

Perceived Influence of Health Education on Occupational Health of Factory Workers in Lagos State, Nigeria

Akanji Rafiu Bankole Ph.D

Dept. of Industrial Relations and Personnel Management,

Lagos State University,

Ojo, Lagos State, Nigeria.

E-MAIL: bankolerafiu@yahoo.com

Lawal Olanrewaju Ibrahim

Topsearch Nigeria Enterprises,

NLV 40, Nasu-Lasu Complex,

Lagos State University, Ojo,

Lagos State, Nigeria.

E-MAIL: lanre1279@gmail.com

Abstract

The study examined the perceived influence of health education on occupational health of factory workers in Food and Beverage industry in Lagos State, Nigeria. Survey research design was adopted using questionnaire as the major instrument. Purposive sampling method was employed to select 160 respondents from ten organisations. Two hypotheses were tested at 0.05 alpha level, using chi-square and t-test. The findings showed that there is a significant relationship between health education and occupational health of the respondents. The result equally revealed a significant difference between the vulnerability to occupational health hazards of factory workers that undergo regular health education programme and the factory workers that do not. Based on the findings, it was suggested among other things that factory owners should put in place adequate health provisions and conduct regularly health education programme for their workers. Also, workers should endeavour to comply strictly with health and safety rules of their workplace. Factory inspectors, on their part should be more diligent and conscientious in the discharge of their statutory duties.

Key Words: Health education, occupational health, factory workers, Food and Beverage Industry, Lagos State.

Introduction

The goal of every organization, whether profit or non – profit oriented is to work towards achieving the corporate objective for its existence. The extent to which this goal can be actualized depends principally on the workforce. This is because they (the workers) constitute the oil that lubricates the factors of organizational growth and effectiveness. However, studies (Isah, Asuzu and Okojie, 1996; Omokhodion, 2009) have identified among other things, poor health status of workers, arising from constant exposure to occupational health hazards as one of the cardinal militating factors against employees' effective performance and productivity.

In line with the above argument, Ototo and Oboh (2008) assert that the health status of an individual worker is a predisposing factor of his/her full or partial commitment to job. Thus, the fitter an individual employees's health is, the better his/her performance on the job. However, it has been reported that over 60 percent of the total working population in Nigeria do not have access to occupational health service (Omokhodion, 2009).

Meanwhile, the rapid industrialization in the past three decades, which arose from the global technological advancement, has consistently rendered Nigerian workers, especially those in the food and beverage industry, vulnerable to high risks of work related diseases, injuries and illness. For instance, work related diseases are put at 160 million every year while more than 2.2 million occupational deaths and 250 million industrial accidents occur every year worldwide (Ajakaye, 2010; ILO, 2011).

In Nigeria, due to the introduction of high – tech equipment and work processes, workers in the manufacturing sector are daily exposed to diverse occupational health hazards such as dusts, gases, noise, vibration, radiation, extreme temperature and other highly reactive chemicals like carbon dioxide, carbon monoxide, ozone, sulphuric acid, nitrogen oxide and host of others, which had led to sudden death of some workers and gross deficit in the health status of others (Omokhodion, 2009; Wikipedia, 2011; ILO, 2011).

As a result of the constant exposure of factory workers to some of the earlier mentioned occupational health hazards, the health as well as the productive capacity of the workers had been impaired. Some of the reported occupational diseases often contacted by factory workers in Nigeria include conjunctivitis, chronic bronchitis, dermatitis, musculoskeletal disorders and injuries (Omokhodion, 2009).

Arogundade (2005) as cited in Ajakaye (2010) reported that a total sum of 47, 832, 536 and 40, 836, 676 claims were paid as workmen's compensation and employers' liability by the insurance companies in Nigeria in 1997 and 1998 respectively. Greater percentage of the claims according to Ajakaye (2010) were on work related death and illness of factory workers. Though high tech innovation that facilitates mass production of products is a good development; the phenomenon must be accompanied by increased measures directed at controlling the work related hazards.

However, some studies (Isah et al, 1996; Hu, Lee, Shiao and Guo, 1998; Bazas, 2001; Nasab, Ghofranipour, Kazemnejad, Khavanin and Tavakoli, 2008; ILO, 2011) had shown that the high vulnerability of workers to occupational health hazards is due largely to insufficient knowledge on how to manage the risks at workplace and the unsafe behavior of both employees and employers. For instance, Hu et al (1998) in their study of manufacturing industry in Taiwan observed that workers who do not undertake occupational health education programmes were five fold more likely to encounter occupational injuries and diseases than those who undertook the programmes.

In a similar study in Nigeria, Isah et al (1996) observed that the practice in some manufacturing organizations is that workers learn knowledge and skills regarding occupational health and safety (OHS) informally from co workers and employers, which implies that workers may not be well informed on how to manage the risks at workplace. The inference can, therefore be made that aside the fact that preventive measure may not be in place in some manufacturing organizations, in

some other organizations where they are provided; workers are not well informed, through health education programme, of the usage of the preventive measures. As a result of lack of adequate knowledge on how to manage risks at workplace, some factory workers had fallen victims to preventable occupational health hazards. It is on this basis that this study examines the perceived influence of health education on occupational health of factory workers in Food and Beverage industry in Lagos State.

Health Education and Occupational Health:

Health education is a social science that draws from the biological, environmental, psychological, physical and medical sciences to promote health and prevent diseases, disability and premature death through education-driven voluntary behaviour change activities ([www.goggle.com/health education.pdf,2011](http://www.goggle.com/health%20education.pdf)).

As a concept, health education has been variously defined by different scholars. Abubakar (2007) describes it as education for healthful living; the kind of knowledge acquired to live a healthy life. In other words, health education is meant to assist people adopt positive health behaviour through their own efforts, so as to prevent diseases, promote health and improve standard of living (Babadare and Ibraheem, 2008).

In their contribution, Nayar, Kelly and Lewis (1997) observe that health education is a method of conveying the knowledge required for the prevention of diseases and the opportunity to lead a full normal life physically, mentally and socially. Suffice it to say that health education could play a prominent role in the prevention and control of occupational health hazards. Through health education, workers could be empowered to prevent work related diseases and to desist from unsafe behaviour at work, which some studies (Hu et'al, 1998; Isah et'al, 1996) had found to be one of the factors affecting workers' vulnerability to occupational hazards.

On the other hand, occupational health and safety generally is a cross – disciplinary area concerned with protecting the health, safety and welfare of people engaged in work or employment (Wikipedia, 2011). The goal of all occupational health and safety programmes therefore is to foster a healthy and safe work environment.

As a concept, occupational health has been given a common connotation by both International Labour Organization (ILO) and the World Health Organization (WHO). At the first session in 1950 and twelfth session in 1995 of the Joint ILO/WHO Committee on occupational health, it was agreed that occupational health should aim at:

- ❖ The promotion and maintenance of the highest degree of physical, mental and social well – being of workers in all occupations;
- ❖ The prevention among workers of adverse effects on health caused by their working conditions;
- ❖ The protection of workers in their employment from risks resulting from factors adverse to health;
- ❖ The placing and maintenance of workers in an occupational environment adapted to physical and mental needs;
- ❖ The adaptation of work to humans.

It is deductive from the above definition that occupational health encompasses a state of complete physical, mental and social well – being of workers and not merely an absence of disease and infirmity (Edet, Ofi and Essienmoh, 2005). In other words, occupational health is meant to protect workers against sickness, diseases and hazards that may arise out of employment (ILO, 2001). In view of the vital role which workers play in organizational performance, occupational health practice requires the collaboration and participation of employers, workers and other stakeholders in the manufacturing sector.

It is, however, noteworthy that issues of occupational health is often given less attention than occupational safety, probably because the causes and consequences of poor safety at work are immediate and often relatively easy to deal with; whereas work related causes of ill health can be more difficult to spot. For instance, it often take some time for symptoms to develop, so the connection between cause and effect is less obvious, but once the problems have been recognized and acknowledged, solutions are documented (ILO, 2011). But the point should be stressed that when health is addressed, safety is automatically taken care of because a healthy workplace is by definition a safe workplace (ILO, 2011).

Labour department in the Republic of South Africa had identified the following as the main causes of occupational ill health in the Food and Beverage industry:

- Musculoskeletal disorder: It mainly comprises work related upper limb disorders and back injuries
- Work-related stress: It is caused by poor work organization
- Occupational dermatitis: It erupts from things like hand washing, contact with foodstuffs, etc.
- Occupational asthma: It is caused by inhaling bakery and grain dusts.
- Rhinitis: It is caused by irritant dusts such as bakery and grain dusts, spices and seasonings.
- Noise-induces hearing loss: This occurs where noise levels exceed 85dB (A).

It is reported that of the above risks, musculoskeletal disorder (MSDs) are by far the most common. That is not to say that other risks are not prominent.

It is apparently an attempt to secure the complete physical, mental and social well – being of workers in Nigeria that the Factory Act of 1958 (as amended in 1990) was enacted. The factory act stipulates that every factory must be kept in clean and sanitary conditions with adequate drain and sanitary conveniences. Accumulation of dirt and refuse must be removed daily and workroom floors washed at least once a week or kept clean by other suitable method. The factory act warns against overcrowding and requires that every workman in a factory should be allowed space of not less than 400 cubic foot. The factory act reiterates that effective and adequate provision must be made for ventilation and illumination. Similarly, the factory act requires that all containers, vessels, sumps, structures or pits containing dangerous or poisonous liquids must be covered properly or securely fenced, with prominently displayed notices in English and Vernacular languages as to the nature of the danger. The factory act further states that persons employed or to be employed at any dangerous machine or process are to be fully instructed and trained, and made aware of the dangers. (Uvieghara, 2001; Bankole, 2008).

It is noteworthy that in Nigeria most of the factory workers at the point of entry are not always trained or educated on the health hazard associated with the jobs and how to manage the risk (Bankole, 2011). This probably may be due to the casual employment on which majority of them are placed. As a result of this negligence, the factory workers often fall victims of preventable occupational health hazard. Perhaps if the workers had been exposed to regular health education programme they could have been able to manage the risks at workplace by taking preventive measures against the hazards.

In line with the above assumption, Bazas (2001) observed that health education in the work place is scanty. He however asserted that education and training in occupational health are a *sin qua non* of good occupational health practice.

In their contribution, Cooper and Cotton (2000) comment that the provision of training on occupational health is not only fundamental to satisfying employees' basic rights to be protected from workplace hazards, but it also a statutory requirement in many jurisdiction.

In the same manner, Cohen, Smith and Cohen (1975) affirm that training is an important component of any occupational health management programme, adding that there is evidence to suggest that effective training is a feature of companies with exemplary occupational health performance.

Some studies (Miller and Agnes, 1973; McKenna and Hale; Holmes et al, 1999) had equally identified an association between traditional first aid training and a lower incidence of work place injuries and diseases.

Writing on the same subject, Isah et al (1996) suggest that health education of both the employers of labour and the employees and the enforcement of existing laws are needed to improve the existing standard of occupational health services in Nigeria. In their views, Ereh and Basse (2009) said human behavior at work including unsafe behavior could be modified through education.

Based on the foregoing, this study sought to find out the perceived influence of health education programme on occupational health of factory workers in the Food and Beverage industry in Lagos State, Nigeria.

Research Hypotheses

H₀₁: There is no significant relationship between health education and occupational health of factory workers.

H₀₂: There is no significant difference between the vulnerability to occupational health hazards of factory workers that undergo regular health education programme and the factory workers that do not.

Research design: The study adopted survey research design because the researcher did not intend to manipulate the independent variable.

Participants: A sample of 160 respondents from ten organizations in the Food and Beverage industry was selected using purposive sampling method. The sample consists 113 males and 47 females. The age range of the respondents is between 21 and 45 years. Their minimum qualification is GCE O/L or SSCE.

Instrumentation: A 12-item self-constructed questionnaire tagged: Health Education and Occupational Health of Factory Workers (HEOEFW) was used for the study. A copy of the questionnaire was given to experts in measurement and evaluation from Guidance and Counseling department and Psychology Department of University of Ibadan, Oyo State, Nigeria. The instrument was pilot tested using test re-test method and reliability co-efficient of 0.82 was obtained. The instrument was formatted on four point response rating scale of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD).

Procedure: The copies of the questionnaire were administered personally by the researcher with the help of two experienced research assistants. Two hundred and ten (210) copies of the questionnaire were distributed but 183 copies were retrieved, out of which 160 copies representing 76.2 percent were found valid for analysis.

Method of Data Analysis: Data were analysed using simple percentage and frequency count for the demographic data of the respondents while inferential statistics of chi-square and t-test were used to test hypothesis one and hypothesis two respectively.

Results: Table 1 indicates the analysis of items 7, 8, 9 on the questionnaire to find out the relationship between health education and occupational health of factory workers in the Food and Beverage industry of Lagos State, Nigeria.

H₀₁: There is no significant relationship between health education and occupational health of factory workers.

Table1: Health Education and Occupational Health of Factory Workers.

	SA		A		D		SD		
Items	O	E	O	E	O	E	O	E	Total
7	30	36.3	91	76	35	40.7	04	07	160
8	31	36.3	78	76	41	40.7	10	07	160
9	48	36.3	59	76	46	40.7	07	07	160
Total	109		228		122		21		480

The summary of the data analysed to test hypothesis one is presented in Table 2 below:

Table 2: Summary of Chi – Square on hypothesis one.

Calculated Value (X^2_{cal})	Critical Value (X^2_{tab})	Degree of Freedom (df)	Level of significance
16.43	21.59	6	0.05

From the table above:

X^2 calculated value = 16.43

X^2 table = 12.59

Since the X^2_{cal} (16.43) is greater than X^2_{tab} (12.59) at 0.05 level of significance, the null hypothesis is rejected, which implies that there is a significant relationship between health education and occupational health of factory workers in the Food and Beverage industry of Lagos State.

H₀₂: There is no significant difference between the vulnerability to occupational health hazards of factory workers that undergo regular health education programme and the factory workers that do not.

Table 3: A t – test comparison of the vulnerability to occupational health hazards between factory workers that undergo regular health education and those that do not.

Variables	N	X	SD	df	T	P
Factory workers that undergo regular health education programme	70	78.20	8.75	158	3.25	<0.05
Factory workers that do not undergo health education programme	90	72.15	8.22			

As shown in the Table 3 above, there is a significant difference between the vulnerability to occupational health hazards of factory workers exposed to regular health education and the factory workers that do not. ($t = 3.25$; $df = 158$, $p < 0.05$).

Discussion of findings: The findings of this study had shown that health education has influence on the occupational health of factory workers. This is so because the results of the two hypotheses tested in the study revealed that there is strong relationship between health education and occupational health of factory workers in the Food and Beverage industry of Lagos State, Nigeria. Also, it was shown that factory workers that were not exposed to health education programme at workplace tend to be more vulnerable to occupational health hazards. This result finds support in the work of Bazas (2001) and Cooper and Cotton (2000) that education and training in occupational health are a sine qua non of good occupational health practice.

The finding of this study which indicates that factory workers that do not undertake regular health education programme are more vulnerable to occupational health hazards, is in agreement with the study of Hu et al (1998) which shows that workers who do not undertake occupational health programme in Taiwan were five fold more likely to encounter occupational injuries and diseases than those who undertake the programme.

Also, the result of this study lends credence to the study of Cohen et al (1975) that training is an important component of any occupational health management programme and that effective training and education on occupational health hazards is a feature of companies with exemplary occupational health performance. In the same vein, the result of the present study affirms the suggestion of Isah et al (1996) that health education of both the employers of labour and the employees are needed to improve the existing standards of occupational health services in Nigeria. This study equally conforms to the findings of Ereh and Bassey (2009) that the unsafe behaviour of workers at workplace could be modified through intervention education programme.

Conclusion and Recommendations

The study has been able to establish strong relationship between health education and occupational health of factory workers in the Food and Beverage industry of Lagos State, Nigeria. Also, the finding reveals that workers that are not exposed to health education programme at workplace are more vulnerable to occupational health hazards than their counterparts who regularly undertake health education programme.

Based on the findings, it is suggested that employers of labour in the Food and Beverage industry should endeavour to conduct on regular basis intervention training programme on health hazards and the management of risks at workplace. This effort of the employers could be complemented by labour inspectors who will need to educate the workers on the provision of the factory acts concerning workers' health at workplace. Workers on their part should desist from exhibiting unnecessary unsafe behaviour at workplace that could make them fall victims of preventable occupational health hazards and comply strictly with the health and safety rules in their workplace. Also, positive reinforcement could be introduced whereby financial incentives would be given to workers who do not have any record of work-related injury and/or illness throughout the year.

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