	0.76	4.49	4.44	0.80	0.80	0.27	A	NS	
11	I have occasionally fallen ill and felt discomfort due to poor ventilation within my working environment.	4.57	0.89	4.43	4.33	0.96	0.96	0.34	SA	NS	
<b>Grand X and SD</b>		<b>4.47</b>	<b>0.77</b>								

**Note:**  $X_t$ = Total mean;  $SD_t$ = Standard deviation total;  $X_1$ =mean of Heads of Departments;  $SD_1$ = Standard deviation of HODs;  $X_2$  = mean of members of staff;  $SD_2$  =Standard deviation of members of staff;  $N_1$  = Number of HODs (8);  $N_2$  = Number of members of staff (124).

Table 1 revealed that 9 out of the 11 items had their mean values ranging from 4.13 to 4.99, which were above the criterion mean of 3.50. This indicates that the respondents agreed that all the 9 items are how indoor air quality affects employee performance in Nsukka local Government Secretariat Complex Enugu State, Nigeria. However, items 1 and 5 had their mean values 3.39 and 2.29 respectively, which were below the criterion mean of 3.50. This indicates that the respondents disagreed that the 2 items were

how indoor air quality affects employee performance. The t-calculated values of all the items ranged 0.03 to 0.50 which were lower than the t-critical value of 1.96 at an alpha level of 0.05. The result therefore indicated that no significant differences exist in the mean response of two groups of respondents. It was therefore concluded that there is no significant difference in the mean responses of Heads of Departments and members of staff on the how the indoor air quality affects employee performance in Nsukka local Government Secretariat Complex Enugu State, Nigeria. The hypothesis was retained.

**Research Question 2:** How does room spacing affect employee performance in Nsukka local Government Secretariat Complex Enugu State, Nigeria?

**Table 2:** Mean Responses and t-test analysis of Heads of Departments and members of staff on how room spacing affects employee performance in Nsukka local Government Secretariat Complex Enugu State, Nigeria.

**N= 132**

S/N	Items:	X <sub>G</sub>	SD <sub>G</sub>	X <sub>1</sub>	SD <sub>1</sub>	X <sub>2</sub>	SD <sub>2</sub>	t-cal	Sig (2-Tailed)	Rmks RQ Ho	
1	I enjoy working in my office because it has enough space for my desks, chairs, filing system, shelves, drawers, etc.	4.09	1.16	4.99	1.13	4.98	1.19	0.03	A	NS	
2	I do not enjoy working in my office due to poor spacing.	4.13	0.92	4.14	0.91	4.11	0.93	0.13	A	NS	
3	My office is too crowded with other members of staff and colleagues.	4.44	0.62	4.47	0.60	4.40	0.63	0.46	SA	NS	
4	There is a significant spacing arrangement for each individual workstation in my office.	3.49	0.90	3.54	4.44	0.97	0.97	0.48	D	NS	
5	The appreciable space within the office affords me the opportunity to move freely, collaborate and interact efficiently with my colleagues.	3.29	0.57	2.49	4.48	0.57	0.57	0.07	SD	NS	
6	Poor spacing within the office limits my movement in and out thereby limiting my level of interactions with my colleagues.	4.41	0.63	4.42	4.40	0.63	0.63	0.09	A	NS	
7	Because of the appreciable spacing in the office, I can spend long productive hours at my work station.	3.47	0.89	3.40	4.33	0.96	0.96	0.34	D	NS	
8	I do not feel motivated enough to spend time in my office due to limited spacing arrangement.	4.44	0.50	4.43	4.44	0.50	0.50	0.50	SA	NS	
<b>Grand X and SD</b>		<b>4.47</b>	<b>0.77</b>								

Table 2 revealed that 5 items out of the 8 items had their cluster mean values ranging from 4.49 to 4.09, which were above the criterion mean of 3.50. This indicates that the respondents agreed that all the 5 items are how room spacing affects employee performance in Nsukka local Government Secretariat Complex Enugu State, Nigeria. However, items 4, 5 and 7 had their cluster mean values: 3.49, 3.29 and 3.47, which were below the criterion mean of 3.50. This indicates that the respondents disagreed that the 3 items are how room spacing affects employee performance. The grand mean of 4.47 with standard deviation of 0.77 suggested that the items were perceived highly by the respondents as ways through which room spacing affects employee performance.

The t-calculated values of all the items ranged 0.03 to 0.48 were lower than the t-critical value of 1.96 at an alpha level of 0.05. The result therefore indicated that no significant differences exist in the mean responses of two groups of respondents. It was therefore concluded that there is no significant difference in the mean responses of Heads of Departments and members of staff on how the room spacing affects employee performance in Nsukka local Government Secretariat Complex Enugu State, Nigeria. The hypothesis was retained.

**Research Question 3:** How does room lighting affect employee performance in Nsukka local Government Secretariat Complex Enugu State, Nigeria?

**Table 3:** Mean Responses and t-test analysis of Heads of Departments and members of staff on how room lighting affects employee performance in Nsukka local Government Secretariat Complex Enugu State, Nigeria.

**N=132**

S/N	Items:	X <sub>G</sub>	SD <sub>G</sub>	X <sub>1</sub>	SD <sub>1</sub>	X <sub>2</sub>	SD <sub>2</sub>	t-cal	Sig (2-Tailed)	Rmks RQ Ho	
1	I do not strain my eyes at work because my office is equipped with good lighting facilities.	4.28	0.84	4.31	4.25	0.85	0.85	0.28	A	NS	
2	I find it hard to concentrate at work due to poor lighting facilities at my office.	4.60	0.56	4.61	4.59	0.57	0.57	0.16	SA	NS	
3	I am always alert and in my best mood at work due to efficient lighting systems at the office.	3.44	0.62	3.40	0.60	4.40	0.63	0.46	D	NS	
4	I always have headache and fatigue due to poor lighting issues at my office.	4.33	0.90	4.42	4.44	0.97	0.97	0.48	A	NS	
5	I strain my eyes occasionally due to overly dim lighting in my office.	4.49	0.57	4.49	4.48	0.57	0.57	0.07	A	NS	
6	I strain my eyes occasionally due to excessively bright lighting in my office.	4.56	0.50	4.56	4.55	0.50	0.50	0.05	A	NS	
7	The offices are always dark because the windows are not big enough to let in enough daylight into the building offices.	4.33	0.90	4.42	4.44	0.97	0.97	0.48	A	NS	
8	Workstations in my office are positioned near windows to take advantage of daylight.	4.37	0.73	4.38	4.37	0.74	0.74	0.05	SA	NS	
9	I always have a positive and energizing atmosphere at work because of a well lit office.	3.37	0.89	3.43	4.33	0.96	0.96	0.34	D	NS	
10	I am not motivated to spend time or work for hours due to poor lighting in my office.	4.03	0.90	4.02	4.44	0.97	0.97	0.48	A	NS	
<b>Grand X and SD</b>		<b>4.47</b>	<b>0.77</b>								

Table 3 revealed that 8 items out of the 10 items had their mean values ranging from 4.03 to 4.60, which were above the criterion mean of 3.50. This indicates that the respondents agreed that the 8 items are how room lighting affects employee performance in Nsukka local Government Secretariat Complex Enugu State, Nigeria. Items 3 and 9 had mean values of 3.44 and 3.37 respectively which were below the criterion mean of 3.50. This indicates that the respondents disagreed that the items were how room lighting affects employee performance. The t-

calculated values of all the items ranged 0.03 to 0.50 which were lower than the t-critical value of 1.96 at an alpha level of 0.05. The result therefore indicated that no significant differences exist in the mean response of two groups of respondents. It was therefore concluded that there is no significant difference in the mean responses of Heads of Departments and members of staff on how the room lighting affects employee performance in Nsukka local Government Secretariat Complex Enugu State, Nigeria. The hypothesis was retained.



## 4. Discussion of Findings

The findings of the study in table 1 revealed how indoor air quality affects employee performance in Nsukka local Government Secretariat Complex Enugu State, Nigeria. Some of them includes that frequent dusts and smokes in the neighbourhood hinder most employees from effectively performing their office duties. While most employees do not like spending long hours in office to work due to lack of a functioning air conditioner or ceiling fan. These findings are in line with Badayai, (2012) who stated that indoor air quality is very significant to the health, comfort, and job performance among employees as pollutants like odours and dusts can cause critical discomfort and feelings of unwillingness that may lead to a reduction in productivity and job performance. Khaled and Okasheh (2017) also assert that unhealthy and unsafe work environment in terms of poor ventilation, immoderate noise, inadequate lighting etc. affect employees' productivity and health.

The study in table 2, also investigated how room spacing affects employee performance in Nsukka local Government Secretariat Complex Enugu State, Nigeria. Some of them include that most employees share offices which are always too crowded with other members of staff and colleagues. Poor spacing within the office limits free movement in and out thereby limiting worker's level of interactions with their colleagues. These findings are in line with Mohamad, (2021) who stated that individual workstation that is too crowded and restricted, will lead to stress, pressure and other psychological effect. An individual employee may feel unstable and have lack of freedom and motivation, on the short-run, it may lead to a very stressful environment, which decreases the quality of the job performance. Also Tran, Park, and Lee, (2020) stated that lack of office space will limit space components like office furniture comprises of desks chairs, the filing system, shelves, drawers, etc., which should have a specified part to play in the productivity and the efficiency of the employees and the suitable functioning of any office. Quesada-Molina, and Astudillo-Cordero, (2023) also noted that if the built environment of an office and its infrastructure are fundamentally inflexible, employees' own flexibility and mobility will be inhibited and productivity and engagement will suffer. Enabling employees to leverage the space

around them, and continuously mould it to their individual needs will be crucial in increasing their performance.

The study in table 3, also investigated how room lighting affects employee performance in Nsukka local Government Secretariat Complex Enugu State, Nigeria. Some of them include that most workers find it hard to concentrate at work due to poor lighting facilities in their offices. The offices are always dark because the windows are not big enough to let in enough daylight into the building offices. The findings are consistent with Okasheh, (2017) who confirmed that inconvenient lighting is a source of distress, thus leading to poor job performance. That happens when the employee is exposed to uncomfortable working environment in which there is a high glare, or dim bulk, or a lack of natural light in the office.

## 5. Conclusion

The purpose of the study was to find out the effects of workplace built environment on employee performance: a case study of Nsukka local Government Secretariat Complex Enugu State, Nigeria. From the above analysis we have reached the conclusion that good workplace built environment is helpful increasing employees' level of productivity. Factors like indoor air quality, noise level, room spacing, room temperature and room lighting has significant negative/positive impact on employees' level of productivity in the organization. A comfortable workplace built environment is important to enable employees to focus and do their job perfectly. This will ensure good quality of life at work as well as efficient performance of office workers for better organizational performance. Good physical working environment inspires workers to spend more time in their various offices, employees responded emotionally better towards the provision of good office environment by not absenting themselves unnecessarily from work, lateness to work and other negative attitude will be drastically reduced.

### 5.1 Recommendations

Based on the findings made and the conclusion drawn, the following recommendations were made:

1. The Enugu state Government and Nsukka Local Government should map out programme for

provision of good workplace built environment to increase productivity and promote occupational safety and health of workers. This can be done by renovating the old offices in Nsukka secretariat complex building and remodelling old offices to meet up latest state of the art designs in the construction industry. The re-modeling and renovation of such offices should provide better office space, good ventilation, improved thermal comfort and efficient lighting for the workers.

2. The Enugu state Government and Nsukka Local Government should ensure that there is adequate and proper improvement of working environment of employees in the secretariat so as to enhance their morale to work efficiently and effectively. If good office environment is provided for employees, it will go a long way to enhance their morale and performance. If office is neat, noiseless, properly arranged well lighted and ventilated, employees will feel a sense of belonging and this will make them to work efficiently and effectively.

3. The Nsukka Local Government should as a matter of urgency introduce and encourage stringent maintenance culture amongst the management and employees within the secretariat. This will ensure that infrastructures within the built environment such as furniture, toiletries, windows, doors, air conditioners, printers, photocopier machines etc are well maintained over a long period of time.

#### Conflicts of Interest

The authors declare that they have no conflicts of interest.

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## 6. References

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- Agba, M. S., Akwara, A. F. & Idu, A. Y. 2013. "Local Government and Social Service Delivery in Nigeria: A Content Analysis." *Academic Journal of Interdisciplinary Studies*, Vol. 2 (2), 455-462.
- Assaf, A. M. & Alswalha, A. (2013). Environmental impacts of working conditions in paint factories workers in the Hashemite Kingdom of Jordan. *European Scientific Journal*, 9 (8). 122-131.
- Awan, M. T. (2015). Impact of working environment on employee's productivity: A case study of Banks and Insurance Companies in Pakistan. *European Journal of Business and Management*, 12. Retrieved from: <https://www.semanticscholar.org/paper/Impact-of-working-environment-on-employee%27s-A-case-Awan-Tahir/ddff90fafc7685dcecfad779e8ff8177f>
- Badayai, A.R. (2012). A Theoretical Framework and Analytical Discussion on Uncongenial Physical Workplace Environment and Job Performance among Workers in Industrial Sectors. *Social and Behavioral Sciences*, 42, 486-495.
- Bushiri, C. (2014). The impact of working environment on employees' performance, the case of Institute of Finance Management in Dar es Salaam. The Open University of Tanzania, Institute of Finance Management. Tanzania: *Semantic Scholar*. Retrieved from: <https://www.semanticscholar.org/paper/The-impact-of-working-environment-on-employees%E2%80%99-the-Bushiri/9fae5b81f800870e968f5a917629d93499ea82db>
- Bolatito, S. & Ibrahim, B. S. (2014). "Challenges of Local Government Administration in Nigeria; An Appraisal of Nigerian Experience." *International Journal of Science and Research (IJSR)* Vol. 3 (7), 562-568.
- Chukwuemeka, E., Ugwuanyi, B. I., Ndubuisi-Okolo, P. & Onuoha, C. E. (2014). "Nigeria Local Government: A Discourse on the Theoretical Imperatives in a Governmental System." *An International Multidisciplinary Journal, Ethiopia*, Vol. 8 (2), 305-324.
- Ekowati, D., Abbas, A., Anwar, A., Suhariadi, F., & Fahlevi, M. (2023). Engagement and

- flexibility: An empirical discussion about consultative leadership intent for productivity from Pakistan. *Cogent Business & Management*, 10(1), 2196041.
- Griffin, S. C., Scanion, M. M., & Reynolds, K. A. (2023). Managing Building Water Disruptions in a Post-COVID World: Water Quality and Safety Risk Assessment Tool for Academic Institutions and School Settings. *Medium Development Publishing Incorporation*.7 (2). 12-22.
- Khaled Al-Omari and Haneen Okasheh (2017) The Influence of Work Environment on Job Performance: A Case Study of Engineering Company in Jordan. *International Journal of Applied Engineering Research* ISSN 0973-4562 Volume 12, Number 24. pp. 15544-15550
- Mewomo, M. C., Toyin, J. O., Iyiola, C. O., & Aluko, O. R. (2023). Synthesis of Critical Factors Influencing Indoor Environmental Quality and Their Impacts on Building Occupants Health and Productivity. *Journal of Engineering, Design and Technology*.13 (4). 88-91.
- Mohamad Shammout (2021). The Impact of Work Environment on Employees Performance. *International Research Journal of Modernization in Engineering Technology and Science*. 03 (11). 78-101.
- Otinche, S. I. (2014). "Fiscal Policy and Local Government Administration in Nigeria. *An International Multidisciplinary Journal, Ethiopia*, Vol. 8 (2), 118-137.
- Okasheh, K. A.-O. (2017). The Influence of Work Environment on Job Performance: A Case Study of Engineering Company in Jordan. *International Journal of Applied Engineering Research* I, 12(24), 7. Retrieved from [https://www.ripublication.com/ijaer17/ijaerv12n24\\_223.pdf](https://www.ripublication.com/ijaer17/ijaerv12n24_223.pdf)
- Okanya A .V, Asogwa J. O & Ike J. O (2021). Indoor Environmental Quality (IEQ) in Nigerian Tertiary Institutions: The Effect on Performance of Building Technology Lecturers. *Middle Eastern Journal of Research in Education and Social Sciences (MEJRESS)*: 2 (1). 172-186. DOI: <https://doi.org/10.47631/mejress.v2i1.143>
- Patel, P., & Patel, A. D. (2021). Use of Sustainable Green Materials in Construction of Green Buildings for Sustainable Development. IOP Conference Series Earth and Environmental Science.
- Perfect Pollucon Services. (2023). Effect of Poor Lighting at Workplace. Majiwada: Perfect Pollucon Services.
- Quesada-Molina, F., & Astudillo-Cordero, S. (2023). Indoor Environmental Quality Assessment Model (IEQ) for Houses. *Sustainability*, 10 (2). 1-18.
- Shah, S. H. A., Fahlevi, M., Rahman, E. Z., Akram, M., Jamshed, K., Aljuaid, M., & Abbas, J. (2023). Impact of green servant leadership in Pakistani small and medium enterprises: Bridging pro-environmental behaviour through environmental passion and climate for green creativity. *Sustainability*, 15(20), 14747.
- Tran, V. V., Park, D., & Lee, Y.-C. (2020). Indoor Air Pollution, Related Human Diseases, and Recent Trends in the Control and Improvement of Indoor Air Quality. *International Journal of Environmental Research and Public Health*.
- Utin Nina & Hermina, S. Y. (2019). The Model of Employee Performance. *International Review of Management and Marketing*, 5. doi: <https://doi.org/10.32479/irmm.8025>
- Yingjun, Z. H. (2019). Impact Of Workplace Environment on Employee Performance: Mediating Role of Employee Health. *Pakistan: Business Management and economics engineering*. 5 (2). 20-31. Doi:<https://doi.org/10.3846/bme.2019.10379>