Research Paper .

SAFETY CULTURE AND EMPLOYEES PERFORMANCE IN SAFETY-RELATED UNITS OF THE TEACHING HOSPITALS IN SOUTH EAST, NIGERIA.

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Abstract

Workplace safety incidents are national as well as global issues hence managers work tirelessly to inculcate safety values within the organisation by providing basic job resources which mitigate the negative effect of job demand especially during emergency situations. But the seemly inability of managers of the focused teaching hospitals in Southeast, Nigeria to conduct safety training and program, provide job resources and steady communication seem to have hampered their safety performance as it was observed that Healthcare Workers(HCWs) contract the same disease from infected patients. The study was anchored on Job Demand-Resource Theory which posits that health impairment occurs when there is disturbance in the equilibrium between the job demand that employees are faced with and the resources at their disposal. The study employed descriptive and correlation research design. Three teaching hospitals were selected from both Federal and State Teaching Hospitals based on the populations of respondents where as no teaching Hospital was selected from private teaching hospital since there is none in the area. The study adopted complete enumeration technique and 176 copies of questionnaire were distributed to HCWs but only 127 were positively responded to. The study adopted content validity and Cronbach Alpha method was used to ascertain the internal consistency and the reliability coefficient of 0.876 was obtained and this was judged adequate for the study. The hypotheses were tested using Pearson Product Moment Coefficient. Correlation coefficient (r) values of 0.475, 0.818 and 0.482 were got from the test of hypotheses 1, 2 and 3 respectively. The results revealed that there is a significant and positive relationship among the variables under study. From the findings, it is recommended that management of the teaching hospitals need to provide basic job resources, maintain steady flow of information and conduct safety programs and training for HCWs so as to increase employee perceived value on safety.

Keywords: Safety culture, work behavior, job demand, hospital, & Nigeria

Introduction

Workplace safety incidents are national as well as a global issue. Work environments have peculiar health-related risks which endanger the health and life of the employees. Hospitals, like other high risk work places, are characterized by a high level of exposure to hazardous agents, which significantly endanger the health and life of the employees. World Health Organizations (WHO) classified these hazards in hospitals into physical, biological, mechanical, ergonomic, chemical and psychosocial (Aluko, Adebayo, Adebisi, Ewegbemi, Abidoye & Popoola 2016). Teaching hospitals are health-related institutions that provide health services, including counseling, clinical, surgical, and psychiatric

consultations and treatments for healthy, sick and injured patients (Aluko, et al., 2016).

Hospitals in Southeast Nigeria as a whole have increased in magnitude, sophistication and diversity over the years with challenges in ensuring and sustaining best practices and ensuring the safety of employees and the work environment (Oluwagbemi 2011 in Aluko 2016). Hence both academia and industry are searching for preventive and proactive strategies. Studies suggest that significant safety improvement may only be achieved by acknowledging the cultural factors such as organizational values, management attitude to safety and employee involvement in safety initiatives (Jebb 2015). Bakker & Demerouti (2007) posit that health impairment among employees occur when there is disturbance in equilibrium between job demand employees and the resources at their disposal.

Safety culture has been identified as a factor for improving safety within an organisation (O'toole 2001). This is because safety management approaches focus on articulating safety values from top management down to middle-level and bottom-level employees thereby involving organizational leaders from inception. Safety culture is a subset of organizational culture that affect employees' attitude, value and behavior as it relates to safety performance (Guldenmund 2002 in Jebbs 2015)

The fundamental management function is to ensure proper allocation and utilization of available resources into productive uses. The limited resources available to managers include time, money and the employees (O'toole 2001). Employees, or human resources are the most important component of an organisation (Onyeizugbe & Orogbu 2015). O'toole (2001) argues that one of the responsibilities of managers is to ensure the safety and health of employees under their control by maintaining a balance in the equilibrium between job demand and job resources so as to minimize the possible number and severity of injuries experienced by workers. However Aluko et al (2016) argue that it is difficult to protect the health and well being of the health care workers (HCWs). This is because in the course of discharging their statutory duties, HCWs may be exposed to hazards which significantly impair their health and quality of life, with multiplier effect on their immediate and extended family members. Hence, it is imperative that management pays attention in maintaining the safety of workers by providing basic job resources in form of supervisors' coaching, training, communication, role-clarity, autonomy etc which will help to buffer the negative effect on job demand (Ria Mardiana , Eliyana & Oci Novita (2012). This is because job resources give employees the power to focus their efforts toward working safely and maintaining safety in workplace (Bakker & Demerouti). To reduce health impairment among employees, organizations struggle with how best to focus these resources to achieve the greatest reduction in injuries and crises amongst employees for the optimal cost. Ria Mardiana et al (2012) posit that when employees are satisfied with the safety in the workplace, accident could be avoided. In view of maintaining the safety of workers, management has the sole responsibility of announcing the safety programs (Armstrong, 2012; Ria Mardiana et al 2012) and these safety programs will not only improve the employees' shared perception and value about safety (safety climate) but increases employees' satisfaction (Ria Mardiana et al 2012).

The teaching hospitals in Nigeria seem to have been subjected to a lot of changes as a result of low budgetary allocation, negligence and carelessness of health care workers, lack of adequate protective aids and equipments, inadequate number of staff, excessive workload and failure to adhere to basic hygiene and safety guidelines and inadequacy of operational knowledge of modern healthcare equipment (Aluko et al 2016). These dynamics and limited resources could invoke unsafe work-related behavior which may pose a serious threat to employees' health as well as extended family members (O'toole 2001). Hence, these made the US Centre for Disease Control and Prevention (CDC) to develop standard precautions (SPs) for preventing occupational exposures and handling of infectious materials in Hospitals and other Health Care Facilities (Aluko, et al., 2016). Adhering to these safety guidelines have shown to be effective in curtailing occupational illnesses and injuries among HCWs in Hospitals (Aluko, et al., 2016). But the reverse seems to be the case as it was observed that HCWs in some of these teaching Hospitals in South-east, Nigeria contract the same disease, like Lassa fever, after an infected patient has been treated due to low priority placed on safety.

Performance is a goal-oriented process that involves the measurement of actual output or results against its intended goals and objectives (Molefe 2010). Measuring employees' health and safety performance is as part of management system as measuring other indices like profits, sales, quality control, production etc. This is because an organisation cannot manage what it cannot measure and it is important for organizations to measure indicators that are important and peculiar to their business. It has been however observed in the focused teaching hospitals in Southeast Nigeria that little seems to have been done in providing basic requirements for employees to carry out their work as well as maintaining the safety of those employees as it is observed that some healthcare workers posted to highly risky units seem not to have been given the prerequisite training and protective materials which will enable them cope with the job demand. In this situation, employees look for less effortful ways to achieve their goals thereby giving low priority to safety and these

have led to the case of some employees contracting the same disease after the patient has been treated or possible breakdown as a result of stress and burnout. Aluko, et al. (2016) and Bronkhrost (2015) posit that employees who are faced with excessive work pressure tend to value performance over safety. Healthcare workers encounter work-related hazards associated with their clinical and laboratory activities in the hospital. Blood and other effluent from infected patients may have pathogens such as HIV, hepatitis B or C virus and Ebola and Lassa fever virus and increasing the risk of transmission from such accidents as needle pricks and contacts with deep body fluids. Injuries from needle pricks are thought to be the commonest work-related hazard reported from Nigerian Teaching Hospitals (Enwere & Diwe 2014). However, Zacharatos & Barling (2005) argue that safety training is likely the most practiced technique in safety management and employees who receive safety training suffer fewer work-related injuries than their untrained counterparts.

To reduce occupational hazard, organizations struggle with how best to maintain a balance between job demand and the resources at employees' disposal as well as increase productivity. This is because job resources give employees the power to focus their efforts toward working safely and maintaining safety in workplace (O'toole 2001). However safety culture has been identified as a factor for improving safety within an organisation (O'toole 2001). It is against this backdrop that the researcher intends to ascertain the relationship between safety management and employee performance in selected teaching hospitals in Southeast, Nigeria.

The main objective is to ascertain the relationship existing between Safety culture and Employees Performance in the selected Teaching Hospitals in South-east, Nigeria. While the specific hypotheses are as follows:

- **Ha1:** There is a positive and very high relationship between training and work behavior in the selected Teaching Hospitals in South-east, Nigeria.
- **Ha2:** There is a positive and very high relationship between job resources and job demand in the selected Teaching Hospitals in South-east, Nigeria.
- **Ha3:** There is a positive and very high relationship between steady communication and management commitment in the selected Teaching Hospitals in South-east, Nigeria.

Review of Related Literature

Conceptual Review

Safety Culture

Safety culture is the subset of organizational culture where the beliefs and values focus specifically on health and safety matters (Schein 1986 in O'toole 2001). Safety culture is simply the product of individual and group values, attitudes, perceptions and patterns of behavior that determine a team or organisation's commitment to safety management.

Safety culture of an organisation is an important factor in ensuring the effectiveness of risk control. Safety culture improves the working condition of workers. This is because employees will be proactive in adhering to safety rules especially when the organisation is characterized by high level of physical safety climate (Bronkhorst 2015). Safety culture embodies the value placed on safety and the extent to which people take personal responsibility for safety in an organisation. Safety culture is often described as the 'personality' of an organisation while safety climate is referred to as an organisation's 'mood' at a particular time. Safety culture is more complex and requires multiple methods of assessment over a long period of time. It is influenced by the safety climate, 'norms', traditions and management procedures in an organisation. A safety culture assessment measures these factors using qualitative (guiding) and quantitative (measureable) data but employee perception survey is a valuable tool for detecting differences in employees' attitude concerning several management practices (Toole 2002).

Safety culture focuses on creating a self sustaining environment based on comprehensive understanding of the causes of organizational safety performance (Dejoy 2005 in Jebbs 2015)

Training

Occupational safety training is likely the most researched issue and practiced technique in safety management, and employees who receive safety training suffer fewer work-related injuries than their untrained counterparts (Colligan & Cohen, 2003). Training allows employees to acquire greater competencies to control their work and as well as performing their jobs more safely. Training increases the problem-solving skills of employees and exerts indirect effects on safety. To be maximally effective, training must extend beyond the mere provision of knowledge related to how to do one's job safely. Employees must also be empowered to use new skills following training (S. K. Parker, Wall, & Jackson, 1997).

Job Resources

Job resources are organizational inputs put in productive use in order to achieve organizational goals. They include physical, psychological, social, or organizational aspects of the job that are either functional in achieving work goals, reduce job demands and the associated physiological and psychological cost, stimulate personal growth, learning, and development. Examples are career opportunities, supervisor coaching and support, social support, performance feedback, role-clarity and autonomy. Job

resources give employees the power to focus their efforts toward working safely and maintaining safety in the workplace (Bronkhorst 2015). Job resources buffer the negative effect of job demands on job strain and burnout. The ability of job resources to buffer the negative effect of different job demands depends on the particular organizational work environment. Bakker (2006) posits Job resources have motivational potential particularly when employees are confronted with high job demands. For example, when employees are faced with high emotional demands, the social support of colleagues might become more instrumental so as to buffer the negative effect. Job resources serve as a means of achievement and protection of other valued resources. Job resources may be located at the level of the organization at large (e.g. pay, career opportunities, job security), the interpersonal and social relations (e.g. supervisor and co-worker support, team climate), the organization of work (e.g. role clarity, participation in decision making), and at the level of the task (e.g. skill variety, task identity, autonomy, performance feedback).

Steady Communication

Steady communication is the process by which information is transmitted and received. It involves the steady exchange of information between the sender and the receiver (Onyeizugbe & Orogbu, 2015)**.** Effective safety management ensures management's ability to communicate positive values and expectations to workers who will make their decisions with safety as a proper priority. Safety management provides information on both the level of performance and why the performance level is at it is**.** Information on health and safety performance measurement is needed by the people in the organisation who occupy different positions with different responsibilities within the health and safety management system. Effective safety management ensures employees have information appropriate to their position and responsibilities within the health and management system. O'Toole (2001) posits that training and educational sessions influence employees' attitudes and perceptions to safety which in turn drives their behavior towards safety.

Employee Performance

Performance is a goal-oriented process that involves the measurement of actual output or results against its intended goals and objectives (Molefe 2010). Measuring employees' health and safety performance is as part of management system as measuring other indices like profits, sales, quality control, production etc. This is because an organisation cannot manage what it cannot measure. The primary purpose of measuring health and safety performance is to provide basic information on the progress and current statue of the strategies, processes and activities used by an organisation to control risks and improve the health and safety of employees. In fact, studies have shown that it is important for organizations to measure indicators that are important and peculiar to their business. Jebb (2015) argued that the workers understand the level of safety performance required of them and know what they are expected to do in order to achieve those requirements but as long as the outcomes for safety performance are not valued, or if the outcomes for other performance indices are more valued and more consistently provided, the worker may experience conflicting motivations to perform safely. Zacharatos , Barling & Iverson (2005) posit that High-performance work systems assume employees are the primary source of competitive advantage and workers are capable of improving performance if they are motivated.

Work Behavior

Work Behavior refers to an activity that is performed to meet the objectives and requirements of a job. Work behaviors consist of observable (physical) and unobservable (mental) components and can include the performance of one or more tasks. Bronkhorst (2015) identified the distinction between two types of individual work behavior: Safety compliance and safety participation. Safety compliance describes the core activities that need to be carried out by employees to maintain workplace safety. Safety participation refers to behavior that do not contribute to an individual personal safety but which help to develop an environment that supports safety for instance addressing physical dangerous behavior or offering a listening ear to co-workers. Job demand and resources influence the occurrence of these safety behaviors

Job Demand

Job demand is the physical, psychological, social, or organizational aspects of the job that require sustained effort or skills. Therefore, they are associated with certain physiological and psychological costs. Examples of job demand are, work pressure, interpersonal conflict, job insecurity, emotional demands, unfavorable physical environment (Bakker et al 2007). It is pressure associated with a particular job which influences safety behavior at work. This is because pressured individuals tend to value performance over safety. Although job demands are not necessarily negative, they may turn into job stressors when meeting those demands which requires high effort from which the employee. (Meijman and Mulder, 1998 in Bronkhorst 2015) argues that job demand reduces employees' physical and psychosocial safety behaviors.

Management Commitment

Management commitment means direct participation by the highest level executives in a specific and critically important aspect or program of an organization. In safety management it includes setting up and serving on safety committee, formulating and establishing safety policies and objectives, providing resources and training, overseeing implementation at all levels of the organization,

and evaluating and revising the policy in light of results achieved. Zacharos (2004) posits that management commitment predicts work performance in general and safe working in particular. If senior management does not express informed, sustained commitment to safety as one of the primary business objectives, the commitment for safety in the field can easily shift towards other, sometimes conflicting, business objectives, particularly in less mature organisation.

Conceptual Framework of the Study

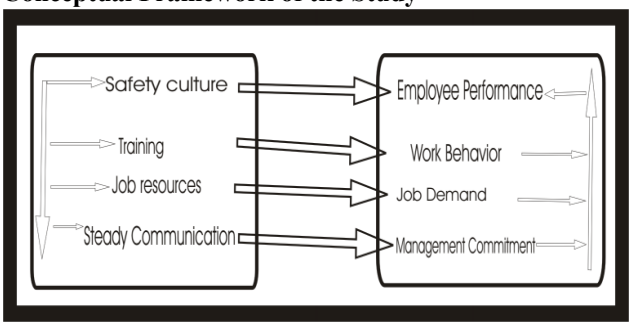

Figure 1: Conceptual Framework of Safety Culture and Employee Performance

The above concepts which represent the independent and dependent variables of the study are diagrammatically represented in a framework known as conceptual framework. The framework depicts the expected relationship between independent and dependent variables which the study intends to test and establish.

Theoretical Framework

This study will be anchored on Job Demand-Resource (JD-R) model. The Job Demand- Resource (JD-R) Model has gained high popularity among researchers and currently recognized as one of the leading job stress and health impairment models along with Karasek's (1979) Job Demands Control (JD-C) model and Siegrist's (1996) Effort Reward Imbalance (ERI) model. The JD-R model was first propounded by Demerouti, Bakker, Nachreiner, & Schaufeli in 2001 as one of the leading job stress models. Unlike JD-C and ERI model, the JD-R model assumes that every occupation have its own specific working characteristics, these characteristics can be classified in two general categories (i.e. job demands and job resources), thus constituting an overarching model that may be applied to various occupational settings, irrespective of the particular demands and resources involved. The central assumption of the JD-R model is that job strain and health impairment develops as a result of disturbance in the equilibrium between job resource and the demand they are confronted with. In contrast, work engagement is most likely when job resources are high also in the face of high job demands. This implies that the JD-R model can be used as a tool by human resource management for improving performance as well as reducing burnout, stress and health impairment. This is because JD-R model has a broader scope, more flexible and can be applied to wider variety of work settings. The broad scope of the model appeals to researchers, just as its flexibility is attractive to practitioners (Schaufeli & Taris 2014).

This theory implies that when both job demands and resources are high, high strain and motivation is to be expected. When both are low, absence of strain and motivation is to be expected. Consequently, the high demands-low resources condition should result in high strain and low motivation while the low demands-high resources condition should have as a consequence low strain and high motivation. This theory is consistent with Bronkhorst (2015) on the relationship between Job demands, Job resources, Safety climate and Safety behavior among healthcare employees in Dutch. This theory is also consistent with Bakker et al (2007) on the Job demand-Resource model: State of the art among employees in Netherlands.

The forgoing has implication on this study. Where HCWs believe that management cares about their safety by conducting routine training, providing appropriate safety kits, reducing the pressure on staff by employing enough staff and instituting proper job schedule it will buffer the negative effect of job demand as well as enhance their perceived value on safety. This is due to the fact that HCWs tend to value performance over safety during emergency situation and especially when the outcomes of safety performance are not valued. Jebb (2015) opined that workers understand the level of safety performance required of them and know what they are expected to do in order to achieve those requirements but as long as the outcomes for safety performance are not valued, or if the outcomes for other performance indices are more valued and more consistently provided, the worker may experience conflicting motivations to perform safely.

Empirical Review

Aluko et al (2016) carried a quantitative study on the topic "knowledge, attitudes and perceptions of occupational hazards and safety practices in Nigerian healthcare workers" the study employed descriptive cross-sectional design and stratified random sampling technique and questionnaire was administered to 290 healthcare workers who have direct contact with patients. The result revealed that the high level of knowledge shown by respondents was not in line with their practice as it was observed that needle prick injuries was the highest hazard experience by HCWs especially the Doctors.

Iwu, Diwe, Merenu, Duru & Uwakwe (2016) studied on assessment of disease reporting among health care workers in a South Eastern State, Nigeria. The study employed quantitative approach and cross sectional

descriptive design with stratified simple random sampling technique was used to select health care workers from three geopolitical zones in a South Eastern State, Nigeria. Data was collected by a pretested semi structured questionnaire and an observational checklist. The study revealed that functioning disease surveillance and reporting system has been a serious challenge to developing countries hence there is need for development of effective strategies to strengthen capacity for early disease out- break detection.

Bronkhorst (2015) examined the relationship between Job demands, Job resources, Safety climate and Safety behavior among healthcare employees in Dutch. The study employed quantitative approach and the use of primary data. The study made use of Linear mixed effect modeling in analyzing data gotten from 6230 healthcare workers in 52 organizations across Dutch. The study was anchored on JD-R model and the study revealed that Job demand, Job resources and Safety climate play a role in employees physical and psychosocial safety behavior. This is because positive safety climate within an organisation buffers the negative effect of Job demand on safety behavior and strengthens the positive impact of job resources on behaviors especially during uncertainty.

Aguocha Gu, Onyeama, Bakare & Igwe (2015) carried out a quantitative research on the topic "Prevalence of depression among resident doctors in a teaching hospital, South East Nigeria". The study employed a cross sectional survey of 300 consenting resident doctors at a tertiary training health institution and 150 non-resident doctors working in 3 states in south east Nigeria. Chi-square test, independent sample t-test and logistic regression were used to analyze the data and the study revealed that there was high prevalence of depression among resident doctors in teaching hospitals located in the Southeast, Nigeria.

Jebb (2015) carried out an exploratory research on the topic "Reducing workplace safety incidence: Bridging the gap between safety culture theory and practice" amongst construction and mining industries in Australia. The aim of this research was to explore safety culture with a view to understanding how theory and practice can be integrated to improve safety culture and related outcomes within the construction and mining industry. The research consists of three studies that explored safety culture in a large and diverse construction and mining company. The first study revealed that leadership commitment is a key factor for positive safety culture in the organisation. The second revealed that safety climate, safety motivation and leadership were significant predictors of variance in safety behaviors, and safety motivation and supportive leadership were significant partial mediators of the climate–behavior relationship. The third study further explored a key finding from the second study and it revealed that workers do not receive rewards that are valuable to them when they meet safety performance expectations.

Enwere et al (2014) carried out an intervention study on the topic "Knowledge, perception and practice of injection safety and healthcare waste management among teaching hospital staff in south east Nigeria" the study suggested that the poor adherence to safety practices and considerably little experience among medical personnel contribute to the risk of Needle Prick Injuries (NPIs) of HCWs in Nigeria. This is because safety measures were poorly adhered to when handling patients and over half of the respondents have had needle prick injuries in the past. The study revealed that Doctors had the highest cases of NPIs compared to other Healthcare Workers. The study proposed that there is a need for healthcare workers to be regularly updated and trained about changing safety standards in their practice.

Schaufeli & Taris (2014) reviewed Job Demands-Resources Model and its Implications for Improving Work and Health. The study employed a qualitative approach. The early model proposed that high job demands lead to health impairment and strain and that high resources lead to increased motivation and higher productivity. Although the early JD-R model was reviewed and extended to include performance measures, which were conceived as outcomes of burnout. The Revised JD-R Model included work engagement in along with burnout and considered burnout and work engagement to be mediators of the relationship between job demands and health problems, and job resources and turnover intention, respectively. The study proposed that the most distinctive feature of the JD-R model is its generality and flexibility, meaning that the model can be applied in a broad array of situations.

Yunusa, Irinoye, Suberu, Garba, Timothy, Dalhatu & Ahmed (2014) examined the Trends And Challenges Of Public Health Care Financing System In Nigeria: The Way Forward. The study revealed that the major challenges of health care financing includes, poor funding by government, high out of pocket payment, inadequate implementation of health care financing policy and corruption.

Ria et al (2012) studied the influence of occupational safety and health on performance with Job satisfaction as intervening variables. The study was carried out among employees in PT. Mahakarya Rotanindo furniture companies in Gresik, Indonesia. The research employed a qualitative approach and data was obtained through administration of questionnaires. The study revealed that occupational safety and health (OSH) has significant effect on job satisfaction and employees' performance.

Agwu (2012) carried out a quantitative study on the impact of employees' safety culture on organizational performance in Shell bonny terminal integrated project in Bayelsa state, Nigeria. The study was anchored on economic effects theory of Mossink and De Greef (2002) which stated that inculcation of safety culture in employees at the company level will have positive effects on employees and organizational safety performance. Chi-square was used to analyze the data and the study revealed that there is a direct relationship between employees' safety culture and organizational productivity. This is because inculcation of safety culture in organisation will improve employees' safety practices, reduce accident / incident rate, liabilities, medical cost as well as improve organizational productivity.

Smith & Wadsworth (2009) carried a pilot study on the topic Safety culture, advice and performance across 40 organizations in the industrial sector in UK. The study employed quantitative approach and all analyses were carried out by the use of SPSS version 12.0.2. At the univariate level, analysis of variance (ANOVA) was used to compare group means, chi-square tests was used to assess differences in proportions and Spearman's for correlations. At the multivariate level, backward stepwise logistic regression and backward linear regression modeling were used to consider associations. The study revealed that safety culture through positive safety climate was associated with safety performance at the corporate level. The study also revealed that there are also significant, independent associations between OSH advice and corporate safety performance.

Bakker et al (2007) carried out a qualitative research on the topic "the Job demand-Resource model: State of the art" among employees in Netherlands. The study stated that health impairment and job strain occurs when there is disturbance in the equilibrium between the demands employees are faced with and the resource at their disposal. The study challenges the existence of demand-control model and effort-reward imbalance model and outlined their strengths and weakness regarding their predictive value for employee wellbeing. The study proposed that JD-R model is a stronger tool for improving employee wellbeing by Human resource management. This is because it can be applied to wide range of occupation.

Zacharatos et al (2005) conducted two studies which investigated the relationship between high performance work system (HPWS) and occupational safety in United States. In the first study, data were gotten from HR and safety directors across 138 organizations and the result revealed that HPWS was positively related to occupational safety in the organizational level. The second study gathered data from 189 frontline employees from 2 organizations. These studies employed quantitative approach and it revealed that HPWS influences occupational safety by increasing employees' trust in management and perceived safety climate

Parker, Lawrie, Hudson (2005) carried out an exploratory study on the topic "A framework for understanding the development of organizational safety culture". This study focused on establishing a theory-based framework that could be used by organisation to understand their safety culture. The framework was designed to show the multidimensional and dynamic nature of safety culture by providing descriptions of an organisation with respect to a range of key aspect of safety culture, at each of the five levels of the safety culture advancement developed from Westrum's initial ideas (1993). The study employed purposive sampling procedure in the selection of senior executives working in oil and gas industry in Houston, Texas. The content of the framework was informed by 26 semi structured interview with executives from oil and gas industry and later given to 12 employees from the same organisation. The study employed face validity for the assessment of the framework.

Fitzgerald (2004) studied safety Performance Improvement through Culture Change in UK. The study employed qualitative approach. The study revealed that achieving safety performance requires more attention to systems and procedures. Toole (2002) examined the relationship between employees' perceptions of safety and organizational culture among employees in ready-mix concrete industry located Southeast region of United States. The study employed quantitative approach and 3116 questionnaires were distributed while 1414 questionnaires were completely filled and returned. The study revealed that there is a connection between management approach to safety, employees' perception of management and accident / injury rate. Positive safety climate is a factor that helped in reduction of incidence that leads to injury. The study suggested that training and educational sessions improve positive safety climate which in turn help to drive behaviors of the employees.

Barling, Loughlin, Kelloway (2002) carried out a quantitative research on the topic "Development and Test of a Model Linking Safety-Specific Transformational Leadership and Occupational Safety". The researchers developed, tested, and replicated a model in 2 separate studies which revealed that safety-specific transformational leadership predicted occupational injuries. The data gotten from 174 employees working in a restaurant were analyzed using structural equation modeling and it provided strong support for a model where by safety-specific transformational leadership predicted occupational injuries through the effects of perceived safety climate, safety consciousness, and safety-related events. The second study replicated and extended this model with data gotten from 164 employees from different jobs. The research revealed that Safety-specific

transformational leadership and role overload were related to o ccupational injuries through the effects of perceived safety climate, safety consciousness, and safety-related events.

Flin, Mearns, O'connor & Brydan (2000) carried out a research on the topic "Measuring safety climate: identifying the common feature" in UK. The study identified a number of common themes from measures of safety climate in the industrial sector. The study revealed that the most commonly measured dimensions relate to management, safety system, risk, work pressure and competence.

Zohar (1980) carried out a research on the topic "Safety climate in Industrial organisation: theoretical and applied implication" in Israel. The studied employed quantitative approach and a survey was administered to 20 industries in Israel. Correlation analysis was used to analyze the data and the study revealed that safety should be regarded as an integral part of production system and should not be separated from general management responsibility. The study proposed that management commitment and positive attitude are the perquisite for safety improvement.

Oladejo, E.I., Umeh, O. L., Egolum, C.C. (2015) studied the challenges of healthcare facilities maintenance in tertiary hospitals in south east Nigeria. The study employed quantitative approach. The study revealed that the maintenance of tertiary hospitals is not effective and it tends to be reactive instead of proactive. The study revealed that the competence of the maintenance crew in tertiary hospitals has always been questionable especially during emergencies which may lead to injury, loss of equipment and possibly loss of life during emergence situation. The study proposed that emphasis must be placed on training of staff enable them keep up with advancement in technology in tertiary hospitals and specialized professionals who can handle sophisticated medical equipment, fixture and fittings should be engaged to render services on full time basis.

Gap in knowledge

From the reviewed literatures, there appear to be dearth of works on safety culture and employees' performance in southeast, Nigeria. None of the previous studies on safety culture and employees' performance in southeast anchored it on JD-R model hence this study tends to contribute to the existing research on safety culture by introducing the JD-R model as a tool to be used by managers to reduce stress, burnout, and health impairment and as well improve performance in the health sector in Nigeria.. This is the gap this study intends to fill.

Methodology

Research Design

The study adopted correlation research design because the work wants to ascertain the type of functional relationship between the dependent and independent variables.

The population was selected from of selected teaching Hospitals in Southeast region of Nigeria and it comprises of Two thousand, eight hundred and eighty six (2886). However, Three hundred and fifty one (351) sample size was gotten by the use of Taro Yamane Formula while Bowler's Proportionate Allocation Formula (1996) was used to determine the various proportion of the sample size to the various institutions. Furthermore, arising from the computation, COOTHAA was issued 32 questionnaires (14 Doctors and 18 Nurses), ESUTH was issued 99 questionnaire (38 Doctors and 61 Nurses) and FETHA 220 questionnaires (98 doctors and 122 Nurses). A 5-point Likert Scale Questionnaire was structured to elicit relevant data for the study. 351 Copies of the questionnaires were distributed by the researcher through the Chairman, Medical Advisory Committee (C-MAC) of the various Teaching Hospitals. A draft of the questionnaire in line with the research objectives, hypotheses and research questions were submitted to experts who were requested to examine the items in terms of content relevance and clarity as well as to ascertain if the items are related to the objective, research questions and hypotheses. Cronbach Alpha method was used to ascertain the internal consistency and reliability of the instrument. The reliability coefficient of 0.876 was obtained and this judged adequate for the study.

Testing Hypotheses

Hypothesis One

H_1: There is a significant relationship between training and work behavior in the selected Teaching Hospitals in South-East, Nigeria**.**

Question 1-10 were designed and administered to validate or disprove the above hypothesis.

Test

Our goal is to analyze the type and extent of relationship between training and work behavior in the selected Teaching Hospitals in South-East, Nigeria**.** Based on the outcome of the ten questionnaire items in the questionnaire administered to test hypothesis one, Pearson's Correlation Coefficient test was employed using the relevant area of the computer special package for social science (SPSS) as related to research questions one and hypothesis one respectively. The result below emerged.

Table 1 Correlations (Pearson) for training and work behavior

		Training	Work Behaviour
Training	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	127	127
Work Behaviour	Pearson Correlation	.559(**)	1
	Sig. (2-tailed)	.001	
	N	127	127

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

Decision Rule:
The two variables were subjected to a correlation analysis to determine relationships that exist if any among them. Findings provided with the aid of the Pearson Correlation Analysis as indicated in table 4.35 presents a correlation coefficient (r) result for training as it relates to work behaviour to be (.559) significant at the 0.01 level (2-tailed).

Hypothesis Two
H_1: There is a significant relationship between job resources and job demand in the selected Teaching Hospitals in South-East, Nigeria.

Questionnaire item 11-20 were designed and administered to validate or disprove the above hypothesis.

Test
Our aim is to ascertain the type and the extent of relationship between job resources and job demand in the selected Teaching Hospitals in South-east, Nigeria. Based on the outcome of the ten questionnaire items in the questionnaire administered to test hypothesis two, the Pearson's Correlation Coefficient test was employed using the relevant area of the computer special package for social science (SPSS) as related to research question two and hypothesis two respectively. The result below emerged.

Table 2 Correlations (Pearson) for job resources and job demand

		Job Resources	Job Demand
Job Resources	Pearson Correlation	1	.846(**)
	Sig. (2-tailed)		.000
	N	127	127
Job Demand	Pearson Correlation	.846(**)	1
	Sig. (2-tailed)	.000	
	N	127	127

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

Decision Rule:
The two variables were subjected to a correlation analysis to determine relationships that exist if any among them. Findings provided with the aid of the Pearson Correlation analysis as indicated in table 4.36 presents a correlation coefficient (r) result for job resources as it relates to job demand to be (.846) significant at the 0.01 level (2-tailed).

Hypothesis Three:
H_1: There is a significant relationship between steady communication and management commitment in the selected Teaching Hospitals in South-east, Nigeria.

Questionnaire items 21-30 were designed and administered to validate or disprove the above hypothesis.

Test
Our aim is to ascertain the type and extent of relationship between steady communication and management commitment in the selected Teaching Hospitals in South-east, Nigeria. Based on the outcome of the ten items in the questionnaire administered to test hypothesis one, Pearson's Correlation Coefficient test was employed using the relevant area of the computer special package for social science (SPSS) as related to research questions three and hypothesis three respectively. The result below emerged.

Table 3 Correlations (Pearson) for communication and management commitment

		Communication	Mgt commitment
Communication	Pearson Correlation	1	-.626(**)
	Sig. (2-tailed)		.000
	N	127	127
Mgt commitment	Pearson Correlation	-.626(**)	1
	Sig. (2-tailed)	.000	
	N	127	127

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

Decision Rule:
The two variables were subjected to a correlation analysis to determine relationships that exist if any among them. Findings provided with the aid of the Pearson correlation analysis as indicated in table 4.4 presents a correlation coefficient (r) result for communication as it relates to management commitment to be (-.626) significant at the 0.01 level (2-tailed).

Discussion
The study evaluated through the use of questionnaire with questions tailored towards ascertaining the type of relationship existing between safety culture and employee performance in selected teaching hospitals in Southeast, Nigeria. The entire three hypotheses were subjected to

statistical test and Pearson correlation was employed. Computer aided Microsoft special package for social science (SPSS) was used to aid analysis to ensure accuracy and eliminate mistake arising from manual computation.
Hypothesis one was tested with Pearson correlation to ascertain the type and extent of relationship existing training and work behavior in selected teaching hospital in southeast, Nigeria. The finding indicates that there is a positive correlation between training and extent of work behaviour for the selected Teaching Hospitals in South East, Nigeria and it is significant at 0.01 level. This result implies that training does contribute or plays a very significant role in the extent to which employees work behaviour complies with work ethics with regards to safety culture. That is, the more training the employees receive, the more likely they are willing to adhere to required safety culture behavior in the workplace so as to minimize hazards and injury.

Hypothesis two was tested using Pearson correlation to ascertain the type and extent of relationship between job resource and job demand in selected Teaching Hospitals in Southeast, Nigeria. The findings indicate that a very strong moderately positive correlation exist between job resources and job demand for the selected Teaching Hospitals in South East, Nigeria. This result implies that the higher the job resources needed are provided for in selected Teaching Hospitals in South East, Nigeria, the more it mitigates the negative effect of job demand on employees. This finding is consistent with Bronkhorst (2015) which states that Job resources buffer the negative effect of job demand.

Hypothesis three was tested using Pearson correlation to ascertain the type and extent of relation existing steady communication and management commitment in the selected teaching hospital in southeast, Nigeria. The findings indicates clearly that there is a very strong negative correlation existing between communication and management commitment to safety culture management issues in the selected Teaching Hospitals in South East, Nigeria.

This result invariably portends that organizations with poor communication on safety culture management would be unwilling to devote commitment and extra cost on safety culture management issues.

Conclusion And Recommendations

The study concludes that job resources plays an important role in mitigating the negative impact of job demand on HCWs therefore an improvement in management attitude and value on safety will lead to increase in positive work behavior and adherence to safety rules. The study also agrees with Jebb (2009) that workers understand the level of safety expected from them but once other performance indices are more valued, they tend to experience conflicting motivation to perform safely. The study is also consistence with Bronkhorst (2015) that job resources mitigate the negative impact of job demand on employees. These recommendations were forwarded based on the findings of the study. Management should provide safety equipments and materials which will enable the HCWs to perform safely

Management should also conduct safety programs and training, this is because it increase workers trust on management and perceive value on safety
Management should also maintain steady flow of communication on issues regarding safety.

References

Aguocha, G. U, Onyeama, G.M., Bakare M.O., Igwe, M.N. (2015) "Prevalence of Depression among Resident Doctors in a Teaching Hospital, South East Nigeria". *International Journal of Clinical Psychiatry 2015, 3(1): 1-5 DOI: 10.5923/j.ijcp.20150301.01*

Agwu, M.O (2012) "Impact of employees' safety culture on organisational performance in shell bonny terminal integrated project (btip)" *European Journal of Business and Social Sciences, Vol. 1, No. 5, pp 70-82, August 2012. URL: http://www.ejbss.com/recent.aspx ISSN: 2235 - 767X*

Bakker, A.E. & Demerouti, E. (2007) "The Job Demands-Resources model: state of the art" *Journal of Managerial Psychology Vol. 22 No. 3, 2007 pp. 309-328 q Emerald Group Publishing Limited 0268-3946 DOI 10.1108/02683940710733115*

Barling, J., Loughlin & Kelloway, E. K., (2002) "Development and Test of a Model: Linking Safety-Specific Transformational Leadership and Occupational Safety". *Journal of Applied Psychology Copyright 2002 by the American Psychological Association, Inc. 2002, Vol. 87, No. 3, 488–496 0021-9010/02/$5.00 DOI: 10.1037//0021-9010.87.3.488*

Bronkhorst, B. (2015) "Behaving safely under pressure: the effect of job demand, resource and safety climate on employee physical and psychological safety behavior*" journal of safety research.www elsvier.com/ locate/jsr.*

Enwere, O.O., & Diwe, K. C.,(2014) "Knowledge, perception and practice of injection safety and healthcare waste management among teaching hospital staff in south east Nigeria: an

intervention study". *The Pan African Medical Journal. 2014;17:218. doi:10.11604/pamj.2014.17.218.3084*

Fitzgerald, M.K. () "Safety Performance Improvement Through Culture Change" ABB Engineering Services, Daresbury Park, Daresbury, Warrington UK WA4 4BT

Fleming, M. (2001) "Safety culture maturity model" The Keil Centre 5 South Lauder Road Edinburgh EH9 9LJ Health and Safety Executive

Flin, Mearns, O'Connor & Bryden (2000) "Measuring safety climate: identifying the common features" *Safety Science 34 (2000) 177±192 www.elsevier.com/locate/ssci*

Haines, V.A., Hurlbert, J.S. and Zimmer, C. (1991), "Occupational stress, social support, and the buffer hypothesis", *Work and Occupations, Vol. 18, pp. 212-35.*

Hakanen, J.J., Bakker, A.B. and Schaufeli, W.B. (2006), "Burnout and work engagement among teachers", *Journal of School Psychology, Vol. 43, pp. 495-513*

Iwu, A. C., Diwe, K. C., Irene A. Merenu, I. A., Duru, C. B. & Uwakwe, K. A., (2016) "Assessment of disease reporting among health care workers in a South Eastern State, Nigeria" *International Journal of Community Medicine and Public Health Iwu AC et al. Int J Community Med Public Health. 2016 Oct;3(10):2766-2774 http://www.ijcmph.com pISSN 2394-6032 | eISSN 2394-6040*

Irinoye, O., Suberu, A., Garba, A., M., Timothy, G., Dalhatu, A. & Ahmed, S. (2014) " Trends And Challenges Of Public Health Care Financing System In Nigeria: The Way Forward". *Journal of Economics and Finance (IOSR-JEF) e-ISSN: 2321-5933, p-ISSN: 2321-5925.Volume 4, Issue 3. (May-Jun. 2014), PP 28-34 www.iosrjournals.org*

Jebb, S. (2015) "Reducing workplace safety incidents: bridging the gap between safety culture theory and practice" *Centre for Accident Research and Road Safety. School of Psychology and Counseling. Institute of Health and Biomedical Innovation Faculty of Health Queensland University of Technology 2015*

Parker, D., Lawrie, M. &Hudson, P. (2002) " A framework for understanding the development of organizational safety culture". *Science direct 44(2006)551-562. Wwwelsevier.com/locate/ssci.*

Oladejo, E. I., Umeh, O.L., & Egolum, C.C. (2015) "The challenges of healthcare facilities maintenance in tertiary hospitals in south east Nigeria" *International Journal of Civil Engineering Construction and Estate Management Vol.3, No.2, pp.1-6, June 2015 Published by European Centre for Research Training and Development UK (www.eajournals.org) ISSN 2055-6578(Print), ISSN 2055-6586(online)*

Onyeizuegbe, C. U. & Orogbu, O.L. (2015). *Management Thoughts, Theories and Practice.*Nimo: Rex Charles and Patrick Publications.

O'Toole, M. (2002) "The relationship between employees' perceptions of safety and organizational culture" *Journal of Safety Research 33 (2002) 231–243 www.elsevier.com/locate/jsr*

Ria Mardiana, Eliyana, A. & Oci, N. S. (2012) "The Influence of Occupational Safety and Health on Performance with Job Satisfaction as Intervening Variables (Study on the Production Employees in PT. Mahakarya Rotanindo, Gresik)" *American Journal of Economics June 2012, Special Issue: 136-140 DOI: 10.5923/j.economics.20120001.30*

Schaufeli, W.B., Bakker, A.B., & Van Rhenen, W. (2009). How changes in job demands and resources predict burnout, work engagement, and sickness absenteeism. *Journal of Organizational Behavior, 30, 893-917*

Schaufeli, W. B & Taris, T. W (2014) "A Critical Review of the Job Demands-Resources Model: Implications for Improving Work and Health" G.F. Bauer and O. Hämmig, Bridging Occupational, Organizational and Public Health: *A Transdisciplinary Approach, DOI 10.1007/978-94-007-5640-3_4, © Springer Science+Business Media Dordrecht 2014*

Trang Vu & Helen De Cieri (2014) "Safety culture and safety climate definitions suitable for a regulator: A systematic literature review" *ISCRR Research Report 0414-060-R2C*

Wadsworth, E. J.K., & Andy P Smith, A.P. (2009) "Safety culture, advice and performance" *Policy and Practice in Health and Safety 07.1 2009 © IOSH Services Limited*

Zacharatos, A., Barling, J., & Iverson, R. D., (2005). "High-Performance Work Sy;stems and Occupational Safety" *Journal of Applied Psychology Copyright 2005 by the American Psychological Association 2005, Vol. 90, No. 1, 77–93 0021-9010/05/$12.00 DOI: 10.1037/0021-9010.90.1.77.*

Zohar, D. (1980)" Safety Climate in Industrial Organizations: Theoretical and Applied Implications" *Journal of Applied Psychology 1980, Vol. 65, No. 1, 96-102*