Safety Management and Job Performance among Employees in Manufacturing Firms in Rivers State, Nigeria

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ABSTRACT
This study investigated safety management and job performance among employees in manufacturing firms in Rivers State. Three research questions were raised to guide the study, and nine hypotheses were formulated and was tested at 0.05 level of significance. The survey research design was adopted for the study. The population of the study was 504 staff of the 16 selected manufacturing industries in Rivers State. The Taro Yamen formular was used to obtain a sample size of 223 respondents (senior and junior staff), while the simple random sampling technique was adopted for the study. The data was collected and analyzed using the descriptive statistic of mean and standard deviation and inferential statistic of Pearson’s product moment correlation to answer the research questions and to test the formulated hypotheses at 0.05 alpha level respectively. The following findings were made: there is a significant relationship between supervision and monitoring and work output among employees in manufacturing firms in Rivers State. Management commitment significantly relates with timely delivery among employees in manufacturing firms in Rivers State. Finally there is a significant relationship between transparency and innovativeness among employees in manufacturing firms in Rivers State. The study therefore recommends to organizations to emphasize and to invest on the implementation of elaborate emergency management practices and plans. The provision of written emergency plan, first aid facilities in their work places, testing of emergency procedures, and presence of officers trained on disaster management, evacuation procedures, display of emergency contacts and display of evacuation procedures, employees training on the use of emergency equipment in their work places will positively influence job satisfaction levels and will in turn improve institution’s image.

Keywords: Safety Management, Job Performance, Employee, Manufacturing Firms, Rivers State

INTRODUCTION
The dangers and threats in manufacturing companies cannot be overemphasized and managers and workers alike are obliged to be acutely aware of the hazards associated with their jobs, as well as the preventive measures necessary for minimizing them. In the view of Pitt (2007), many investigations bordering on workplace fatality point out the same areas of concern regarding worker safety, and the primary contributing factors to these fatal workplace injuries are human error, procedural insufficiency, and equipment insufficiency. Rollah (2010) asserts that today, technology pressure and intense global competition do not only bring tremendous changes in organizational safety but also threaten it. Although in many countries, workplace accidents have received big attention as early as 100 years before due to the fact that it is enormously costly (Pitt, 2007). According to Stromgren and Andersson (2010), making good business could be proven through the increase of productivity and profit in an accident-free working environment. Durrishah (2009) opined that inconsistent understanding of safety responsibility between management and employees has contributed to unsafe working environment. Safety therefore is regarded as the provision of safe and accident free working environment for employees. Safety management therefore is the managing of business activities and applying principles, framework, and processes to help prevent accidents, injuries and to minimize other risk. It is also referred to as a systematic approach
to managing safety, including the necessary organizational structures, accountabilities, policies and procedures. As per ICAO requirements, service providers are responsible for establishing an SMS, which is accepted and overseen by their State. The dimensions of safety management to be discussed in this study are; supervision and monitoring by management, establishment of management commitment, and establishment of transparency. A suitable work environment influences workers attitude positively to work and the desire to participate in the training processes within the working environment. It also deals with staff interest at the workplace. Safety can also undermine the involvement or noninvolvement of workers in the production activities which operates at the workplace. Staff translates technology, cognitive and skills into production to consumers at the workplace. Working environment is important to productivity. If a staff experiences the work place as a safe, healthy, happy place with supportive resources and facilities for working for optimal production, he or she tends to participate more than expected in the process of production (Alisimo, 2003). However, despite this strategic importance of the manufacturing industry, the industry is fraught with safe issues as it affect the job performance of employees in the industry and the obvious need to manage health and safety proactively, some establishment do not give it the priority it deserves. This may be due to a lack of knowledge, skills and motivation or to limited staff resources as the case may be. It has been reported by International Labour Organization (ILO, 2012) that, everyday 6,300 people die as a result of occupational accidents of work-related diseases - more than 2.3 million deaths per year, 317 million accidents occur on the job annually; many of these resulting in extended absences from work. The human cost of this daily adversity is enormous and the economic burden of poor occupational safety and health practices is estimated at 4 percent of global Gross Domestic Product each year. Most of these deaths and injuries are said to occur particularly in developing countries where a large part of the population is engaged in hazardous activities. Creating a safe working environment is rationally acceptable and neglecting safety in the workplace can cause a lot of damage and injury to the workforce. Increased injuries caused by the absence of or inadequate safety in the workplace will not only lead to the financial losses, but also to the loss of valuable human resources of the organization. It is, therefore, necessary that much more attention be paid to safety and occupational health than before (Stone, 2004). In the view of Ford and Tetrick (2011), many studies suggest that accidents, injuries and illnesses in the workplace are still significant problems in organizations. Others indicate that if an organization can reduce the rate of occupational accidents, diseases and unwanted stress, naturally medical leaves, job abandonment and absenteeism will be reduced, and the efficiency and effectiveness of the organization, job satisfaction, flexibility, and employees’ participation in workplace will improve (Stone, 2004). In the contrary, amid international concerns about health care safety and quality, there has been an escalation of investigations by health care regulators into adverse events (Laverty, Smith, Pape, Mears, Wachter & Millett, 2012). Safety issues are not limited to physical injuries that occur in the job but also occupational diseases for example excessive and constant noise, long ignored as a source of problems in the past, can lead to serious health problems such as neurologic, cardiovascular and endocrinological, also cancer and hypertension are due to occupational hazards and stress, furthermore, the proliferation of chemicals in the working and living environment particularly chlorinated and synthetic organic chemicals, create serious long short-term problems. For example carbon tetrachloride induced liver and kidney damage in plastic and dry cleaning workers and bladder cancer in paint manufacturing workers textile. Many employers are attempting through assistance programs to address a variety of employee’s health problems such as drugs and alcohol abuse and accumulative effects of exposure to toxic substances and psychological stressor. Additionally, employers today are advocating employee’s wellness programs, thereby encouraging healthy lifestyles (Leap & Crino, 2014).

The importance of risk and safety management is increasingly emphasized in firms, and the importance of overall safety in the company’s profitability, business and competitiveness is significant. The world’s leading companies have started to increasingly invest in different sectors of safety, and safety is a central precondition of competitiveness, as well as an integral part of high-quality business operations today (Pekka, 2009). 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 HRM 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, and attendance at court hearings in contested cases. Regardless of the size of the industry, or how you chose to measure it, the safety of each and every employee is crucial to your organization’s success and to improve job performance of employees. No matter how sophisticated or superior the operations, activities, communication, and data processing systems are, they are designed, maintained, and operated by people. The importance of having an emergency plan, disaster recovery plan, or business continuity plan to minimize the negative impact of potential natural or man-made disasters cannot be overlooked. The need for planning has been reinforced by the lessons learned in the aftermath of the terrorist attacks on 11 September 2001 and catastrophic natural events such as hurricanes, tornadoes, and earthquakes (Jyothi & Venkatesh, 2006).

Job performance is the way employees perform their work. An employee's performance is determined during job performance reviews, with an employer taking into account factors such as leadership skills, time management, organizational skills and productivity to analyze each employee on an individual basis. The dimensions of job performance are; Profitability, market share and product quality. However, the achievement of a healthy and safe place of work and the elimination to the maximum extent possible of hazards to health and safety is the responsibility of everyone employed in an organization, as well as those working there under contract as it enhances sustainable profitability, market share and product quality in the industry. But the onus is on management to achieve and indeed go beyond the high standard in health and safety matters required by the legislation, the Health and Safety at Work, etc Act, 1974 and the various regulations laid down in the Codes of Practice (Armstrong, 2009). Agwu (2012) studied total safety management (TSM) as a strategy for improving organizational performance in selected construction companies in Nigeria, the research question addressed the extent of implementation and influence of total safety management on better organizational performance in the six selected construction companies. The study was based on Ken Wilber’s Integral Safety Model which views construction safety from the perspective of the construction worker as an entity consisting of four inter-dependent and complementary dimensions. The research concluded that implementation of total safety management at the organizational level in construction companies in Nigeria will improve organizational performance. The constant and unexpected releases of reactive, toxic, or flammable liquids and gases in the manufacturing processes involving highly hazardous chemicals have been reported for many years (Jefress, 2000). Regardless of the industry that uses these highly hazardous chemicals, there is a potential for an accidental release any time they are not properly controlled. This, in turn, creates the possibility of disaster and accident for both employees and properties of the industry. Controlling these hazards becomes a big burden on the output and overall job performance. Unsafe conditions, unsafe acts and accidents are all symptoms of something wrong in the organizational system and that it is the top management who is responsible for building such management systems that can effectively control the hazard associated with organizations operation. Safety management thus is the duty of the management as well as the individual employees.

**Research Questions:** The following research questions were raised to guide the study:

i. To what extent does supervision and monitoring relate with work output of manufacturing firms in Port Harcourt, Rivers State?

ii. To what extent does management commitment relate with timely delivery of manufacturing firms in Port Harcourt, Rivers State?

iii. To what extent does transparency relate with innovativeness of manufacturing firms in Port Harcourt, Rivers State?

**Hypotheses**

The following null hypotheses were tested at 0.05 alpha level.

**H₀₁:** There is no significant relationship between supervision and monitoring and work output of manufacturing firms in Port Harcourt, Rivers State.

**H₀₂:** There is no significant relationship between management commitment and timely delivery of manufacturing firms in Port Harcourt, Rivers State.
There is no significant relationship between transparency and innovativeness of manufacturing firms in Port Harcourt, Rivers State.

**METHODOLOGY**

The survey research design was adopted for this study. The population of this study was 504 senior and junior staff of 16 manufacturing firms in Port Harcourt. The Taro Yamane’s formula was adopted to determine the sample size of 223. The simple random sampling technique was adopted for this study. A well-constructed and questionnaire titled Safety Management on Job Performance Questionnaire (SMJPQ) was used in this study to elicit responses from the respondents. The structured questionnaire was designed and tailored in a modified four-point Likert format. The instrument was validated by two experts in the field of Measurement and Evaluation, while a reliability coefficient value of 0.73 was determined. The descriptive statistic of Mean was used to answer the stated research questions, while the Pearson’s Product Moment Correlation Analysis (statistic of inference) was used in testing the formulated hypotheses at 0.05 level of significant.

**RESULTS**

**Research Question 1:** To what extent does supervision and monitoring enhance work output among employees of manufacturing firms in Rivers State?

<table>
<thead>
<tr>
<th>S/N</th>
<th>Questionnaire Item</th>
<th>X</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Supervision and monitoring enhances work output ratio of manufacturing firms.</td>
<td>2.91</td>
<td>1.05</td>
</tr>
<tr>
<td>2</td>
<td>Supervision and monitoring affects employees’ dispositions in realizing huge work output.</td>
<td>2.60</td>
<td>0.91</td>
</tr>
<tr>
<td>3</td>
<td>Employees who are not properly supervised do not raise sufficient return on investment.</td>
<td>2.72</td>
<td>1.81</td>
</tr>
<tr>
<td>4</td>
<td>Inspections identify dangerous substances</td>
<td>2.53</td>
<td>1.92</td>
</tr>
</tbody>
</table>

**Grand Mean**

2.69

The mean score of 2.91 implies that supervision and monitoring enhances work output ratio of manufacturing firms. The mean score of 2.60 agrees that supervision and monitoring affects employees’ dispositions in realizing huge work output, the means score of 2.72 also indicates that employees who are not properly supervised do not raise sufficient return on investment, while the mean score of 2.53 agrees that inspections identify dangerous substances. The grand mean of 2.69 implies that supervision and monitoring enhances work output among employees of manufacturing firms in Rivers State.
Research Question 2: To what extent does management commitment enhance timely delivery of manufacturing firms in Port Harcourt, Rivers State?

Table: 2. Mean of the extent to which management commitment enhance timely delivery of manufacturing firms in Port Harcourt, Rivers State

<table>
<thead>
<tr>
<th>S/N</th>
<th>Questionnaire Item</th>
<th>( \bar{X} )</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Establishment of management commitment enhances surplus timely delivery in manufacturing firms.</td>
<td>2.82</td>
<td>1.87</td>
</tr>
<tr>
<td>10</td>
<td>Roles and responsibilities of the employees are defined in their commitment.</td>
<td>2.90</td>
<td>1.71</td>
</tr>
<tr>
<td>11</td>
<td>Employees committed to work understand their involvement in increasing their timely delivery.</td>
<td>2.97</td>
<td>2.01</td>
</tr>
<tr>
<td>12</td>
<td>Management commitment negatively influence staff.</td>
<td>2.58</td>
<td>1.91</td>
</tr>
</tbody>
</table>

Grand Mean 2.82 SD

The mean score of 2.82 implies that establishment of management commitment enhances surplus timely delivery in manufacturing firms. The mean score of 2.90 agrees that roles and responsibilities of the employees are defined in their commitment, the means score of 2.97 also indicates that employees committed to work understand their involvement in increasing their timely delivery, while the mean score of 2.58 agrees that management commitment negatively influence staff.

Research Question 3: To what extent does transparency enhance innovativeness of manufacturing firms in Port Harcourt, Rivers State?

Table: 3. Mean of the extent to which transparency enhance innovativeness of manufacturing firms in Port Harcourt, Rivers State

<table>
<thead>
<tr>
<th>S/N</th>
<th>Questionnaire Item</th>
<th>( \bar{X} )</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>Establishment of transparency influences the innovativeness of firms.</td>
<td>2.80</td>
<td>1.72</td>
</tr>
<tr>
<td>18</td>
<td>Transparency of employees significantly improves the innovativeness of their firms.</td>
<td>3.01</td>
<td>1.09</td>
</tr>
<tr>
<td>19</td>
<td>Transparency is another means of controlling and modifying quality of outputs in manufacturing firms.</td>
<td>2.50</td>
<td>2.10</td>
</tr>
<tr>
<td>20</td>
<td>Companies educate employees about a healthy work-style and lifestyle through transparency.</td>
<td>2.67</td>
<td>1.56</td>
</tr>
</tbody>
</table>

Grand Mean 2.75 SD

The mean score of 2.80 implies that establishment of transparency influences the innovativeness of firms. The mean score of 3.01 agrees that transparency of employees significantly improves the innovativeness of their firms, the means score of 2.50 also indicates that transparency is another means of controlling and modifying quality of outputs in manufacturing firms, whereas the mean score of 2.67 agrees that companies educate employees about a healthy work-style and lifestyle through transparency. The grand mean of 2.75 implies that transparency relates to innovativeness to a very great extent.

Test of Hypotheses

In determining the statistical technique to suit our purpose, we considered Kothari (2004: 138) who argued that when there exists association or correlation between two variables, correlation technique should be used and when there exists cause and effect relationship between two variables in the case of the bivariate population or between one variable on one side and two or more variables on the other side.
in case of multivariate population, partial correlation technique is appropriate. This was the basis for our choice of the Pearson’s product-moment correlation coefficient to test our hypothesized relationships in our study. This section will therefore be used to present.

### Correlations

<table>
<thead>
<tr>
<th>Supervision and Monitoring</th>
<th>Work Output</th>
<th>Timely Delivery</th>
<th>Innovativeness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervision and Monitoring</td>
<td>Pearson Correlation</td>
<td>1.694**</td>
<td>.739**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>195</td>
<td>195</td>
<td>195</td>
</tr>
<tr>
<td>management commitment</td>
<td>Pearson Correlation</td>
<td>.694**</td>
<td>1.737**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>195</td>
<td>195</td>
<td>195</td>
</tr>
<tr>
<td>transparency</td>
<td>Pearson Correlation</td>
<td>.739**</td>
<td>.737**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>195</td>
<td>195</td>
<td>195</td>
</tr>
</tbody>
</table>

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

**Source:** SPSS output, 2019

**Ho₁: There is no significant relationship between supervision and monitoring and employee work output of manufacturing firms in Rivers State.**

From the result in the table above, the correlation coefficient shows that there is a positive relationship between supervision and monitoring and employee work output. The correlation coefficient 0.694 confirms the magnitude and strength of this relationship but it is not statistically significant at p 0.000<0.05. The correlation coefficient represents a very high correlation between the variables. Therefore, based on empirical findings the null hypothesis earlier stated is hereby rejected and the alternate accepted. Thus, there is a significant relationship between supervision and monitoring and employee work output of manufacturing firms in Rivers State.

**Ho₂: There is no significant relationship between management commitment and employee work output of manufacturing firms in Rivers State.**

From the result in the table above, the correlation coefficient shows that there is a positive relationship between management commitment and employee work output. The correlation coefficient 0.835 confirms the magnitude and strength of this relationship but it is not statistically significant at p 0.000<0.05. The correlation coefficient represents a very high correlation between the variables. Therefore, based on empirical findings the null hypothesis earlier stated is hereby rejected and the alternate accepted. Thus, there is a significant relationship between management commitment and employee work output of manufacturing firms in Rivers State.

**Ho₃: There is no significant relationship between transparency and employee work output of manufacturing firms in Rivers State.**

From the result in the table above, the correlation coefficient shows that there is a positive relationship between transparency and employee work output. The correlation coefficient 0.867 confirms the magnitude and strength of this relationship but it is not statistically significant at p 0.000<0.05. The correlation coefficient represents a very high correlation between the variables. Therefore, based on empirical findings the null hypothesis earlier stated is hereby rejected and the alternate accepted. Thus,
there is a significant relationship between transparency and employee work output of manufacturing firms in Rivers State.

DISCUSSION OF FINDINGS

Based on the analysis of the data it was found that there is a significant relationship between supervision and monitoring and work output, timely delivery and innovativeness among employees in manufacturing firms in Rivers State. This finding is in line with the assertion of Champoux and Brun (2002) that supervision involves overseeing or watching over an activity or task being done by someone and ensuring that it is performed correctly. He stated further that a supervisor will, by watching, posing questions, giving guidance, and/or taking actions, all in consultation with the staff concerned, make sure that the important activities are being performed and are performed correctly. For example, a supervisor will observe whether a trained health worker gives four key messages following vaccination according to training guideline given and, if not, will find out the reasons and try to remedy them.

Monitoring according to Hamid (2004) is the continuous review of programme implementation to identify and solve problems so that activities can be implemented correctly and effectively. Monitoring involves regular collection and analysis of information/data on aspects of the programme’s activities. The difference between monitoring and supervision is that monitoring is usually concerned with aspects of the programme that can be counted, whereas supervision deals with the performance of the people working within the programme including giving them support and assessing conditions in the health facility. Some aspects of monitoring are closely connected to supervision. During the supervisory visit, the supervisor can monitor by taking notes and recording data, such as how many trained health workers at the session are giving injections according to the protocols, and the vaccines and supplies available (Robson, 2007).

It was also found that the management commitment significantly relates with timely delivery of task among employees in manufacturing firms in Rivers State. This finding is in line with the view of Lingard and Holmes (2001) who opined that management commitment is referred to as an individual's psychological bond to the organization, which includes a sense of work engagement, loyalty and belief in the values of the organization. Management commitment according to Miller and Lee (2001) therefore is characterized by employee's acceptance of organizational goals and their willingness to exert effort on behalf of the organization. Commitment is see as the force that binds an individual to a course of action of relevance to one or more targets. Organizational commitment is also seen as the situation whereby an employee identifies with a particular organization and its goals, and wishes to maintain membership in the organization. Organizational commitment is therefore, the degree in which an employee is willing and able to maintain membership due to interest with the organization’s goals and values (Albert & Hallowell, 2013).

Finally it was found that a significant relationship exists between transparency and innovativeness among employees in manufacturing firms in Rivers State. This entails that transparency, as used in science, engineering, business, the humanities and in other social contexts, implies openness, communication, and accountability. Transparency in the opinion of Kahya (2007) is operating in such a way that it is easy for others to see what actions are performed. Transparency in the workplace refers to how and why something occurs. For example, if Company A identifies efficient workers and promotes them without revealing what separated the efficient and inefficient workers, it would be considered a lack of transparency. There’s no indication as to how the workers are chosen for a promotion. If Company B states all employees who exhibit X, Y and Z qualities will be considered for a promotion, then Company B’s promotions are transparent.

Kossek (2012) asserted that lack of transparency can lead to disgruntled workers who question the company’s actions. When employees aren’t told why something happens, they are left to form their own assumptions, which can cause rumors that hurt the company’s relations with the public as well as with employees. A lack of transparency effectively destroys trust in the workplace. When a company knowingly keeps employees in the dark, means telling them they cannot be trusted with the information. A workplace that is not transparent often leads to decreased productivity and a high turnover rate.
However, a workplace that is too transparent can cause unneeded panic and too much insight into the company. For example, if a company is conducting extensive employee productivity reports to prepare for a layoff, explaining the reasoning to the employees would cause workplace morale and productivity to plummet. If telling employees why or how something is occurring could cause significant problems, it is best to avoid transparency.

CONCLUSION/ RECOMMENDATIONS
It was concluded that there is a significant relationship between supervision and monitoring and work output, timely delivery and innovativeness of manufacturing firms in Port Harcourt, Rivers State. Management commitment significantly relates with timely delivery, work output, and innovativeness of manufacturing firms in Port Harcourt, Rivers State. Finally there is a significant relationship between transparency and innovativeness, work output and timely delivery of manufacturing firms in Port Harcourt, Rivers State.

From the above, the study recommends that the practice of occupational health safety and management practices leads to improved job satisfaction levels among employees in an organization. The creation and implementation of a policy that sensitizes and allows for provision of sufficient welfare services such as drinking water facilities, toilet facilities, canteen services and parking spaces in the work environment so as to improve job satisfaction levels of the employees in their work places. The study further recommends to organizations to emphasize and to invest on the implementation of elaborate emergency management practices and plans. The provision of written emergency plan, first aid facilities in their work places, testing of emergency procedures, and presence of officers trained on disaster management, evacuation procedures, display of emergency contacts and display of evacuation procedures, employees training on the use of emergency equipment in their work places will positively influence job satisfaction levels and will in turn improve institution’s image.

REFERENCES


