EMPLOYEES' KNOWLEDGE AND ATTITUDE REGARDING OCCUPATIONAL HAZARDS IN A LARGE SCALE INDUSTRY IN ENUGU STATE

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Abstract

This study investigated the knowledge and attitude of employees regarding occupational hazards in Anambra Motor Manufacturing Company (ANAMCO), Enugu. The study utilized 221 employees (122 senior and 99 junior) as participants for the study. A 22-item knowledge and attitude scale developed by the researcher was used for data collection. Three hypotheses were tested .The findings indicated that experienced employees demonstrated higher level of knowledge of hazards associated with the workplace environments than their inexperienced counterparts in areas of social, $\div^2$ = 5.8, df 1, p<.05; physiological stress, $\div^2$ = 10.21, df 1, p<.05; chemical hazards, $\div^2$ = 11.7, df 1, p <.05; physical hazard, $\div^2$ = 12.8 df 1<.05; and ergonomically poor working environment, $\div^2$ = 12.2 df 1 p<.05. There were no differences on the attitude of experienced and the inexperienced employees regarding occupational hazards. However, the attitude of senior employees differed significantly from the attitude of junior employees, with senior employees showing more favourable attitude than their junior counterparts, t (219) =7.06, p<0.5

Introduction

Workplace injuries, accidents and illnesses have continued to be a significant problem in our various work organizations and this has attracted the attention of scholars in the field of workplace environment. The importance of safety of workers in their workplace environment notwithstanding, the attention and interest of researchers in this area vary across countries. Bureau of labour statistics (2010) noted that there were approximately high rate of injuries and fatalities at work, creating a genuine interest to protect the workers against the hazards of their jobs in the developed countries. However, the contrary seems to be the case for the developing countries. In Nigeria, the situation seems to be worse as Owumi (1997) had earlier reported that many employees in Nigeria are not knowledgeable about the harmful effects of their exposures to the substances of production. This reported low level of workers' knowledge about occupational hazards, Owumi posits, may affect the attitude of workers towards their workplace environment. This also poses a potential health problem to the workers, for according to Okwulehie (1997), the concept of occupational health hazards derives from the realization that workers are of special risks of injury and health impairment, arising from exposures to hazards in the work environment. In view of the realization of the need for an ambient and conducive workplace environment, where workers would realize their potentials and maintain high productivity, Ford and Tetrick (2011) had suggested that workplace environments should be free of hazards.

World Health Organisation (1997) classified industrial hazards in terms of mechanical hazard; ergonomically poor working conditions; biological agents; physical factors, social hazards; reproductive hazards and allergenic agents; chemical agents and psychological stress. The present study investigates the extent to which employees are knowledgeable of the above classified industrial hazards. This becomes necessary since Asogwa (1986) contends that in developing countries like Nigeria, workers may intuitively have a positive attitude concerning their hazardous workplace environment, in view of the fact that they lack adequate knowledge about unsafe working condition and the necessary attitude to be adopted in other to avert hazards associated with their workplace environment.

Knowledge, according to Ogbonna (2011) is a familiarity with someone or something, which can include facts, information, descriptions, or skills acquired

through experience or education. This means that workers become knowledgeable when they had interacted with and have had experiences regarding their workplace environment, which help them in acquiring knowledge desired for their job. An attitude towards occupational hazards is a tendency to have a work role orientation characterized by approval or disapproval concerning hazardous workplace environment (Ford & Tetrick, 2011). Alge, Ballinger, Tangirala and Oakley (2006) had earlier observed that attitude of employees act as a strong predictor of several work performance factors such as creativity, extra role performance and managerial effectiveness. This implies that attitude helps employees in maintaining consistency of thought, feeling and decisions and that as individual interacts with and gains experience, he or she evaluate events, issues, people and material things (occupational hazard) within the environment with some degree of favour or disfavour.

Williquist and Tomer (2005) showed that work experience plays a significant role in improving the knowledge and attitudes of workers toward their jobs because as employees gain more experience in their jobs, they become more knowledgeable and able to cope with negative and positive features of their jobs. On the contrary, Labog (1988) had earlier found through empirical study that inexperienced employees demonstrated equal attitude towards their workplace conditions with the experienced employees. This he attributed to the fact that lack of experience increases workers carefulness in handling their jobs since they have not gained mastery of the use of tools and substances of production.

The issue of job status is crucial in predicting attitude. According to Hopkins (2000), senior employees participate in decision – making process, which provides the employee with sense of belonging thereby, projects positive attitude of senior employees more than their junior counterparts. However, Lupton (1999) had earlier observed that seniority does not influence employee's attitudes, rather it inhibits positive attitude and awareness since the attributes of the jobs are no more to their potentials.

The study is hinged to two theoretical frameworks. One such theory, which explain knowledge, is Aristotle's epistemology theory of knowledge (384 – 322 Bc). This theory posits that people know about things and events around them through, their senses and that knowledge can mean; to be aware, to have understanding or grasp of the object of knowledge (health hazards in this study). This means that workers become knowledgeable

of occupational hazards when they are aware of hazards associated with work environment. The second, which concerns attitude, is Festingers (1957) theory of cognitive dissonance. The theory posits that attitude predicts behaviour and that where attitude and behaviour are not related cognitive dissonance results. Cognitive dissonance refers to an individual's motivation to reduce the discomfort (dissonance) caused by two inconsistent thoughts. To this effect, most people have a tendency to make their thoughts consistent. It is therefore, expected that workers with negative or positive attitudes would express them in their responses to the attitudinal questions about occupational hazards.

From the discussions above, it is clear that the findings of various researchers on knowledge and attitudes of employees in relation to their level of experience and job status are inconsistent. Besides, most of these studies on occupational hazard have been conducted in the western cultures especially, Europe and America and have focused predominantly on the desire to improve productivity and the impact of hazardous environment on employee's health and well-being. However, only few of these studies looked into the knowledge and attitude of workers towards occupational hazard. The present study investigated the knowledge and attitude of workers using Nigerian sample. Such Nigerian based study is needed to verify the validity of some of the findings gathered across cultures. It was hypothesized that there will be no significant difference between experienced and inexperienced employees on their level of knowledge regarding occupational hazard; there will be no significant difference between experienced and inexperienced employees on their attitude towards occupational hazards; the attitude of senior staff employees will not differ significantly from the attitude of the junior staff on their occupational hazards.

Methods

The research design used in the study was cross-sectional survey design. The sample for the study was 221 employees selected by means of stratified sampling technique. Available data on the number of employees per section allowed stratification of sampling proportionately by sections. In other words, employees were selected from the eight sections that make up the company in proportion of 1:2 of the number of workers in each section. The sections are: administrative with 46 workers, mechanical 152, assemblage 142, health unit 62, security 43, bursary 38, catering 18 and laundry 20

workers. Out of this number 304 of them were junior staff while 217 were senior staff employees. The total number of inexperienced employees was 215 while the experienced employees were 306 in number. The experienced and inexperienced employees were categorized on the basis of the number of years they have worked. Employees who have worked for 10 years and above were classified as experienced ones while those who have worked for less than ten years were classified as inexperienced. The justification for this classification is based on the civil service rule which states that employees who have worked for ten years and above are pensionable even if on voluntary retirement. Their ages ranged from 22 to 57 with mean age of 42 – 58 years.

Instrument

A 22 – Item questionnaire developed by the researcher was the instrument used for data collection in this study. The questionnaire was designed to measure knowledge and attitude regarding occupational hazards. It consisted of three sections, namely section A, B and C. Section A deals with personal data of respondents, such as job status and work experience. Section B is made up of 10 items that measure nine components of hazards namely; social, chemical hazards, psychological stress, mechanical, biological, allergenic agents physical, ergonomically poor working conditions and reproductive hazards. Item 3 measures social, items 4 and 5 measures chemical hazards, item 6 measures psychological stress, item 7 measures mechanical hazards item 8 measures biological hazards, item 9 measures allergenic agents, item 10 measures physical hazards, item 11 measures ergonomically poor working conditions while item 12 measures reproductive hazards.

Section C measures workers attitude towards occupational hazards (items 13 – 22). The respondents were requested to indicate their degree of agreement with the attitudinal statements. The option for attitude questionnaire were "Strongly agree" (SA), "Agree"(A), "Undecided" (U), "Disagree"(D) and "Strongly Disagree"(SD). The assigned values of 5,4,3,2,1 were points for positive items and 1,2,3,4,5, for negative items. In other words, in each positive statement, 5 points were assigned to "Strongly Agree" (SA), 4 points to "Agree" (A), 3 points to "Undecided"(U), 2 points to "Disagree" (D) and 1 point to "Strongly Disagree"(SD). In the case of negatively worded statements, the scoring was reversed.

Draft copies of the questionnaire with objective of the study and instrument

evaluation guide were sent to three lecturers in University of Nigeria, Nsukka who critically examined the questionnaire and agree that the content covered the objectives of the study. A split-half reliability coefficient alpha of 0.85 was obtained using this inventory on 96 employees of Emenite Nigeria Ltd, Enugu. This was corrected with spearman-Brown formula, r = 92.

Procedure

For effective distribution of the 260 copies of the questionnaire, the researcher recruited two research assistants. These were two final year students of Health and Physical Education University of Nigeria Nsukka who helped in distribution and collection of the questionnaire. They were trained by the researcher on how to establish rapport with the participant and provided with the guidelines and the time frame within which the participants were supposed to accomplish the task. They distributed the questionnaire to the employees of ANAMCO through eight sectional heads of the company. The questionnaires were distributed as follows: administrative 23, mechanical 76, assemblage 71, health unit 30, security 22, bursary 19, catering 9 and laundry 10. The time allotted for the filling of the questionnaire was thirty minutes and these were filled shortly after break period under examination condition and collected on the spot. Respondent's names were not requested. A hundred per cent return rate was achieved with 221 copies (85%) correctly filled. Thirty-nine copies (17.65%) were rejected as a result of incomplete and / or improper filling of the questionnaire.

Statistics

The level of knowledge was determined using Ashur (1977) criteria. By these criteria, less than 40 per cent of those who indicated correct responses in any aspect of the variables investigated were considered low level knowledge. Those whose scores fall between 40 – 59 were considered as having moderate level of knowledge, while 60 – 80 per cent was high level, and above 80 per cent classified as very high level of knowledge. Chi-square statistics was used to answer knowledge questions (Hypothesis 1).

The Likert-five point scale was used to establish the attitude of workers towards occupational hazards. Hypothesis 2 and 3 which tested attitudes were answered using student's t-test.

Result

Hypothesis 1

There will be no significant difference between experienced and inexperienced employee on their level of knowledge regarding occupational hazards.

Table I

Difference between experienced and inexperienced employees on their level of knowledge regarding occupational hazards.

Components of knowledge	N	Cal. $\div^2$ value	Table value $\div^2$	P	d
Social hazards	221	5.8*	3.84	P<.05	1
Chemical hazards	221	11.7*	3.84	P<.05	1
Psychological stress	221	10.21*	3.84	P<.05	1
Mechanical hazards	221	39.1*	3.84	P<.05	1
Biological hazards	221	2.8*	3.84	P<.05	1
Allergenic agents	221	19.4*	3.84	P<.05	1
Physical hazards	221	12.8*	3.84	P<.05	1
Ergonomically Poor working conditions	221	12.8*	3.84	P<.05	1
Reproductive hazards	221	11.3*	3.84	P<.05	1

* = Significant at. 05 (p<.05)

Table 1 above shows that there are significant difference between experienced and inexperienced employees on the hazards associated with their workplace in areas of social, $\div^2 = 5.8$, df 1, p<.05; physiological stress, $\div^2 = 10.21$, df 1, p<.05; chemical hazards, $\div^2 = 11.7$, df 1, p <.05; physical hazard, $\div^2 = 12.8$ df 1<.05; and ergonomically poor working environment, $\div^2 = 12.2$ df 1 p<.05.

However, inexperienced employees differed significantly on knowledge than the experienced employees on the mechanical, $\div^2 = 39.1$, p<.05 and allergenic hazards, $\div^2$ 19.4, <.05 components of the occupational hazards of their workplace. No significant difference was found between experienced and inexperienced employees on knowledge of the biological component of the hazard. Only 44% of the experienced and 41% of the inexperienced employees are aware of the biological hazards associated with their occupations.

Hypothesis 2

There will be no statistically significant difference between experienced and inexperienced employees on their attitude towards occupational hazards ($p<.05$).

Table II

Attitude of senior and junior staff regarding occupational hazards.

Subject	N	X	SD	Computed t-value	d f	Level of significant	Table t-value	Decision
Senior	122	4.57	10.5	7.06	219	P<.05		significant
Junior	99	3.68	7.4					

In table 2 above, there is significant mean difference between junior and senior staff workers of ANAMCO on attitudes towards occupational health hazards, $t(219) = 7.06$, $p<.05$. Senior staff employees showed more favourable attitude towards occupational hazards ($X = 4.57$, $SD = 10.5$) in contrast to the reported attitude of the junior staff workers of the same firm ($X = 3.68$, $SD = 7.4$).

Table III

Difference between experienced and inexperienced employees on their attitude towards occupational hazards.

Subject	N	X	SD	Computed t-value	d f	Level of significant	Table t-value	Decision
Experience	151	3.03	13.4	0.76	219	p >.05		Not significant
Inexperienced	70	2.91	12.09					

Table 13 above shows no significant mean difference on attitude towards occupational hazards between experienced and inexperienced employees, ($t(1,219) = 0.76$, $p>.05$). However, experienced workers reported more favourable attitudes towards occupational hazards than inexperienced workers of the same organisation. This finding supports the third

hypothesis which posited that there would be no significant difference between experienced and inexperienced workers on attitude towards occupational hazards.

Discussion

As indicated in table 1 experienced employees showed higher level of the hazards associated with their work in areas of social, psychological stress, chemical, physical and ergonomically poor working conditions, than their inexperienced counterparts. The reported differences on level of knowledge in the five components of hazards stated above could be explained by the fact that as one works and performs tasks in work settings, he/she acquires more skills and becomes more familiar with positive and negative attributes of such jobs (Williquest and Torner, 2005). Besides, experienced employees may have fallen victims to those hazards or may have witnessed co-workers who become victims to the occupational hazards, which may have left indelible mark in their memory. On the contrary, the inexperienced employees may not have encountered the hazards of the workplace as to internalize the hazards associated with their work into their cognitive set.

Regarding the difference between experienced and inexperienced employees on attitudes towards occupational hazards, the finding shows that no differences existed. This suggests that experienced employees hold similar attitudes with inexperienced employees towards occupational hazards. This finding supported the finding by Labog (1988) who observed that both experienced and inexperienced employees hold equal attitude towards their job. This he attributed to the fact that the inexperienced appeared to be careful in handling their jobs since they have not gained mastery of their jobs.

For attitude of workers towards occupational hazards, it was hypothesized that senior staff employees would not differ from the junior staff employees. This hypothesis was rejected. Senior staff employees' attitude differed significantly from the attitude of junior staff employees. This finding is consistent with the earlier finding of Hopkins (2000) which showed that employees' attitude towards workplace environment depend, to some extent, on the workers' encounter with the potential hazards of the workplace environments. However, the present finding is at variance with the suggestions of earlier writer such as Marchared (1994) which states that seniority does not influence employee's attitude. A possible explanation of this finding is based on the fact that most of the senior staff employees rose through the ranks and

as such have invested so much time and energy working for the company. In addition, length of service is a valued resource in itself, while privileges associated with length of service make it easier to derive additional organisational rewards, which may influence senior staff employees' attitudes towards the positive direction.

Conclusion

The present study examined the differences in the level of knowledge among experienced and inexperienced employees; the differences in the attitudes of experienced and inexperienced and senior end junior employees of Anambra Motor Manufacturing Company (ANAMCO) in relation with the hazards associated with their jobs. Experienced employees demonstrated higher knowledge than their inexperienced counterparts. The finding shows no differences on the difference between the attitude of experienced and the inexperienced employee's. Regarding the difference between the attitude of senior and junior employees, the attitude of senior employees differed significantly from the attitude of junior employees. In view of the above result, it could be inferred that employees acquire knowledge in the cause of performing job and as individuals gain mastery of their jobs they demonstrate suitable attitudes towards their job.

Recommendation

The following recommendations are made:

1. that workers should be subjected to appropriate training, retraining, seminars and workshops to help them become knowledgeable of the hazards associates with their workplace environment. This will equally improve the attitude of employees towards their jobs
2. that management should show strong and true commitment to occupational health and safety so that all employees, irrespective of cadre and experience, will improve their attitude towards safety in their jobs
3. that management should provide an ambient working environment that will bring about high safety culture in their company so that employees' optimum performance will be ensured.

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