



OCCUPATIONAL HAZARDS ASSOCIATED WITH PABOD BREWERY WORKERS IN PORT HARCOURT, RIVERS STATE

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Abstract

This study focused on occupational hazards associated with PABOD Brewery Company in Port Harcourt, in Rivers State. The descriptive cross-sectional survey design was adopted for the study. The sample size for this study was four hundred. Data was collected using a self-developed questionnaire and analyzed using descriptive statistics such as frequencies, percentages, mean and ANOVA test was used for testing the hypotheses at 0.05 level of significance. The finding of the study showed a moderate level of occupational hazards associated with workers in PABOD Brewery Company. The tested hypotheses showed a significant difference between age of workers and occupational hazards in PABOD brewery company [$F(16, 373) = 20.029$; $p < 0.05$], and a non-significant difference between employment status of workers and occupational hazards in PABOD brewery company [$F(3, 386) = 1.948$; $p > 0.05$]. It was concluded that age influences occupational hazards, while employment status has a non-significant influence among workers in PABOD Brewery Company. It was recommended that the Federal Government, PABOD Brewery Company management and health agencies should identify factors that contribute to sources of occupational hazards and reduce the impact of occupational hazards such as providing more staff to adequately cover units in order to reduce physical and psychosocial hazards, providing clear and specific job description.

Keywords: Occupational hazard, Brewery Company, Port Harcourt, Rivers State

Introduction

The welfare of workers in all occupation is of paramount important including those who work in brewery industries. The issues of reducing or eliminating hazard at the workplace have been yet resolve over the decades. Occupational hazard could be seen as the risk, harm, or danger that an individual is exposed to at the workplace (World Health organization 1986 as cited in Awodele, Popoola, Ogbudu, Akinyede, Coker & Akintonwa, 2014). However, due to frequent exposure of workers especially at breweries industry to hazard and rapid level of industrialization in Nigeria, major debilitating diseases appear with preventive measures. Most workers in manufacturing firm are faced with conditions emanated from hazardous state such as injuries, deformities, occupational disease, anxiety among others. Studies of Awodele et al (2014) revealed that 75% of workers are aware that hazards is associated with the jobs. Every work environment is with hazards that place the workers and company at the chances of obtaining injuries, ill health, damage etc. According to WHO (2001), the potential health hazards associated are classify as air contaminants, chemical hazards, biological hazards, physical hazards, ergonomic hazards, and psychosocial hazard all which contribute to poor job performance and poor productivity. In the light of this, occupational safety and Health Administration OSHA (2012) in United State, identify numerous hazards not related to the explosion during an inspection in Brewery Company as deficiencies in procedure for work in a confused space, incomplete procedures for locking out machines improper storage of oxygen, unguarded machinery among others. Certain personal factors are associated with occupational hazards among workers in brewery company include PABOD in Port Harcourt city Rivers State.

The age of workers in brewery industry contribute to their welfare. Young workers may be vibrant to practice safety measures in order to abolish hazards more than the older staffs. Evidence depict that younger staffs were more likelihood to report good safety practice against hazards as when compared with older workers. It is pertinent to note that younger staffs could show good motivation and enthusiastic to information regarding safety and good health more the way older staff do. In the same vein, likewise younger workers have the chances to suffer for injury, accidents, damage than older one (Tadesse & Kumie 2007, Berhe, Yemane, Gebresilassie, Terefe, & Ingale 2015; Aderaw, Engdaw, Mirmohammadi and Mehparwar (2011) reported that over 38.51% with workplace accidents are within the age ranged (20-29) and 21.5% belonged to age group

(30-35). There may be decrease in hazard rate (accident) as the employee grow older. Izudi, Ninsiima, and Alege (2017) added that the used of PPE is high among aged workers 31-45 years, 46-60 years more than workers age 18-30 years. Therefore, younger workers may be at risk of occupational hazard but could improve in their safety practices as they grow older.

The employment status of PABODs workers could place them at risk of hazards that may affect the production service of the company. Most workers who are permanent in their job may report good safety practices to curb hazards as when compared with those of them who are temporary workers. Studies of Tezora, Chercos and Dessie (2017) report a positive significant predictor of practicing safety measure to reduce hazards among permanent staffs as compared with casual workers. Most packages given to permanent workers include safety training on regular interval, supplies and renew of safety apparatus, but all of this may not be seen among temporary staffs. Mbomgaba (2015) further buttress that relatively less than half (43.2%) of workers are casual labourers and 47.7% are permanent employees have the chances of benefitting from the company such as free medical services, availability of safety gadgets, well-paid remuneration. All which reduce the menace of occupational in the workplace. Brewery Company workers are among other workers who are at risk occupational hazard that would lead to low productivity and poor quality service delivery as many observed those who work in PABOD Brewery Company in Port Harcourt, Rivers State.

Statement of the Problem

Despite the fact that organization, institution, agencies have consider restructuring their department through employing high qualified, skilled and semi-skilled staffs, the consequences of occupational hazards continue to persist. The menace of occupational hazard is of the increase contributing to low productivity and service delivery in Nigerian Breweries Company. In recent, workers are employed without health and safety training, and safety test thereby living the workers unprofessional to their job. Issues of minor and major injuries, damages to properties, contraction of occupational diseases, loss of lives have been more noticeable and higher in several company in brewery production.

Most brewery industries are left with few permanent staffs of workers with so many casual workers. Having less priorities to the temporary works such as lack of good employment status, income status, no promotion, no responsibility, lack of safety training all which is symptomatic to hazardous state. It is obvious

that workers huge personal and family needs that could be handle by the company but total neglect to the welfare of workers have come to stay in most Nigerian industries including Brewery Company. Workers should have been the most company's priority since hazard is born with the company. The researcher noticed that there is a dearth of literatures in respect to occupational hazards in Nigerian Brewery Company. However, the researcher intend to identify occupational hazards and associated factors among PABOD Brewery Company workers in Port Harcourt metropolis.

Aims of the Study

The aim of this study will be to identify occupational hazard associated with PABOD Brewery Company in Port Harcourt, Rivers State. In specific term, this study seek to:

1. determine the level of occupational hazards associated with PABOD Brewery Company in Port Harcourt.
2. determine the level of occupational hazards among PABOD Brewery workers based on age in Port Harcourt city.
3. determine the level of occupational hazards among workers based on employment status in PABOD Brewery Company in Port Harcourt.

Research Questions

The following are formulated to guide this study

1. what is the level of occupational hazards associated with workers in PABOD Brewery Company in Port Harcourt?
2. what is the level of occupational hazards among workers based on age in PABOD Brewery Company in Port Harcourt?
3. what is the level of occupational hazards among workers based on employment in PABOD Brewery Company in Port Harcourt?

Hypotheses

The null hypothesis of the study will be tested at 0.5 alpha level.

1. There is no significant relationship between age of workers and occupational hazards in PABOD Brewery Company in Port Harcourt.
2. There is no significant relationship between employment status of workers and occupational hazards in PABOD Brewery Company in Port Harcourt.

Research Design: A cross-sectional descriptive survey design will be adopted for the study which attends to examine the events in a natural setting. In this regard, Elendu (2010) examined it as a type of design that explain, describe, and analyzed event in their natural setting at a particular point in time. This design was successfully utilize by Amfo-Otu & Agyemang (2016) occupational health hazards and safety practices among the informal sector auto mechanics. Hence, it was considered successful

Population of the Study: The total population of the study will be 1261 in Pabod Brewery Company, Port Harcourt (*Source: Human Resource Manager, 2019*)

Sample and Sampling Techniques: The sample size used was four hundred (400) respondents. The sample size was determined using Taro Yamene formula. The multi-stage sampling procedure was used to select the sample.

Instrument for Data Collection: The instrument for data collection will be questionnaire adopted from similar studies of Amfo-Otu & Agyemang (2016) occupational health hazards and safety practices among the informal sector auto mechanics.

Validity of the Instrument: The adopted questionnaire was validated by experts for construct and content validity.

Reliability of the Instrument: The adopted questionnaire will have a reliability coefficient value of 0.69 using Pearson Product Moment Correlation (PPMC) which will be considered reliable for the study.

Method of Data Collection: The adopted instrument will be distributed with the help of two assistant well trained. The instrument will be given to respondents from the selected institutions and will be retrieved after completion.

Procedure for Data Analysis: Data elicited for this study will be analysed using SPSS version 21.0.

Descriptive statistical tools such as mean, percentage, frequency, standard deviation and inferential statistical tools such as chi-square, ANOVA, logistic regression will be used to determine the relationship between variables.

Results and Discussion

Table 4.1: physical hazards

Variables	Frequency (F)	Percentage (%)
Little or no adequate ventilation in brewery unit		
Yes	187	47.9
No	203	52.1
Total	390	100.0
Inadequate arrangement of equipment in the unit		
Yes	142	36.4
No	248	63.6
Total	390	100.0
Illumination of light is sometimes not supplied		
Yes	151	38.7
No	239	61.3
Total	390	100.0
Positioning of equipment is not proper		
Yes	116	29.7
No	274	70.3
Total	390	100.0
Disposition of broken materials like bottles are not properly done		
Yes	121	31.0
No	269	69.0
Total	390	100.0
The temperature is not encouraging		
Yes		
No	168	43.1
	222	56.9
Total	390	100.0
The level of noise or sound is too high		
Yes	207	53.1
No	183	46.9
Total	390	100.0

Table 4.1 revealed physical hazards among respondents. It revealed that 47.9% agreed that there is little or no adequate ventilation in brewery unit. 36.4% agreed that there is inadequate arrangement of equipment in the unit, 38.7% agreed that illumination of light is sometimes not supplied, 31% agreed that positioning of equipment is not proper, 31% agreed that disposition of broken materials like bottles are not properly done, 43.1% agreed that the temperature is not encouraging while 53.1% agreed that the level of noise or sound is too high.

Table 4.2: Biological Hazards

Variables	Frequency (F)	Percentage (%)
Workers usually contact infection early from the brewery unit		
Yes	153	39.2
No	237	60.8
Total	390	100.0
No proper hygiene exposes workers to infection		
Yes	178	45.6
No	212	54.4
Total	390	2222
Exposure to bacterial infection		
Yes		
No	168	43.1
Total	222	56.9
Exposure to fluid infection	390	100.0
Yes		
No	203	52.1
Total	187	47.9
	390	100.0

Table 4.2 revealed biological hazards among respondents. It revealed that 39.2% agreed that workers usually contact infection early from the brewery unit, 45.6% agreed that no proper hygiene exposes workers to infection, 43.1% agreed that there is exposure to bacterial infection while 52.1% agreed that there is exposure to fluid infection.

Table 4.3: Chemical Hazards

Variables	Frequency (F)	Percentage (%)
Substances are always found on the floor		
Yes	166	42.6
No	224	57.4
Total	390	100.0
Substances always spilled on the floor		
Yes	167	42.8
No	223	57.2
Total	390	100.0
There is exposure to vapour of substances daily		
Yes	67	17.2
No	323	82.8
Total	390	100.0
Alcohol substances are always licking		
Yes	114	29.2
No	276	70.8
Total	390	100.0
Presence of fumes and gases		
Yes		
No	160	41.0
	230	59.0
Total	390	100.0
Vapour and fumes affect the workers in the brewery unit		
Yes	144	36.9
No	246	63.1
Total	390	100.0
Chemical substances are toxic		
Yes	101	25.9
No	289	74.1
Total	390	100.0

Table 4.3 revealed chemical hazards among respondents. It revealed that 42.6% agreed that substances are always found on the floor, 42.8% agreed that substances are always spilled on the floor, 17.2% agreed that there is exposure to vapour of substances daily, 29.2% agreed that alcohol substances are always licking, 41% agreed that there is presence of fumes and gases, 36.9% agreed that vapour and fumes affect the workers in the brewery unit while 25.9% agreed that chemical substances are toxic.

Table 4.4: Psychological Hazards

Variables	Frequency (F)	Percentage (%)
No information		
Yes	157	40.3
No	233	59.7
Total	390	100.0
Poor communication among workers		
Yes	170	43.6
No	220	56.4
Total	390	100.0
Prolonged working hours		
Yes	126	32.3
No	264	67.7
Total	390	100.0
Poor human relation		
Yes	94	24.1
No	296	75.9
Total	390	100.0
Poor interpersonal skills		
Yes		
No	206	52.8
	184	47.2
Total	390	100.0
Swing between moods		
Yes	102	26.2
No	288	73.8
Total	390	100.0
Quarrels between workers		
Yes	197	50.5
No	193	49.5
Total	390	100.0

Table 4.4 showed psychological hazards among respondents. It revealed that 40.3% of respondents agreed that there was no information, 43.6% agreed that there was poor communication among workers, 32.3% agreed that there was prolonged working hours, 24.1% agreed that there was poor human relationship, 52.8% indicated poor interpersonal skills, 26.2% indicated swing between moods while 50.5% indicated quarrels between workers.

Testing of Hypotheses

Hypothesis 1: There is no significant difference between age of workers and occupational hazards in PABOD Brewery Company in Port Harcourt

Table 4.7: Analysis of Variance (ANOVA) showing significant relationship between age of workers and occupational hazards in PABOD Brewery Company

Sources of variance	Sum of squares	of Df	Mean sum of squares	F-value	p-value	Decision
Between group	25.643	16	1.603	20.029	.000	H ₀
Within group	29.847	373	.080			Rejected
Total	55.490	389				

*Significant. $p < 0.05$

Table 4.7 shows the One-Way ANOVA of significant difference between age of workers and occupational hazards in PABOD Brewery Company. The findings of this study shows that there is a significant difference between age of workers and occupational hazards in PABOD brewery company [$F(16, 373) = 20.029$; $p < 0.05$]. Therefore, the null hypothesis which states that there is no significant difference between age of workers and occupational hazards in PABOD Brewery Company in Port Harcourt was rejected.

Hypothesis 2: There is no significant difference between employment status of workers and occupational hazards in PABOD Brewery Company in Port Harcourt

Table 4.8: Analysis of Variance (ANOVA) showing significant relationship between employment status of workers and occupational hazards in PABOD Brewery Company

Sources of variance	Sum of squares	of Df	Mean sum of squares	F-value	p-value	Decision
Between group	.828	3	.276	1.948	.121	H ₀
Within group	54.662	386	.142			Retained
Total	55.490	389				

*Not Significant. $p > 0.05$

Table 4.8 shows the One-Way ANOVA of significant difference between employment status of workers and occupational hazards in PABOD Brewery Company. The findings of this study shows that there was no significant difference between employment status of workers and occupational hazards in PABOD brewery company [$F(3, 386) = 1.948$; $p > 0.05$]. Therefore, the null hypothesis which states that there is no significant difference between employment status of workers and occupational hazards in PABOD Brewery Company in Port Harcourt was retained.

Discussions

The finding of the study showed a moderate level of occupational hazards associated with workers in PABOD Brewery Company. The finding of the study corroborates that of Halvaniet (2011) and Aderaw et al (2011) whose studies reported occupational hazards among workers. The finding of the present study also confirms that of Adane et al (2013) whose study discovered that workers experienced some form of occupational health hazards among workers. Berhe et al (2015) and Kemei and Nyerere (2016) supported the finding of the present study as it reported that workers experienced occupational hazards such as physical, chemical and biological hazards. The finding of Jazari et al (2018) agrees with the finding of the present study as it discovered a moderate level of occupational hazards. This might be attributed to the fact that occupational hazards may occur in the working environment due to some factors such as education, use of PPEs, years of experience etc.

The findings of this study shows that there is a significant difference between age of workers and occupational hazards in PABOD brewery company [$F(16, 373) = 20.029$; $p < 0.05$]. The finding of the study corroborates that of Halvaniet (2011) and Aderaw et al (2011) whose studies reported a significant difference between age of workers and occupational hazards among workers. The finding of the present study also confirms that of Adane et al (2013) whose study discovered that age is related to occupational health hazards among workers. Berhe et al (2015) and Kemei and Nyerere (2016) supported the finding of the present study as it reported a significant difference between age of workers and occupational hazards. The finding of Jazari et al (2018) agrees with the finding of the present study as it discovered a significant difference between age of workers and occupational hazards. This might be attributed to the fact that old age contributes to occupation hazards especially amongst occupation that requires the use of strength. However, job experience and training including proper job placement can play an important role.

The findings of this study shows that there was no significant difference between employment status of workers and occupational hazards in PABOD brewery company [$F(3, 386) = 1.948$; $p > 0.05$]. The finding of the study corroborates that of Moradinazar et al (2013) whose study discovered that employment pattern is associated with occupational hazards among workers. This is strongly related because in some cases, the mode of employment whether casual or permanent plays an important role in the way workers prevent occupational hazards. However, the studies of Jazari et al (2018) and Izudi et al (2017) reported a non-significant difference

between employment status of workers and occupational hazards. The finding of Abdellah and Morsy (2013) also differs from the finding of the present study as it reported a non-significant difference between employment status of workers and occupational hazards. In this case, all workers may likely want to prevent some form of occupational hazards in order to continue and protect their current jobs. This may also be attributed to the fact that workers are only interested in what will provide food on their table and not their employment status even if it's very important.

Conclusion

Based on the findings of the study, It was concluded that age influences occupational hazards, while employment status has a non-significant influence among workers in PABOD Brewery Company. Most of the occupational hazards identified among PABOD workers are physical, chemical and psychological hazards.

Recommendations

In view of the findings of this study, the following recommendations were made:

1. The Federal Government, PABOD Brewery Company management and health agencies should identify factors that contribute to sources of occupational hazards and reduce the impact of occupational hazards such as providing more staff to adequately cover units in order to reduce physical and psychosocial hazards, providing clear and specific job description.
2. PABOD Brewery Company and other relevant industries providing employments should ensure that workers are placed properly for their job, provide PPE and ensure that they comply with all safety terms in their place of work.
3. The government, ministries of health/environment and other relevant agencies should embark on health education and awareness campaign on occupational health hazards

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