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INDOOR POLLUTION AND EMPLOYEES' PERFORMANCE IN UNIFOAM NIGERIA LIMITED AND FORTUNATE BAKERY[1]

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Abstract. *Researchers have long been eager to uncover the causes of declining productivity. This study investigates the adverse impact of indoor pollution on worker performance, with a particular focus on businesses located in Ilorin, the capital city of Kwara State in Nigeria. The study involved 83 participants from different workplaces who completed surveys, and the chi-square statistical method was used to test four hypotheses. The results revealed a significant correlation between employee productivity and the work environment, particularly about pollution levels. The study revealed that businesses that maintained a welcoming and supportive atmosphere for their employees were more productive and in greater demand. The conducive workplace environment improved worker performance, leading to a reduction in negative behaviours such as laziness, low commitment, and absenteeism. In conclusion, the study advocates for initiatives aimed at enhancing work performance factors to foster positive productivity. Suggestions include implementing financial incentives, motivating employees, adopting more worker-friendly management policies, and improving employee wages. These measures are deemed crucial for fostering a more conducive work environment and enhancing overall productivity.*

Keywords: *Pollution; Employees; Motivation; Efficiency; Productivity*

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1. Introduction

Business owners are currently reevaluating their managerial systems to instigate change and foster growth within their firms, striving to maintain competitiveness in today's economy. Technological advancements and shifts in workplace structures have granted workers increased responsibilities and autonomy. However, pollution persists as a significant challenge impacting the performance of physically demanding workers, despite concerted efforts to mitigate environmental damage (Bari et al., 2022). This issue is particularly acute in developing countries like Nigeria, where industrial emissions, inadequate waste management, and indoor air pollution pose serious health hazards (Nchege & Okpalaoka, 2021). Even in developed nations, pollution disproportionately affects marginalized communities. Research indicates that air pollution hampers productivity in physically demanding roles (Zivin & Neidell, 2011; Chang et al., 2014).

Moreover, business owners are actively adjusting their managerial approaches to tackle modern economic challenges. Despite efforts to enhance productivity, workers continue to face health issues due to pollution, leading to decreased efficiency and absenteeism. The pervasive nature of pollution poses significant health risks, particularly in developing nations, where industrial emissions and indoor air pollution prevail. This phenomenon also impacts developed countries, exacerbating productivity challenges. Pollution-induced illnesses contribute to 'presenteeism', where employees attend work despite being unwell, resulting in increased societal costs and reduced productivity. Indoor air pollution, exceeding WHO guidelines in many developing countries, poses serious health risks. Unfortunately, monitoring of indoor environments remains inadequate.

Industries are experiencing a loss of experienced employees due to pollution-related health issues, aggravating productivity challenges. In Nigeria, industries lose seasoned workers just when their expertise is most needed, due to diseases like cancer, heart disease, and hypertension. Despite existing literature on pollution's impact on employee performance, there is a gap in studying its effects on specific industries like Unifoam Nigeria Limited and Fortunate Bakery, which this present study aims to address.

2. Literature review

Concept of pollution

As stated by Alhyali (2009), pollution refers to alterations in the environment caused by human activities, leading to the introduction of substances that are unsuitable for that particular environment. This can lead to disturbances and harm to the natural surroundings. Pollution is evident in regions where waste is exposed or through the emission of black smoke from industrial facilities (Altoranji, 2008).

Indoor Pollution

Air pollution encompasses hazardous substances, such as gases and particles, present in both indoor and outdoor air. Surprisingly, indoor air pollution often exceeds outdoor pollution in harmful effects. Many impoverished regions still rely on traditional cooking methods, elevating indoor air pollution levels and posing significant health risks. According to the World Health Organization (2019, 2021), household air pollution causes an estimated annual death toll of 4.3 million people. Exposure to various hazardous materials indoors, including asbestos, lead, formaldehyde, tobacco smoke, and chemicals in paints and cleaning products, as well as common pollutants like dust mites and animal dander, can lead to severe health complications such as lung cancer, mesothelioma, and asbestosis. Symptoms may include flu-like illnesses, asthma exacerbations, and throat irritations. Prolonged exposure can result in life-threatening conditions such as kidney failure, anaemia, neurological damage, and cardiovascular abnormalities. (World Health Organization, 2019, 2021)

Environmental Pollution

Environmental contamination refers to the presence of dangerous materials and pollutants in the environment. This contamination can have adverse effects on the natural processes of the earth and atmosphere, which, in turn, can affect the health and well-being of living organisms. Pollutants, such as toxic chemicals, are typically released into the air, water, or soil, causing different types of pollution, including air pollution, soil pollution, water pollution, thermal pollution, land pollution, and noise pollution.

Types of environmental pollution

1. Air pollution is a term used to describe the harmful effects of smoke and toxic gases such as nitrogen, sulfur, and carbon oxides on the atmosphere. Examples of air pollution include vehicle exhaust emissions, burning of fossil fuels like coal, oil, or gas, and toxic off-gassing from items like paint and plastic.

2. Land pollution refers to the degradation of the earth's surface due to the improper disposal of garbage and mismanagement of natural resources. This type of pollution can manifest in various ways, including roadside litter, illegal dumping in natural areas, land-based oil spills, and the use of pesticides and other chemicals in farming.

3. Noise pollution refers to loud sounds that can be uncomfortable or harmful to both humans and animals. Examples of noise pollution include the sounds produced by vehicles like cars, helicopters, and aeroplanes, as well as construction or demolition projects, concerts, and sporting events.

4. Thermal pollution is a term used to describe an increase in temperature caused by human activities. One example of thermal pollution is the warmer water in lakes resulting from manufacturing plants using cool water to cool down and then discharging it back into the lake. Thermal pollution can also occur in cities with a lot of concrete or traffic.

Water pollution occurs when harmful substances or pollutants are introduced into any body of water, such as lakes, rivers, seas or subterranean sources. This can happen through the dumping of raw sewage into streams or lakes, industrial waste spills that contaminate groundwater, radiation leaks or nuclear accidents, the illicit disposal of materials or objects into waterways, or the development of dangerous bacteria through biological contamination.

The concept of work performance

Employers often evaluate their employees' work performance on a quarterly or annual basis to identify areas that need improvement. An individual's attitude towards their job is a crucial factor that influences their performance. Attitudes are an individual's predispositions to respond positively or negatively to various things or items in their surroundings. By examining and understanding employee attitudes towards management, compensation, perks, promotions, and

other factors that could elicit favourable or unfavourable responses, employers can gain valuable insights into their staff's behaviour. Considering this, attitudes and employee happiness are essential indicators of organizational effectiveness.

Assessment of workforce productivity

Employers often neglect the comprehensive measurement of workforce productivity, which encompasses both presenteeism and absenteeism, constituting a significant portion of indirect costs. While absenteeism, a visible yet often overlooked expense, is relatively manageable, presenteeism tends to be underestimated. Quantifying absence due to reported illness is feasible, but accounting for personal sick days poses challenges, particularly with the rise of telecommuting. Discrepancies between reported absenteeism rates by employers and employees are notable. While various studies have explored aspects of absenteeism, recent attention has shifted towards presenteeism due to its wide-ranging effects and severity. Accurate measurement of lost productivity from illness episodes necessitates considering both actual days absent and presenteeism. Brouwer (2002) found a 16% increase in production losses when presenteeism charges were added to absenteeism costs, underscoring its impact despite a small sample size (n = 51).

Buildings factors

Numerous studies, involving over 100,000 participants, have highlighted the adverse health effects of damp environments, including asthma, allergies, wheezing, and coughing (Sundell, 1999; Bornehag, 2001). Building ventilation systems are categorized into pollutant removal and air exchange, but conclusive data on their correlation with health effects remains limited, with only thirty scientifically conclusive studies identified (Wargocki, 2002). Ventilation rates below 25 litres per second per person in commercial and institutional buildings can heighten the risk of Sick Building Syndrome (SBS), leading to increased sick leave and reduced productivity (Sundell, 1993; Sundell, 1994; Wargocki, 2002b). In Western countries, energy-saving measures have reduced house ventilation rates, possibly contributing to increased allergies, while in Eastern European nations, rising energy costs have led to tighter construction and reduced ventilation (Sundell, 2004).

The chemistry of indoor air is complex, involving the interaction of various contaminants with ozone and other substances, producing highly reactive compounds posing health risks (Sundell, 1993; Weschler, 2000). Though challenging to measure, these compounds can be more harmful than their precursors, necessitating reassessment of factors like humidity, ventilation rate, building materials, and cleaning agents to ensure safe indoor environments. These findings emphasize the importance of proactive measures to maintain optimal indoor air quality (Sundell, 2004).

Relationship between Health of Workers and Work Performance

The health and well-being of a workforce can have a significant impact on a business's productivity. This impact is reflected in the number of worker absences for paid time off or sickness. Additionally, presenteeism, where employees come to work while sick or injured, can also decrease productivity. Poor employee health and well-being can also indirectly affect productivity by reducing staff engagement levels.

Absenteeism

Many Australian employees take unscheduled absences from work, with sick leave being a common reason reported to the Australian Psychological Society (APS). Besides sick leave, other types of absence include compensation leave, miscellaneous leave, and unapproved absences. Australian workplaces have long offered paid time off for personal reasons, with the National Employment Standards guaranteeing a minimum of 10 days of paid sick leave annually. Providing benefits like sick leave and career leave can position a company as a "family-friendly employer," enhancing its attractiveness to potential hires and bolstering its industry reputation. Public sector workers in Australia typically enjoy more extensive leave benefits compared to their private sector counterparts, with the number of personal/career leave days varying among APS agencies. While sick leave may impact workplace productivity, determining if illness-related absences incur organizational costs poses a challenge. Nevertheless, promoting a healthy workplace and minimizing work-related illnesses and injuries are managerial responsibilities.

Managers must also ensure that employees refrain from taking unjustified absences from work. (Australia National Employment Report)

Presenteeism

Presenteeism is a circumstance where an employee shows up for work even when they are sick or injured. This lowers their productivity and studies have shown that sick workers are more likely to spread their illnesses to others and also suffer from injuries. Even though this concept is relatively new, research has indicated that presenteeism leads to more productivity losses than absenteeism. An ongoing study conducted by one of the biggest health insurance companies in Australia suggests that presenteeism can lead to productivity losses up to four times higher than absenteeism.

3. Theoretical framework

Stakeholder Theory

The term "stakeholders" was first introduced by the Stanford Research Institute in 1963. They defined stakeholders as groups whose support is vital for the organization's survival. In 1984, Freeman integrated the stakeholder concept into strategic management. This approach differentiates between stakeholders and shareholders in corporations and emphasizes the influence of various stakeholders on companies' decision-making processes. The theory is based on four fundamental premises. Firstly, companies have relationships with multiple stakeholder groups, all of which influence or are influenced by the company's decisions. Secondly, these relationships shape the processes and outcomes for both the company and its stakeholders. Thirdly, the interests of stakeholders hold inherent value, and no single stakeholder's interests should dominate over others. Lastly, the decision-making of the company is the central focus of stakeholder theory.

The Natural Resource-Based View (NRBV)

The Natural Resource-Based View (NRBV) extends the Resource-Based View (RBV) by emphasizing the role of the natural environment in gaining a competitive edge. NRBV outlines three interconnected environmental strategies: pollution prevention, product stewardship, and

sustainable development. Pollution prevention focuses on eliminating unnecessary pollution within internal operations, serving as the initial step in proactive environmental management. To advance to product stewardship and sustainable development, a company requires resources to implement pollution prevention and follow a path-dependent progression. Product stewardship addresses environmental concerns externally, from sourcing to end-of-life disposal, while sustainable development involves stakeholder engagement in environmental problem-solving. This strategy has evolved into clean technology and the base of the pyramid approaches. Environmental strategies serve as overarching guidelines directing a company's response to environmental challenges, implemented through various practices, such as targeting key areas of pollution in internal operations. The connection between environmental strategies and competitive advantage is a central focus within the NRBV. (Andersén, Jim. 2021; Makhloufi, Lahcene, et al 2021; McDougall, et al.,2019).

Research questions

1. Does pollution affect workplace productivity?
2. Is pollution-related health problems the only factor contributing to persistent absences from work?
3. Is there a relationship between work performance and pollution?

4. Methods

The survey design was adopted in this study to assess and predict the views, and reactions of respondents on the effects of indoor pollution on employees' performance. Under survey design, the researcher develops a list of questions and presents them in a standard way to each participant typically using either the interview or questionnaire. The study was conducted in two renowned organisations in Ilorin and these are Unifoam Nig. Ltd. and Fortunate Bakery. The study relied on a sample size of 90 respondents i.e. 30% of the total population of each organization. Purposive sampling was used to select the respondents in the study. The instrument used for data collection was a questionnaire. Ninety (90) questionnaires were distributed among the selected samples in both organisations, but Eighty (83) forms of questionnaires were returned successfully

culminating in a response rate of 92%. In administering the questionnaires, direct delivery techniques [DDT] were adopted.

Results

The survey primarily targeted respondents aged 20 to 30, comprising 85.5% of the total, with the remaining 14.5% aged 31 to 40, indicating the predominance of individuals in their economically active years. This age group, known for its peak physical strength, is particularly pertinent for roles demanding speed and physical prowess, such as factory work.

Regarding education levels, a significant majority of respondents are well-educated, with 86.7% holding degrees beyond the SSCE level. The breakdown shows 38.6% possessing Diplomas, 43.4% with HND/B.Sc. degrees, 4.8% with M.Sc. degrees, and 13.3% with SSCE qualifications, contributing to organizational advancement.

Ventilation within the factories appears conducive to enhancing productivity, with 75.9% of respondents rating it as good or excellent. Similarly, temperature conditions are generally satisfactory, as indicated by 79.5% rating them as good or excellent.

Regarding odour conditions, 77.1% of respondents rated it as good or excellent, with only 8.4% expressing dissatisfaction, which minimally affected their work performance.

Overall, the survey data suggests positive perceptions of workplace conditions among the respondents, potentially contributing to enhanced productivity.

Table 1. Distribution of Responses

Age	Frequency	Per cent
20-30 years	71	85.5
31-40 years	12	14.5
Total	**83**	**100.0**
Educational Qualification	Frequency	Per cent

	OND/Diploma	32	38.6
	B.Sc./HND	36	43.4
	M.Sc.	4	4.8
	SSCE	11	13.3
	Total	**83**	**100.0**
Ventilation		Frequency	Per cent
Valid	Excellent	34	41.0
	Good	29	34.9
	Average	14	16.9
	Poor	6	5.1
	Total	83	100.0
Temperature		Frequency	Per cent
Valid	Excellent	20	24.1
	Good	46	55.4
	Average	13	15.7
	Poor	4	4.8
	Total	83	100.0
Odour		Frequency	Per cent
Valid	Excellent	24	28.9
	Good	40	48.2
	Average	12	14.5
	Poor	7	8.4
	Total	83	100.0

Source: Researcher's survey, 2023

Table 2. Space of the workplace

Space of the workplace		Frequency	Per cent
Valid	Excellent	41	49.4
	Good	34	41.0
	Average	8	9.6
	Total	83	100.0
Noise		Frequency	Per cent

Valid	Excellent	25	30.1
	Good	34	41.0
	Average	20	24.1
	Poor	2	2.4
	Very poor	2	2.4
	Total	83	100.0
Work performance		Frequency	Per cent
Valid	Strongly Agree	30	36.1
	Agree	42	50.6
	Indifferent	5	6.0
	Disagree	4	4.8
	Strongly Disagree	2	2.4
	Total	83	100.0
Smoke and emission		Frequency	Per cent
Valid	Strongly Agree	12	14.4
	Agree	36	43.2
	Indifferent	9	10.8
	Disagree	12	14.4
	Strongly Disagree	14	16.8
	Total	83	100.0

Source: Researcher's survey, 2023.

According to the survey findings, both Unifoam and Fortunate Bakery provide spacious and comfortable work environments that promote favourable working conditions. Respondents unanimously agreed on the high quality of facilities in both organizations, rating them above average. Unifoam's expansive production rooms accommodate more employees efficiently, while modern machinery minimizes the need for additional personnel. Similarly, Fortunate Bakery's utilization of electric ovens and a Mikano generator ensures minimal noise pollution within the factory.

The survey indicates that noise pollution did not significantly impact work performance in either organization. While some respondents noted slight dissatisfaction with noise levels, the majority

considered it tolerable or excellent, attributed to the strategic placement of generators and modern machinery.

Moreover, the survey underscores the significant influence of the physical work environment on productivity, with 86.7% of respondents agreeing that a positive work environment enhances productivity, aligning with Kohun's argument on the importance of conducive work environments for employee satisfaction and motivation.

Regarding concerns over excessive factory smoke and emissions potentially affecting productivity, opinions among respondents varied. While a joint majority agreed with the hypothesis, a notable portion disagreed, with some expressing indifference.

Table 3: Worker's Health and Organisational Productivity

Table 3 highlights the significance of employee well-being in organizational productivity, shedding light on why some organizations hesitate to hire disabled employees. A substantial majority, comprising 96.3% of respondents, either strongly agreed or agreed with this notion, suggesting widespread concern. Furthermore, the table underscores the detrimental impact of unsafe working conditions, unclean environments, and inadequate resources on employee fatigue and motivation, subsequently diminishing job commitment. A majority of respondents, totalling 86.7%, strongly agreed or agreed with this observation, indicating a consensus on the negative consequences. However, a small percentage of respondents, 13.3%, expressed indifference or strong disagreement with this viewpoint, suggesting varying perceptions within the workforce.

Table 3.Worker's Health and Organisational Productivity

Health and Productivity		Frequency	Per cent
Valid	Strongly Agree	42	50.6
	Agree	28	33.7
	Indifferent	10	12.0
	Disagree	2	2.4
	Strongly Disagree	1	1.2
	Total	83	100.0

Unsafe work and motivation		Frequency	Per cent
Valid	Strongly Agree	43	51.8
	Agree	29	34.9
	Indifferent	6	7.2
	Disagree	3	3.6
	Strongly Disagree	2	2.4
	Total	83	100.0
Ventilation		Frequency	Per cent
Valid	Strongly Agree	36	43.4
	Agree	37	44.6
	Indifferent	6	7.2
	Disagree	2	2.4
	Strongly Disagree	2	2.4
	Total	83	100.0
Chemicals		Frequency	Per cent
Valid	Strongly Agree	31	37.3
	Agree	39	47.0
	Indifferent	5	6.0
	Disagree	6	7.2
	Strongly Disagree	2	2.4
	Total	83	100.0

Source: Researcher's survey, 2023.

The survey findings underscore the detrimental effects of poor ventilation on employee productivity, with an overwhelming 88% of respondents strongly agreeing with this concern. However, a small proportion, comprising 7.2% of respondents, expressed indifference, while 4.8% disagreed, suggesting some variation in perception within the workforce.

Additionally, the table highlights the negative impact of production materials and internal furnishings, such as paint and chemicals, on work performance. Specifically, the congestion of these materials hampers ventilation and access to fresh air, a concern echoed by 84% of

respondents who either strongly agreed or agreed with this observation. Nonetheless, a small percentage of respondents, totalling 8.4%, expressed indifference or disagreement with this viewpoint, indicating differing perspectives among respondents.

Table 4.Production space and productivity

Production space and productivity		Frequency	Per cent
Valid	Strongly Agree	49	59.0
	Agree	29	34.9
	Indifferent	3	3.6
	Disagree	2	2.4
	Total	83	100.0
	Health incentive motivates productivity		
Health Incentives		Frequency	Per cent
Valid	Strongly Agree	40	48.2
	Agree	30	36.1
	Indifferent	7	8.4
	Disagree	4	4.8
	Total	83	100.0

Source: Researcher's survey, 2023.

The data presented in the table underscores the significant impact of the work environment, particularly regarding heat and congestion levels, on work productivity. An overwhelming majority of respondents, accounting for 93.9%, agreed with this assertion, indicating widespread acknowledgement of the importance of conducive working conditions. This finding aligns with Yesufu's (1984) argument that the physical conditions of the workplace profoundly influence employee output.

Moreover, the table indicates that nearly half of the respondents, 48.2%, strongly agreed that the work environment directly affects productivity, with an additional 36.1% agreeing. However, a notable percentage of respondents, 13.2%, either remained indifferent or disagreed with this viewpoint, suggesting some variance in perspectives among the workforce.

In addition to promoting productivity, providing paid sick leave can facilitate employee access to medical care, expedite recovery, prevent the development of serious illnesses, and mitigate the spread of diseases in the workplace. This underscores the importance of implementing supportive policies to enhance employee well-being and organizational performance.

Table 5. Production heat and job productivity

Heat and Productivity		Frequency	Per cent
Valid	Strongly Agree	30	36.1
	Agree	43	51.8
	Indifferent	7	8.4
	Disagree	3	3.6
	Total	83	100.0
Days of Absence			
Number of days		Frequency	Per cent
Valid	Less than 5	9	10.8
	6-10	15	18.1
	11-14	35	42.2
	more than 14	5	6.0
	None	19	22.9
	Total	83	100.0
Sick leave and work performance			
Sick leave		Frequency	Per cent
Valid	Once	31	37.3
	Twice	10	12.0
	Thrice	4	4.8
	None	38	45.8
	Total	83	100.0
Absenteeism and productivity			
		Frequency	Per cent

Valid	Yes	56	67.5
	No	27	32.5
	Total	83	100.0

Source: Researcher's survey, 2023.

Table 5 highlights the detrimental impact of excessive heat on workers' productivity, stemming from factors like machinery heat and inadequate ventilation. An overwhelming 87.9% of respondents strongly agreed or agreed with this assessment, indicating widespread recognition of the issue. This finding underscores the importance of addressing heat-related challenges to enhance workplace efficiency

Moreover, the table reveals concerning trends in absenteeism, with over 60.3% of respondents reporting being absent from work more than six times, and 10.8% missing duty between 1 and 5 times. Such high absenteeism rates pose significant obstacles to maintaining optimal work performance, potentially hindering organizational productivity.

Furthermore, the data indicates a substantial proportion of respondents, accounting for 54.1%, having applied for sick leave at least once in the past year. This prevalence of sick leave requests can further disrupt production processes and impede effective work performance, highlighting the need for strategies to address absenteeism-related challenges.

Lastly, while a majority of respondents, comprising 67.5%, acknowledge the adverse impact of absenteeism on work productivity, a notable proportion, representing 32.5%, believe otherwise, attributing it to the size of their organizations. This divergence in perspectives underscores the complexity of managing absenteeism and its effects on productivity within varying organizational contexts.

Test of Hypotheses

Hypothesis One

$H0_1$: There is no significant relationship between pollution and employee performance

H_1: There is a significant association between pollution and employee performance

Table 6 Showing the association between pollution and employee performance

Noise		Poor ventilation					Total
		Strongly Agree	Agree	Indifferent	Disagree	Strongly Disagree	
noise	Excellent	13	6	4	0	2	25
	Good	13	17	2	2	0	34
	Average	6	14	0	0	0	20
	Poor	2	0	0	0	0	2
	Very poor	2	0	0	0	0	2
Total		36	37	6	2	2	83

X2c 23.703: df 16 x2t: 26.30

The chi-square test revealed a significant association between pollution and employee performance. With a calculated chi-square value of 23.703 surpassing the table value of 26.30 at an alpha level of 0.05, and with 16 degrees of freedom, the null hypothesis was rejected in favour of the alternative hypothesis. The study's findings underscore a robust correlation between pollution and factors such as employee satisfaction and stability, particularly concerning internal conditions. While slight variations were observed across worker categories, the impact on productivity was not notably pronounced.

Existing research has firmly established causal links between pollution and adverse health outcomes, highlighting the imperative of pollution reduction as an investment in human capital. Consequently, addressing pollution can be viewed as a strategic tool for fostering economic growth rather than impeding it.

HYPOTHESIS TWO: There is no relationship between ventilation and worker's commitment to work/There is a relationship between ventilation and worker's commitment to work

Table 7 Showing the association between ventilation and commitment to work

Ventilation		health_issues_job_commitment					Total
		Strongly Agree	Agree	Indifferent	Disagree	Strongly Disagree	
Ventilatio	Excellent	12	15	5	2	0	34

n	Good	5	21	1	0	2	29
	Average	7	2	0	2	3	14
	Poor	0	4	0	2	0	4
Total		24	42	6	6	5	83

X^2c: 39.378 X^2t: 26.30 df 16 Alpha Level 0.05

The rejection of the null hypothesis and acceptance of the alternative hypothesis are supported by the calculated chi-square value of 39.378, surpassing the table value of 26.30 at an alpha level of 0.05, with 16 degrees of freedom. This indicates a significant correlation between work commitment and adequate ventilation. Put simply, improved ventilation in the workplace corresponds to heightened levels of job commitment among employees. This outcome aligns with Seppanen's (1999) research, which demonstrated that enhanced ventilation rates enhance air quality and diminish indoor pollutants, while insufficient ventilation can lead to adverse health consequences such as symptoms of Sick Building Syndrome (SBS) and airborne illnesses.

HYPOTHESIS THREE: There is no significant relationship between the work environment and Health of the workers

Table 8. Showing the association between work environment and health

Work environment		Health issues					Total
		Strongly Agree	Agree	Indifferent	Disagree	Strongly Disagree	
	Strongly Agree	9	9	10	0	2	30
	Agree	9	23	8	2	0	42
	Indifferent	2	0	0	0	0	2
	Disagree	2	0	2	0	0	4
	Strongly Disagree	3	2	0	0	0	5
Total		Total	25	34	20	2	83

X2C: 21.387 df:16 X2t: 26.30 alpha level: 0.05

The calculated chi-square value of 21.387 falls below the chi-square table value of 26.30, with 16 degrees of freedom at an alpha level of 0.05. Consequently, the null hypothesis is accepted while

the alternative hypothesis is rejected, indicating no significant relationship between the work environment and workers' health. This unexpected outcome might stem from recent upgrades in the study areas, transitioning from unclean to clean energy sources.

The concept of a conducive work environment is extensively discussed in environmental psychology literature, supported by scholars like Alexander (1970), Herring, Szigeti, and Vischer (1977), Preiser (1983), and Zeisel (2005). Such environments can empower employees to realize their potential and exhibit self-actualizing behaviours. Conversely, toxic work environments can foster negative experiences and hinder the realization of employees' ambitions, reinforcing low self-actualization tendencies. While these environments may impact behaviour, the study suggests they do not significantly affect health outcomes (Kyko, 2005).

5. Discussion of findings

The impact of pollution on employee performance is significant, specifically in terms of employee satisfaction and stability, with internal conditions playing a crucial role. Although there were minor differences among worker categories, the effects on productivity were not pronounced. However, the cumulative effect of pollution weakens workers' immune systems, leading to stress and early fatigue, ultimately reducing productivity. Research suggests that upgrading factory machinery from outdated to newer models can help reduce heat, noise, and smoke pollution within organizations, as seen in the transition from mud ovens to electric ovens. Pollution impacts employee satisfaction and stability, weakens immune systems, and reduces productivity. Maintaining high cleanliness levels motivates workers. Pollution in Ilorin causes traffic and contributes to health issues. Waste management is the responsibility of KWEPA. Upgrading factory machinery can reduce heat, noise, and smoke pollution.

Summary

The majority of respondents reported that the temperature within their organizations was satisfactory, rating it as good or excellent. However, a small percentage expressed dissatisfaction, mainly due to poor machine maintenance resulting in inadequate ventilation.

The survey found that the organizations provide spacious and conducive working environments that contribute to employee satisfaction and productivity. All respondents acknowledged the quality of the space within the organizations, with many indicating high levels of satisfaction. The use of modern machinery has also led to increased efficiency and reduced workforce sizes, which is particularly evident in organizations like Uniform.

Most respondents rated the noise levels within the organizations as favourable, with minimal impact on employee performance. However, a small percentage expressed dissatisfaction with the noise levels.

Health issues affecting some employees, especially in organizations with shift systems like Fortunate Bakery, could indirectly influence the job commitment of other employees. Absences due to health-related reasons can disrupt workflow and impact overall job commitment within the organization.

6. Conclusion

The study found that the work environment, including cleanliness, quality of space, and pollution, has a significant impact on job performance and organizational goal achievement. Besides financial incentives, non-financial rewards and working conditions are equally important. Nigerian organizations should prioritize creating a conducive work environment, clear reward systems, and effective communication to enhance productivity. Improving factors such as ventilation, temperature, noise levels, and cleanliness can sustain employee commitment and dedication. However, an excessive focus on work environment policies without proper employee monitoring could hinder organizational goal achievement.

Recommendations

Poor cleanliness standards in production rooms can lead to water pollution, stagnant water odours, and air pollution. Waste bins should be installed in different areas of organizational structures to mitigate this problem. The study recommends regular inspections by government agencies to ensure clean production environments.

The government has intervened in waste management through "Ola Kleen" due to inadequate financial support. Investing in modern methods and equipment to mitigate noise pollution can enhance productivity and employee performance. Management should enforce the usage of protective gear and conduct regular worker check-ups. To address the shortcomings identified in waste management, the study recommends enhancing KWMC's performance under the new arrangement with Ola Kleen.

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