



HEALTH AND SAFETY TRAINING AND EMPLOYEE PERFORMANCE IN OIL AND GAS COMPANIES IN RIVERS STATE, NIGERIA

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Abstract: This study examined the relationship between health and safety training and employee performance in oil and gas companies in Rivers State, Nigeria. The study adopted a cross-sectional survey research design. Primary data was generated through structured questionnaire based on the 5-point Likert scale. The population of the study was 250 employees of seven (7) selected oil and gas servicing companies in Rivers State. The sample size of 154 was determined using the Taro Yamane's formula for sample size determination. The reliability of the instrument was achieved by the use of the Cronbach Alpha coefficient with all the items scoring above 0.70. The hypotheses were tested using the Spearman Rank Order Correlation Coefficient with the aid of Statistical Package for Social Sciences version 23.0. The tests were carried out at a 95% confidence interval and at a 0.05 level of significance. The findings of the study revealed that there is a significant and positive relationship between health and safety training and employee performance in oil and gas companies in Rivers State, Nigeria. The study recommends that management oil and gas companies should ensure that training programs be evaluated consistently in order to ensure that necessary and adequate measures are taken to improve it from time to time.

Keywords: Health and Safety Training, Employee Performance, Effectiveness, Efficiency

INTRODUCTION

Employee performance has been described in many ways; ability to achieve targets, realize goals, attain benchmarks. Most commonly people immediately talked of job performance as what a person did at work. Different stages of job as well the complexity of a job also affected the overall performance of the jobholder. This could mean that job performance as a construct could be defined in different ways depending on the different stages and complexities

of the job (June, 2011). Sarmiento and Beale (2007) noted job performance resulted from two elements, abilities and skills (natural or acquired) that an employee possessed, and motivation to use them in order to perform a better job.

The performance of an employee is measured actually by the output the individual produces in relation to productivity. At corporate level, productivity is affected by many factors such as employees, technology and objectives of the



organisation. It is also dependent on the physical environment and its effect on health and employees' performance. Other factors include employees applying the skills they learnt during training programs once they return to their workplace. Tending to the structural and interpersonal aspects of each of these factors enables employees to apply the required skills in a consistent and habitual way (Knight, 2005). Crucial to an employee's performance is the extent of exposure to health and safety training and education. In most accidents, managers and supervisors almost instantaneously point fingers at human efforts and unsafe actions as the ultimate cause without probing deeper into the root cause of the accident. Such incidents occur due to multifaceted factors. Human errors and unsafe actions caused by illiteracy, lack of training, poor supervision, technical flaws relating to design, layout, machine guarding and arrangement of work (Krishnan, 1999).

Workplace health and safety raises the question of economic costs. The economic cost of occupational health and safety to the organisation is double-edged. On the one hand, health and safety measures which protect employees from the hazards of the workplace can conflict with management's objective of containing production costs. On the other hand, effective health and safety policies can improve the performance of employees and the organisation, by reducing costs associated with accidents, disabilities, absenteeism, or illness. There are also indirect costs associated with work-related accidents. The indirect costs include overtime payments necessary to make up for lost production, cost of retaining a replacement employee, a wage cost for the time

spent by human resource manager personnel recruiting, selecting and training the new employee and, in less typical cases, the cost associated with loss of revenue on orders cancelled or lost if the accident causes a net long-term reduction on sales as well as the negative effect on morale in workers which may also lead to possible reduction in the quality of work (Rousseau, 1998).

A company's appreciation of the employees is observed in the careful attention it pays to their health and the opportunities it gives for their personal development. The training activities planned to cause employees to have the appropriate attitudes, also serve to keep their safety and health. Regular training is considered as a function which serves both to increase employees' knowledge, skills and performance and to protect their physical and spiritual health (Sari, 2009). Investment in safety prevention will lead to a significant decrease in occupational accidents and diseases which will also help save lives, prevent enormous human suffering and financial resources through employee absenteeism.

The purpose of the study therefore was to examine the relationship between health and safety training and employee performance in Oil and Gas Companies Rivers State, Nigeria.

This study was guided by the following research question:

- i. What is the relationship between health and safety training and employee effectiveness in Oil and Gas Companies in Rivers State, Nigeria?
- ii. What is the relationship between health and safety training and employee efficiency in



Oil and Gas Companies in Rivers State,

Nigeria?

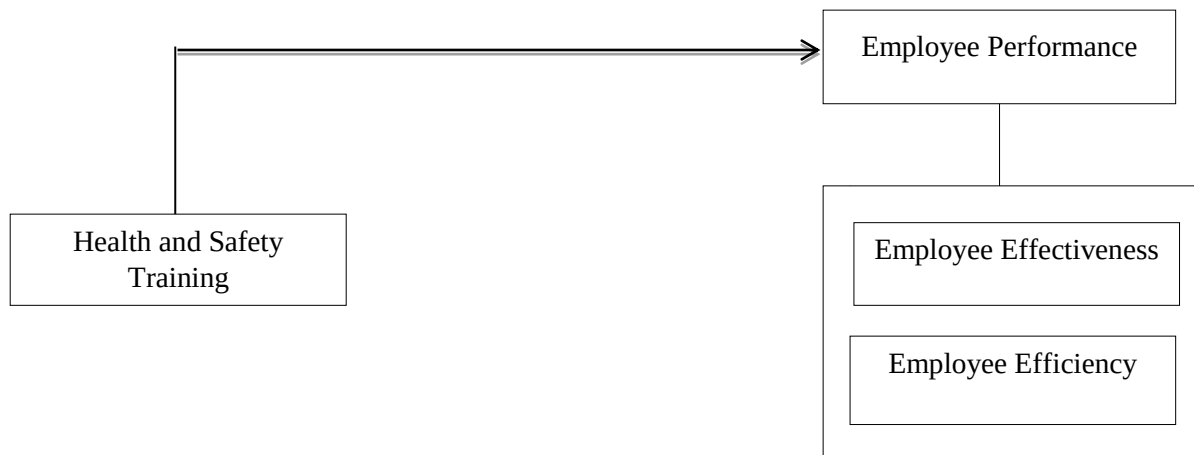


Fig.1 Conceptual framework for the relationship between health and safety training and employee performance

Source: Author's Desk Research, 2020

LITERATURE REVIEW

Theoretical Foundation

Goal-Freedom Alertness Theory

The Goal-Freedom Alertness Theory was developed by Kerr (1950) and it states that safe work performance is the result of psychologically rewarding work environment. Under this theory, accidents are viewed as low-quality work behaviour occurring in an unrewarding psychological climate. This contributes to a lower level of alertness. According to this theory also, a rewarding psychological climate is one where workers are encouraged to participate, set sustainable goals and choose methods or safety programmes to attain those safety and health goals. They must be allowed to participate in raising and solving problems.

Goal-Freedom Alertness Theory essentially states that management should let workers have well defined goals and freedom to pursue those goals. The result is a higher level of alertness and a focus on the tasks at hand. The theory suggests that managers and supervisors should try and make work more rewarding for workers. They may use a variety of managerial techniques including positive reinforcements, goal setting participative management and clear work assignments. Heinrich, Peterson & Roos (1980) supported this theory by stating that workers will be safe in a positive work environment. They argue further that safe performance is compromised by a climate that diverts the attention of workers. They confirm that hazards divert the workers attention during work hours, and thus the diversion increases susceptibility



to injury. Heinrich *et. al* (1980) suggests that managers and supervisors can actively work to alleviate hazards in the work environment. Reaction of workers to unsafe conditions depends on the fact that whether the worker identifies the unsafe condition.

Concept of Employee Performance

The debate on performance measures has been a domain of interest for academicians and practitioners. Employee performance is the ultimate dependent variable of interest for scholars concerned in area of management and also an indicator for evaluating the operational efficiency of a business. Despite the importance of the concept, studies have revealed disparities as to what constitute organizational performance. Venkatraman and Ramanujan (1986) noted that there is no agreed definition and measures of employee performance. They argue that the concept has multiple meaning depending on the specific discipline such as the service, production and manufacturing industry. For instance, Delaney and Huselid (1996) placed high emphasize on financial performance which are objective such as accounting measures such as profit per employee, return on sales, productivity per employee or subjective measures (perception of performance relative to similar organizations or relative to product market competitors). Guest (1997) criticizes the overreliance of financial performance that does not capture the full impact of human resource management on overall performance. The use of subjective measures is a common occurrence in existing studies examining the link between employee empowerment and employee performance (Yang & Choi, 2009). Dess

and Robinson (1984) and Venkatraman and Ramanujam (1986) comparing objective and subjective measures of employee performance revealed that the two methods are appropriate in different situations. In this regard, recent studies have focused on a combination of the different methods in order to avoid bias toward one or the other measure, that is, objective or subjective. The Balanced Scorecard (BSC) proposed by Kaplan and Norton (1996) is the most dominant performance module used world over. It focuses on four major perspectives of performance namely financial performance, customer focus, internal business process and learning and growth. The study utilized the non-financial measures of customer focus, internal business process, learning and growth and corporate social responsibility as the indicators of organization performance.

Measures of Employee performance

Effectiveness Measure

Effectiveness is a broad concept that is difficult to measure in organizations. According to (Amah, 2014) the concept of organizational effectiveness is an elusive one that there is no single way of defining it. This may be due to the too many criteria used and the many definitions available for the concept. Veldsman (1982) defined organizational effectiveness as a qualification attached to an organizations resulting from the comparison from the actual state of the entity against its ideal state. He posits that an organization can either be effective or ineffective. Effective organizations are built on effective individuals who work effectively in groups Lawler (1972). There are different variables for measuring organizational effectiveness. Maheshwari



(1980) said this much when he opined that that organizational effectiveness is a multi-dimensional concept, which has no agreement as to which dimensions are significant and should be used as the basis of the analysis.

Efficiency Measure

Ogboso and Amah (2016) opines that efficiency refers to the accomplishment of goals with minimum resources or waste. It includes measures such as time minimization, cost minimization, and waste minimization. Speed and time are important resources for any organization and must be seen to seek to maximize speed and minimize time. The way an organization does this indicates how efficient and productive they are. Speed and time were the essence of time and motion studies since the day of scientific management introduced by Taylor that led to management efficiency. They are sources of competitive advantage. Doing the right thing in corporate governance terms is an important, but not a sufficient, condition for performance. And doing the wrong thing (e.g. an ineffective audit committee, or lack of independence among the executives) will make it more difficult for an organization to perform but is not a measure of success or lack of it either. The questions relating to organization efficiency are: How effective is the organization in dispatching businesses (including through organization committees in and between meetings) and following up on decisions, does the organization identify and focus on key (not just a long list of) issues and risks facing the organizations; is the organization able to take initiatives, dealing with crises and identifying emerging issues? The conception of time here is the duration taken to accomplish a task. These honest

questions are both a matter of choice. Since it is usually only after an extended period is it possible to know whether the organization has dealt with the right issues, how well it has done so, and which issues have not been addressed. Accordingly, failing to ensure succession or invest in new technology is just as much about performance as successful talent management or systems investment.

Health and Safety Training and Employee Performance

A good occupational health and safety program fosters a sense of security and comfort and increases job satisfaction (Ria, Anis & Oci, 2012). Furthermore, Mamoria and Gankar (2011) argue that a comprehensive health program not only ensures good health of employees but also leads to a lowering rate of absenteeism and health insurance costs resulting in higher productivity and improved morale. For instance, a wellness program boosts employee morale and increases job satisfaction since it promotes employee health by providing education on health issues and healthy lifestyles. Safety training programs are developed with an aim of enabling workers acquire attitudes, knowledge and skills which helps them reduce the perceived risk of their jobs. Most workplace hazards are caused by incomplete or absent training and if an employee is not trained to their job properly in order to avoid falling victim to hazards, they are likely to become frustrated. When trained correctly on health and safety measures, an employee is likely to feel much less stress and more satisfied with their job. Sieben-Thomas (2005) found that job satisfaction tended to be higher where there is access to workplace training.



Studies conducted in different sectors on the influence of health and safety practices on job satisfaction reported a positive relationship between the variables. For instance, Gyekye (2005) found a positive association between job satisfaction and safety climate. Workers who expressed more satisfaction at their posts had positive perceptions of safety climate and displayed greater emotional attachment, involvement and expressed stronger feelings of allegiance and loyalty to their organization. Cole (2002) asserted that among the key factors that affect employees' productivity and performance include management driven factors which include the development of organisation plans, shift-working, health and safety policies, including the provision of training, development of safe working practices and the adequate supply of protective clothing and equipment.

This study thus hypothesizes that:

- H₀₁:** There is no significant relationship between health and safety training and employee effectiveness in Oil and Gas Companies in Rivers State, Nigeria.
- H₀₂:** There is no significant relationship between health and safety training and employees' efficiency in Oil and Gas Companies in Rivers State, Nigeria.

METHODOLOGY

The study adopted a cross-sectional survey research design. Primary data was generated through structured questionnaire based on the 5-point Likert scale. The population of the study was 250 employees of seven (7) selected oil and gas servicing companies in Rivers State. The sample size of 154 was determined using the Taro Yamane's formula

for sample size determination. The reliability of the instrument was achieved by the use of the Cronbach Alpha coefficient with all the items scoring above 0.70. The hypotheses were tested using the Spearman Rank Order Correlation Coefficient with the aid of Statistical Package for Social Sciences version 23.0. The tests were carried out at a 95% confidence interval and at a 0.05 level of significance.

DATA ANALYSIS AND RESULTS

Bivariate Analysis

The level of significance 0.05 was adopted as a criterion for the probability of accepting the null hypothesis in ($p > 0.05$) or rejecting the null hypothesis in ($p < 0.05$). However, below is the scatter graph. According to Neuman (2000: 323) cited in Asawo (2009), Scatter graph is one of the techniques used in deciding whether a bivariate relationship does exist between interval scaled variables. In our bid to determine the existence and trend of this relationship, we plotted a scatter diagram as presented in Figure 2 health and safety training as a predictor variable is plotted on the X axis whereas employee performance as the criterion variable is on the Y axis.

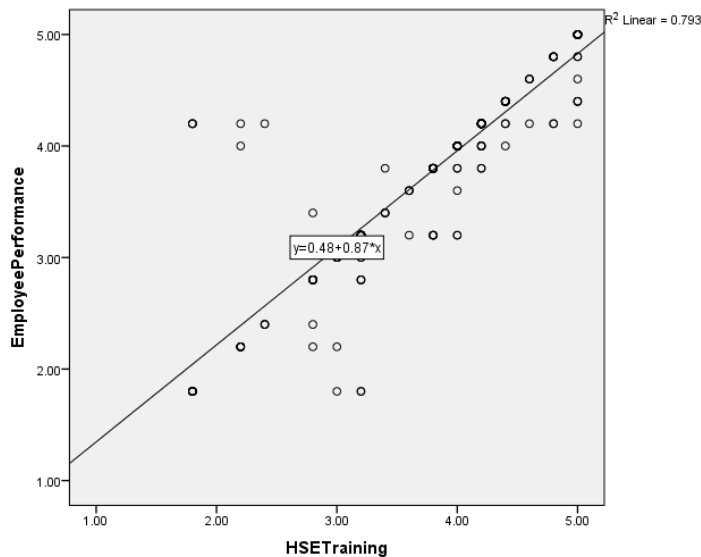


Figure 4.5 scatter plot relationship between health and safety training and employee performance

Figure 2 shows a strong relationship between health and safety training (independent variable) and employee performance (dependent variable). The scatter plot graph shows at R^2 linear value of (0.793) depicting a strong viable and positive relationship between the two constructs. The implication is that an increase in occupational health and safety programs simultaneously brings about an increase in the level of employee performance.

Table 1: Correlations for Health and Safety Training and employee Performance

			Health and Safety Training	Effectiveness	Efficiency
Spearman's rho	Health and Safety Training	Correlation Coefficient	1.000	.894**	.627**
		Sig. (2-tailed)	.	.000	.000
		N	227	227	227
	Effectiveness	Correlation Coefficient	.894**	1.000	.567**
		Sig. (2-tailed)	.000	.	.000
		N	227	227	227
	Efficiency	Correlation Coefficient	.627**	.567**	1.000
		Sig. (2-tailed)	.000	.000	.
		N	227	227	227

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Research Data , 2020 (SPSS output, version 23.0)



Table 4.15 illustrates the test for the two previously postulated bivariate hypothetical statements.

H₀₁: There is no significant relationship between health and safety training and employee effectiveness in Oil and Gas Companies in Rivers State, Nigeria.

From the result in the table above, the correlation coefficient (ρ) shows that there is a significant and positive between health and safety training and employee effectiveness. The *correlation coefficient* 0.894 confirms the magnitude and strength of this relationship and it is significant at $p\ 0.000 < 0.01$. The correlation coefficient represents a very strong correlation between the variables. Therefore, based on empirical findings the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between health and safety training and employee effectiveness in Oil and Gas Companies in Rivers State, Nigeria.

H₀₂: There is no significant relationship between health and safety training and employees' efficiency in Oil and Gas Companies in Rivers State, Nigeria.

From the result in the table above, the correlation coefficient (ρ) shows that there is a significant and positive health and safety training and employees' efficiency. The *correlation coefficient* of 0.627 confirms the magnitude and strength of this relationship and it is significant at $p\ 0.000 < 0.01$. The correlation coefficient represents a strong correlation indicating also a moderate relationship between the variables. Therefore, based on empirical findings the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship

between health and safety training and employees' efficiency in Oil and Gas Companies in Rivers State, Nigeria.

DISCUSSION OF FINDINGS

The first and second hypotheses sought to examine the relationship between health and safety training and employee performance in Oil and Gas Companies in Rivers State, Nigeria. Hence it was hypothesized that there is no significant relationship between health and safety training and employee performance in Oil and Gas Companies in Rivers State, Nigeria. These hypotheses were tested using the Spearman's Rank Order Correlation Statistics tool. The test of hypotheses one and two table 1 shows that there is a strong positive relationship between health and safety training and employee performance in Oil and Gas Companies in Rivers State, Nigeria. This implies that safety education aims at building up a favorable attitude towards safety measures and precautions while training is concerned with providing immediate job knowledge, skills and methods of work and creating awareness on the hazards likely to be encountered in the course of work.

This current finding was also consistent with the arguments of Doeringer and Piore (2007), who say that in order to develop skills and abilities specific to the company, it's significant from an organizational perspective to train employees in accordance with their company's specific skills and abilities (Armstrong, 2009). Sieben-Thomas (2005) found that job satisfaction tended to be higher where there is access to workplace training. Morishima (2006), indicate that training opportunities increase the level of individual



performance and organizational commitment among workers in their career advancement, influences the workers behaviors and attitudes such as motivation and organizational commitment, particularly in the case of stable employment (Njiru,2008). In upholding the views of Pigors and Myers (2008), submitted that training should encourage those employees who make a successful effort to increase their knowledge or skill.

In the view of Bogonko and Saleemi (1997), cited by Njiru (2008) training is effective only when it is properly planned and effectively executed. Training methods must be appropriate to the level of employees, the nature of tasks and purpose of training. The effectiveness of a training program should be evaluated so that necessary improvements can be made in it from time to time. Hence, training must be carefully planned and evaluated and employees must be purposively selected. Coaching can be defined as the helping relationship which is formed between a client who has managerial authority and responsibility in an organization and a professional coach. Typically, the coach uses a wide variety of behavioral science techniques and methods to help clients achieve a mutually identified job-related set of goals to improve his or her professional and personal performance.

CONCLUSION AND RECOMMENDATION

- i. Management of oil and gas companies should ensure that training programs be evaluated consistently in other to ensure that necessary and adequate measures are taken to improve it from time to time.
- ii. Management of oil and gas companies should allocate funds and invest

in health and safety trainings of employees. The training programs should be regularly conducted for new staff and efficient orientation programs should be carried out in the organization, in order to reduce newness anxiety, and foster productivity in the workplace.

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