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Workplace Hazard and Oil Companies' Performance in Nigeria: The Role of Office and Information Management

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ABSTRACT: This study evaluated the relationship between workplace hazards and performance of oil and gas companies' performance by envisaging the role office and information management plays in decreasing workplace hazards in Nigerian National Petroleum Corporation, Abuja. To do this, a survey was given to Nigerian National Petroleum Corporation employees to learn about their perspectives on the workplace hazards associated with field employment. Descriptive (percentages, frequency count, mean and standard deviation) and inferential (simple regression) statistical techniques were used to evaluate the data from the field survey, which involved 45 respondents who worked for the company. The results showed that employees' job performance was negatively impacted by adequate awareness, ignorance, and the use of technology in preventing occupational health hazards. This could be explained by the gaps in innovative activities, information role and service delivery models that must be created to reduce the workplace hazards faced by oil field workers. Based on the results, it was suggested that in order to enhance employee job performance, workplace hazards and safety management systems should be an essential component of oil and gas companies' production processes rather than being tampered with by management and employees. Also, office and information management practices in the oil and gas industry should be given priority.

KEYWORDS: Workplace hazards; Employee performance; Office information management; Oil and gas

1. INTRODUCTION

In any given organization, office and information management plays a fundamental role in providing information about workplace hazards aimed at enhancing employee performance. Because management tends to associate occupational disease with industrialisation, the importance of workplace hazards in enhancing employees' job performance is frequently disregarded in modern organisations. Conceivably, this has worsened due to the insufficient awareness, lack of knowledge and the use of technology in combating-related health hazards in the work environment. While at work, employees face a variety of occupational health hazards like chemical, biological agents and adverse ergonomic conditions etc. which affects their performance (Asuzu, 2021). On a global perspective, there are over 2.9billion of the oil and gas employees who are exposed to occupational health hazards in the workplace (Aliyu & Saidu, 2020).

According to Achalu (2019), occupational health dangers and injuries, a lack of safety for the working population, and the humanisation of the workforce are responsible for two million deaths annually. Furthermore, fractionalisation, which produces a range of chemicals for different applications, is a feature of the oil and gas sector and is commonly recognised as a significant source of pollution or worker dangers (Aliyu & Shehu, 2021). Once more, workers in the oil and gas sector are subject to a variety of health risks, including pipeline explosions, fires, transportation accidents, accidents involving heavy tools and equipment, and unfavourable ergonomic conditions (Speegle, 2018). As a result, workplace hazards have become more common among oil and gas companies.

Workplace hazard is "the highest degree of physical, mental, and social well-being of workers in all occupations," according to the International Labour Organisation (ILO, 2021). According to Isah, Asuzu, and Okojie (2017), workplace hazards are risks to people's health and well-being that are connected to particular professions. Exposure to heavy machinery can result in occupational hazards that cause disease, injury, or death (Ariss, 2018). Surprisingly, industrial and agricultural workers have the greatest occupational dangers and hazards of any occupation, according to a 2020 World Health Organisation research. Thus, workplace hazards practice in the oil and gas industry must take cognizance of the known hazard that exists in the particular locale of operation in order to prevent and control their occurrence.

Despite efforts to lessen workplace hazards, these hazards are nonetheless common in the workplace due to the nature of the occupation (Alli, 2018). Additionally, although management of organisations is working to reduce workplace hazards, the

practice has been impacted by a lack of information, awareness, and technology to battle these health hazards (Asuzu, 2019); this is where office and information management practices plays imperative roles. Furthermore, as far as the researcher is aware, no empirical research has yet assessed how workplace hazards affect workers' job performance, specifically at the Nigerian National Petroleum Corporation, Abuja. Therefore, the purpose of this study was to evaluate how Nigerian National Petroleum Corporation employees' job performance was affected by workplace hazards and the role office and information management practices can play in mitigating workplace hazards. In view of the above, the following research hypotheses were developed:

H_1: There is no significant impact of the awareness of workplace hazards on employees' job performance.

H_2: The lack of information and knowledge on workplace hazards has no significant impact on employees' job performance

H_3: There is no significant impact of the use of information technology in combating workplace hazards on employees' job performance

2. REVIEW OF RELATED LITERATURE

2.1 Workplace Hazards

Because employees frequently work in confined spaces, their exposure levels to occupational health risks are typically significantly higher than those to general environmental hazards. This is one way that workplace hazards differ from those found in the general environment. According to Hughes and Ferrett (2020), workplace hazards are the extent to which work-related risks impact employees' physical, emotional, and social well-being. Generally speaking, there are five categories of occupational hazards: mechanical, chemical, biological, behavioural, psychosocial, and physical. First, it's a common misconception that chemical risks are more significant than physical ones, but this is untrue. They can and do cause several health problems, injuries or even death to the employees (Stranks, 2016; Isah, et al, 2017; and Speegle, 2018).

Physical workplace hazards come in many forms and should not be underestimated, but according to the ILO (2021), the following are the main ones that can lead to occupational disorders and injuries: noise, illumination, vibration, radiation (both ionising and non-ionizing), and microclimatic conditions in the event of extreme heat or cold. The following dimensions of workplace health hazards threats are mechanical, biological, chemical, and psychosocial, according to Bonehill (2019). When there are dangerous tools, unstable structures, and unshielded machinery present in the workplace, mechanical dangers become apparent. Nonetheless, mechanical occupational dangers may be decreased by implementing safer work procedures, enhancing safety systems, and altering management techniques.

Furthermore, most work environments expose people to biological agents, viruses, bacteria, parasites, fungi, and organic dusts. Once more, there are already around 100,000 distinct chemical products in use in modern workplaces, and the number is growing. Industries that handle chemicals and metals, such as the oil and gas sector, are most likely to have high exposures to chemical risks. Particles, fibres, fumes and mist, metals and metalloids, organic, solvents and compounds, and inorganic gases are some of the categories into which chemical dangers can be divided (Lowe, 2018; Perry, 2016). Psychosocial workplace hazards comprise of psychological and social hazards. Psychological hazards are caused when time and work pressure become more common in the work environment (Asogwa, 2017; Barnett-Schuster, 2021).

The physical occupational dangers that management can control to enhance employee performance are the main topic of this paper. Unpredictable work schedules, shift work, lower-risk work, and employees not taking on too much responsibility are all ways to reduce physical occupational hazards (Collins, 2015; Fishback & Kantor, 2017). Employees may have negative psychological consequences if management is unable to control these, which could make it difficult for them to carry out their duties and responsibilities in the most effective and efficient way possible.

2.2 Employee Job Performance

Researchers and organisations have been concerned about employee work performance. Researchers have been searching for various methods to improve workers' job performance for decades (Adeleye, Adegbite & Aderemi, 2018). According to Nassazi (2017), one of the most important elements influencing the organisation is the work performance of its personnel. Even if there are many other elements that contribute to an organization's performance, employee conduct and decisions are crucial to its success. Employee performance is important in a number of ways, including assisting in the consideration of capital costs (Oyinlola & Adam, 2013), serving as a gauge of the volume and calibre of work completed (Malaolu & Ogbuabor, 2019), and assisting in the survival and success of businesses (Ezeani, 2013).

While job performance can be used to explain what an organisation has achieved in terms of process, results, and success, it is also viewed as the result or contribution of employees to help them achieve goals (Brown, 2013). Employee performance is demonstrated by increased output, ease of use of new technologies, and highly motivated staff. According to Tzafrir (2015), the organization's performance standards are used to gauge how well employees perform on the job. Employee work performance can be measured and assessed using a variety of techniques.

According to Nana, Okpara, and Abubakar (2013), they consist of employee attributes that validate traits or qualities that are significant to the company; employee behaviours that are frequently used to assess or define employee behaviours required to perform a job successfully; and employee accomplishments that demonstrate the degree to which particular goals or objectives have

been reached, surpassed, or not reached. Good performance, then, refers to how well workers completed the duties they were given. Every organisation has certain performance requirements for its staff. When they perform up to the set standards and meet organizational expectations they are believed good performers.

2.3 Theoretical Framework

Herbert William Heinrich's 1976 Occupational Health Safety Theory (Domino Theory) served as the foundation for this investigation. Heinrich (1976) asserts that there are 300 workplace accidents that result in no injuries and 29 incidents that result in minor injuries for every major injury. Because many accidents share common root causes, addressing more commonplace accidents that cause no injuries can prevent accidents that cause injuries. This theory holds that 95% of workplace accidents are caused by unsafe acts; hence, office and information management practices may play a vital role in mitigating workplace hazards.

Heinrich (1976) reached this result after examining thousands of supervisor-completed accident reports, in which supervisors typically accused employees of causing mishaps without carrying out thorough examinations into the underlying causes. Heinrich (1976) conducted safety research in a variety of industries and produced data that can be used to scale up from incidents and near-misses to a reliable assessment of the likelihood of actual accidents. The use of this theory is justified by the fact that social interactions at work result in mistakes that cause occupational health hazards, which in turn promote worker autonomy and management's involvement in safety as a way to prevent occupational injuries.

3. RESEARCH METHODS

The descriptive survey research approach was used in this study because it allowed for the description of the effects of occupational health hazards on the job performance of employees with common traits in a sample group. All employees of the Nigerian National Petroleum Corporation (NNPC), Abuja, made up the study population. There are roughly fifty-six (56) people working with NNPC in the office department. There was no requirement for sampling because the research population was tiny and the full NNPC workforce was used.

In an effort to accomplish the goals and address the issue being studied, this study used primary data. The study acknowledged the value of primary data and incorporated it into its conclusions regarding the issue. The researcher was able to gather data and information from NGC employees by using a questionnaire. The sixteen (16) items in the questionnaire were intended to address concerns about awareness, information/knowledge and use of information technology in preventing workplace hazards and improving workers' job performance. The Likert 5-point scale—strongly agree, agree, disagree, undecided, and agree—was used for the survey question type.

The research supervisor validated the research instrument by first creating a first copy of the questionnaire and giving it to the supervisor to verify its contents. This ensured that the questions in the questionnaires addressed the primary concerns related to the research. Additionally, the Cronbach alpha was used to confirm the data's internal dependability. According to Cronbach (1951), for a scale to be considered dependable, its alpha value must be more than 0.6. Cronbach's alpha in this study was 0.70, indicating that the research tool was considered credible.

Awareness, information/knowledge, and information technology utilisation in addressing workplace hazards and workers' job performance are the study factors. Two (2) components made up the questionnaire: section B dealt with the study theme, while section A focused on the respondents' demographic data. Descriptive and inferential (basic regression) statistical methods were used to analyse the data collected during the field survey. The mean values served as the criterion for the research question; a mean of less than 2.50 renders the research question invalid. The effect of workplace hazards on workers' job performance was evaluated using the basic regression statistical method. The following is the regression equation:

$Empjperf_I = a_0 + ß_1 aohhi + \mu_t$ - eq. 1

$Empjperf_I = a_0 + ß_1 kohhi + \mu_t$ - eq. 2

$Empjperf_I = a_0 + ß_1 uthhi + \mu_t$ - eq. 3

Where: *empjperf* = employee job performance; *aohh* = awareness of workplace hazard; *kohh* = information/knowledge on workplace hazard; *uthh* = use of information technology in mitigating workplace hazard; *I* = individual respondents µt = error term. The decision rule for validating the research hypotheses is that if calculated probability is greater than the level of significance (0.05), the null hypotheses was accepted and if otherwise, accepted vice-versa.

4. RESULTS AND DISCUSSION

Table 1: Demographic Variables of Respondents

S/N	Parameters	Respondents	Frequency = 45	Percentage
1	Gender	Male	29	64.44%
		Female	16	35.60%
		Total	**45**	**100%**

2	Age	21-25years	13	28.90
		26-30years	18	40.00
		31-35years	8	17.80
		36years and above	6	13.30
		Total	**45**	**100%**
3	Marital Status	Single	14	31.11
		Married	25	55.60
		Others	6	13.29
		Total	**45**	**100%**
4	Religion	Christianity	41	91.1
		Islam	1	2.20
		African Traditional	3	6.70
		Religion	-	-
		Others	**45**	**100%**
5	Period of	**Total**	11	24.4
	Employment	0-2years	25	55.6
		3-5years	9	20.0
		> 5years	**45**	**100%**
		Total		

Source: Author's Computation (2024)

Table 1 revealed that 16 (35.60%) of the respondents were female and 29 (64.44%) were male. According to the respondents' age distribution, the majority of them—13, or 28.90%—and 18—or 40.0%—fall within the 21–25 and 26–30 year age ranges, respectively. Additionally, it was shown that 8 (17.80%) and 6 (13.30%) of the respondents, respectively, fall into the age ranges of 31–35 and 36 years and older. Also, it revealed that 14(31.11%) and 25(55.60%) of the respondents are single and married respectively while only 6(13.29' %) are either divorced or separated.

Additionally, it was shown that just 3 (6.70%) of the respondents practiced other religions, whereas 41 (91.1%) and 1 (2.20%) of the respondents, respectively, practiced Christianity and Islam. Additionally, it was discovered that the majority of respondents—11, or 24.4%, and 25—had worked for the company for 0–2 years and 3-5 years, or 5 years, respectively. This suggests that they were able to express their opinions on the research theme.

Table 2: Summary Statistics of Workplace Hazards and Employees' Job Performance

Parameters	**Mean**	**Std. Dev.**
Awareness of workplace hazards	3.12	0.54
Information and knowledge of workplace hazard	2.94	0.43
Use of information and technology to mitigate workplace hazards	3.01	0.51
Employees' job performance	2.91	0.40

Source: Author's Computation (2024)

The respondents' impression of workplace hazards (awareness, information/knowledge, and use of information technology) and employees' job performance are similar, according to the mean and standard deviation values (see Table 2), with awareness of workplace hazards having the greatest mean value (3.12), indicating that respondents are informed, knowledgeable and that the organisation uses information technology to mitigate occupational health dangers, the mean value above the 2.50 level.

Table 3: Regression Results of Awareness of Workplace Hazards and Employees' Job Performance

Number of Obs.	=	45	F (1, 44)	=	44.58	
R-Squared	=	0.8722	Prob. > F	=	0.000	
Adj. R-Squared	=	0.7800				
Empjperf	**Coef.**	**Std. Error**	**T**	**P>/t/**	**[95% Conf. Interval**	
aohhi	0.3484	4.494	-12.65	0.000	-.52994	5.7867
_cons	0.3131	9.393	10.06	0.000	-26.621	28.382

Source: Author's Computation (2024)

The relationship between NNPC workers' job performance and their awareness of workplace hazards (aohh) is shown in Table 3. The model fits the data well since the independent variable accounted for almost 89% of the systematic variance in the dependent

variable, as indicated by the R2 corrected of 0.87. Additionally, the study discovered that employees' job performance is impacted by their awareness of workplace hazards, as evidenced by the f-ratio (44.88 Prob. 0.000) and t-value (-12.65; Prob. 0.000). As a result, the null hypothesis was rejected, and the alternative hypothesis—that there is a substantial influence of workplace hazard awareness on workers' job performance was accepted.

Table 4: Regression Results of Information/Knowledge of Workplace Hazard and Employees' Job Performance

Number of Obs.	=	45		F (1, 44) =	64.19	
R-Squared	=	0.8702		Prob. > F	=	0.000
Adj. R-Squared	=	0.8419				
Empjperf	**Coef.**	**Std. Error**	**T**	**P>/t/**	**[95% Conf. Interval**	
Kohh	0.3393	6.322	-7.48	0.000	-0.5507	6.01411
_cons	0.2183	3.494	6.39	0.000	-27.667	29.4974

Source: Author's Computation (2024)

The relationship between workers' job performance and their information/knowledge of workplace hazards (kohh) is shown in Table 4. The model fits the data well since the independent variable accounted for almost 84% of the systematic variation in the dependent variable, as indicated by the R2 corrected of 0.84. Additionally, the study discovered that employees' job performance is impacted by their understanding of workplace hazards, as evidenced by the f-ratio (64.19; Prob. 0.000) and t-value (-7.48; Prob. 0.000). This resulted in the null hypothesis being rejected and the alternative hypothesis—that employees' job performance is significantly impacted by their ignorance of workplace hazards—being accepted.

Table 5: Regression Results of Use of Information Technology in Combating Workplace Hazard and Employees' Job Performance

Number of Obs.	=	45		F (1, 44) =	34.19	
R-Squared	=	0.7902		Prob. > F	=	0.000
Adj. R-Squared	=	0.7419				
Empjperf	**Coef.**	**Std. Error**	**T**	**P>/t/**	**[95% Conf. Interval**	
uthhi	0.4441	3.322	-5.23	0.000	-0.5507	6.01411
_cons	0.2987	1.494	3.39	0.000	-27.667	29.4974

Source: Author's Computation (2024)

The relationship between workers' job performance and the adoption of information technology to combat workplace hazards (uthh) is shown in Table 5. The model fits the data well since the independent variable accounted for almost 74% of the systematic variation in the dependent variable, as indicated by the R2 corrected of 0.74. Additionally, the f-ratio (34.19; Prob. 0.000) and t-value (-5.23; Prob. 0.000) showed that employees' job performance is impacted by the employment of information technology to tackle workplace hazards. As a result, the null hypothesis was rejected and the alternative hypothesis—that employees' job performance is significantly impacted by the employment of information technology to reduce workplace hazards—was accepted.

Given that management of organisations is eager to improve employees' job performance, the significance of workplace hazards in influencing employees' job performance cannot be overstated. According to Asuzu (2021), workers encounter a range of workplace hazards, including chemical and biological agents as well as unfavourable ergonomic situations, which can impair their ability to do their jobs. In this study, the effect of workplace hazards on employees' job performance was investigated; the study revealed that workplace hazards contributed significantly to employees' job performance, particularly those of Nigerian National Petroleum Corporation. The study's conclusions partially support those of Aliyu and Shehu (2021); Aliyu and Saidu (2020) discovered that workplace dangers have a major impact on worker safety.

The lack of connections in innovative activities, poor utilization of office and information roles and service delivery models that must be created to control workplace hazards of oil field workers may be the cause of the inverse relationship between workplace hazards and workers' job performance. Furthermore, it is comparable to the fact that Nigerian oil and gas businesses have yet to address the critical role that reducing workplace hazards may play in enhancing worker performance; as a result, certain regulatory recommendations are necessary.

5. CONCLUSION AND RECOMMENDATIONS

From the local workplace to the national and international levels, the human, social, and financial costs of workplace hazards, illnesses, and accidents have long been a source of worry. To keep up with technological and economic advancements, workplace hazard prevention, control, reduction, and/or elimination measures and strategies have been created and implemented consistently

over the years. This study examined the relationship between workers' job performance and workplace hazards and the role office and information management practices play in mitigating workplace hazards. In light of the results, it was suggested that:

1. Workplace-related hazards and safety management system should be integral parts of the production processes of oil and gas organizations and not to be toyed with by management and staff in order to positively improve employee job performance.
2. To increase awareness, information and knowledge of workplace hazards and how they may impact employees' performance, management must launch information management programs addressing workplace hazards.
3. There is the need to further invest in information technology, empowering the office department aimed at reducing workplace hazards in the work environment.

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