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Effects of Occupational Hazards on Workers’ Performance in Nigeria’s Cement Industry

Ebeloku Ademola I., Akinbode James O., Sokefun Eniola A.

Abstract
Purpose. This paper examined the effects of occupational hazards on workers’ performance in Nigeria’s cement industry.
Methodology. Survey research method was employed in conducting the research: a structured questionnaire was designed and administered to one hundred and eighty-three (183) workers of Lafarge Cement Plant in Sagamu, Ogun State, Nigeria.
Findings. The study revealed that the frequency level of occupational hazards had a significant influence on workers performance; a significant difference exist between performance levels of healthy workers to unhealthy workers; and that safe workers had high tendencies of performing on the job than workers who were unsafe at work in the cement industry.
Research implications – The study established the relevance of workers wellness and safety to workers commitment to duties as predictors of workers’ performance.
Originality/Value – The paper advocates the promotion of global standard occupational health and safety practices in Nigeria’s cement industry. Specifically, the study emphasises the importance of a healthy workforce and work system, and suggestions were presented for improved occupational health and safety systems.
Paper type: Empirical paper.

Keywords: Absenteeism, Cement Industry, Hazard, Health, Presenteeism, Workers’ Performance.

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1. Introduction

Workers are central to the achievement of organizational goals and objectives. This centrality becomes threatened irrespective of workers’ knowledge, skills, experience and competence, when the workplace is either unhealthy or unsafe for workers’ to discharge identified tasks. This implies that workers wellness and safety are critical factors to workplace performance. It is a healthy worker that can be productive and it is only a safe worker that can be comfortable at work to discharge his/her responsibilities. Workers are vulnerable to occupational hazards which often result to a number of health hazards and cardiovascular ailments. This is obvious in the cement manufacturing activities such as quarrying, crushing, blending, and kiln burning. Emissions of pollutants such as noise, dust, gases and vibration when operating machinery are also common occurrences. Potentially, these causes changes in the respiratory tract and impairs pulmonary functions (Tetrick, 2011) as well as industrial accidents and injuries.

Hence, occupational hazards have an enormous negative impact on the health of workers and their performance. Numerous studies have attempted to analyse occupational hazards to identify the resultant factors such as frequent absenteeism and low workers’ commitment, and other counterproductive work behaviour. Health and safety hazards as components of occupational hazards affect workers wellbeing and subsequently their levels of work performance. For instance, a study conducted by Okoye, Odumegwu and Omuku (2012) found that most workers in Nigeria were unaware of the hazardous nature of their work environment and the consequences of working in such places without adopting the relevant safety measures. Ahmed and Newson-Smith (2010) discovered that despite the relatively high knowledge of cement factory workers about the adverse health effects of exposure to dust, the use of respiratory protective equipment was poor. Other factors affecting workers’ wellbeing and performance in the work environment include illumination, temperature, noise, and atmospheric conditions (Asigele, 2012; Akintayo, 2012; Jagero, Komba & Mlingi, 2012), with recent studies pointing at other significant factors such as impaired working tools and absence of health insurance scheme (Yusuff, Adegbite, Awotedu, & Akinosho, 2014; Brown, McHardy, McNabb, & Taylor, 2011; Bhandari & Adhikari, 2014).

Thus, aside low levels of knowledge to perform a given task (Akintayo, 2012), poor work performance can be attributed to a combined effect of health and safety hazards which could lead to health challenges or deter workers from exercising the expected level of work commitment. Specifically, this study examined the effects of occupational hazards on workers’ performance in
Nigeria Cement Industry using Lafarge Cement WAPCO Plc., Sagamu, Ogun State, Nigeria. The specific objectives are:

i. to assess the frequency of occupational hazards on workers performance in Nigeria’s cement industry;

ii. to examine how workers’ health contribute to performance level in Nigeria’s cement industry; and

iii. to evaluate the effect of workers’ safety on work performance in Nigeria’s cement industry.

The following null hypotheses were stated for this study:

H₀₁: There is no significant relationship between the frequency level of occupational hazards and workers’ performance.

H₀₂: There is no significant difference between the performance level of healthy workers and unhealthy workers.

H₀₃: There is no significant relationship between the safety of workers and work performance.

2. Literature Review

*Occupational Hazards*

Hazard is a condition, object, activity or event with the potential of causing injuries to people, damage to equipment or structures, loss of material, or reduction of ability to perform a prescribed function (Ilias, Stephen, Michel, Dave, Carmela, Michel, & Clément, 2009). Ahmed, Dosoki, and Nasr (2012) defined hazard as the presence of materials or conditions that have the potential of causing loss or harm or a combination of the severity of consequences and likelihood of occurrence of undesired outcomes. As clarified by Meenesh (2014), hazards in cement production processes can be classified into three (3) categories namely: (a) Routine and general hazards, (b) Special hazards during the cement production and (c) Special hazards as a result of the work environment.
Table 1. Classification of Hazards in Cement Production Processes

<table>
<thead>
<tr>
<th>Routine and general hazards</th>
<th>Special hazards during the cement production</th>
<th>Special hazards as a result of the work environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Safe behaviour</td>
<td>• Quarrying</td>
<td>• Dust</td>
</tr>
<tr>
<td>• Environment, work and passage areas</td>
<td>• Crushing</td>
<td>• Noise</td>
</tr>
<tr>
<td>• Work equipment</td>
<td>• Clinker production</td>
<td>• Fire</td>
</tr>
<tr>
<td>• Safety labelling</td>
<td>• Milling processes at raw mill, cement milling and coal milling</td>
<td>• Emergency response</td>
</tr>
<tr>
<td>• Personal Protective Equipment (PPE)</td>
<td>• Material transport</td>
<td></td>
</tr>
<tr>
<td>• Manual load handling</td>
<td>• Filtering</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Storage</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Loading and delivery of final products</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Fuel storage activities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Use of hazardous material</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Generating units</td>
<td></td>
</tr>
</tbody>
</table>

Source: Meenesh (2014)

Ford and Tetrick (2011) described occupational hazards as ‘aspects of one’s occupation-specific context that increase the risk of injury’. Occupational hazards refer to the potential risks to the health and safety of those who work outside the home. According to Chandrasekar (2011), unsafe and unhealthy workplace environment, especially in terms of poor ventilation, inappropriate lighting, excessive noise among others, affect workers performance. Generally, the causes of occupational accidents are classified as unsafe conditions and unsafe behaviors (Sadullah & Kanten, 2009). Oketunji (2014) remarked that the absence of health and safety system at workplace makes the employees easy victims of occupational hazards that could depress morale and productivity. In any workplace, the safety of employees should be a priority whether one works in a low- or high-risk job (Oketunji, 2014). Occupational safety aims to prevent the accidents caused by the unsafe behavior of the employees and/or the unsafe work environment, and to create a safe working environment. In this context, safety researches advocate for adaptive employee safety behavior,
either directly or indirectly. Violation of safety rules escalates workplace hazards that impede the performance of the worker. Health hazards refer to potential risks to the workers’ health occasioned by environmental activities which are capable of exposing workers to various diseases. One’s occupational role determines to a large extent what one is expected to do and the hazardous nature of the tasks one must perform, thus highlighting the variations in health hazard exposures (United State Department of Labour, 2008; Bureau of Labour Statistics, 2010).

Questions have been raised on the importance of ensuring a healthy workforce. Specifically, Bevan (2010) explored the relationship between employee health and employee commitment and found that healthy employees are more committed. Healthy employees – whose physical and psychological wellbeing is good – can demonstrate higher levels of commitment than those who are less healthy. They tend to work harder and are more willing to deploy ‘discretionary effort’. In addition, they tend to exhibit lower rates of sickness-related absence. Barber, Hayday, and Bevan (1999) found that low levels of employee commitment led to higher levels of absence. Studies on occupational health hazard have indicated that the extent of occupational injuries is severe. Healthy workforce correlates with lower sickness absence rates, which translates to significant cost savings for employers. For instance, Aribigbola, Fatusin and Fagbohunka (2012) reported that health concerns of the workforce come to the fore as hazards remained a serious threat to many workers in the discharge of their responsibility in the process of sand blasting, stone crushing, drilling, quarrying and tunneling through the earth crust.

**Workers’ Performance**

Work performance has been one of the important variables that has generated substantial empirical studies (Jankingthong & Rurkkhum, 2012). Byars and Rue (2006) define performance as the extent to which an employee accomplishes the tasks that make up his or her job. It is the extent to which worker is able to accomplish the task assigned to him or her. Workers performance can be defined as the measurement of how well or poorly an employee has accomplished a task (George & Jones, 2012). Workers’ performance is the level of individual workers productivity in relations to job expectations (Babin & Bolos, 1998), such performance could be judged excellent, good, average or poor when expectations are compared with actual output. Performance in this sense relate to task performance which is behavioural oriented depending on the attitude of job holder towards the work (Borman & Motowidlo, 1997; Werner, 2000). Individual performance refers to the amount of effort, initiative
and absenteeism, maintenance of standards and commitment displayed by individuals while performing the job tasks (Ivancevich & Matteson, 1996). Worker's performance is the degree to which employees accomplish work requirements. Workers effectiveness and efficiency are the two major components that determine level of workers performance. Workers effectiveness is a measure of the degree to which an employee achieves his/her set objectives and goals while worker efficiency has to do with the employee achieving his/her objectives or set goals with proportionally few resources. To achieve the objectives of task performance, workers must be available and committed. Allen (2008) and Escorpizo (2008) conceptualized work performance from the perspective relevant to this study as they investigated the domains of absenteeism and presenteeism. They opined that absenteeism is counterproductive work behaviour which is capable of undermining expected work performance level. It is thus obligatory for employers to provide a safe workplace for employees to increase their efficiency and productivity, thus contributing to mitigating the incidence of negligence, associated accidents and injuries.

Conceptual Framework

The researchers’ framework implies that occupational hazards can affect the level of workers performance. It assumes that occupational hazards consist of two components that is, safety hazards and health hazards. These types of hazards can engender workers’ absenteeism and low commitment to work and subsequently influence workers’ performance. (See model in figure 1)
Based on the review of literature relating to occupational hazards and workers performance, the researchers' developed a conceptual research model (Figure 1) suggesting that occupational hazards affect workers performance. Performance in this study is considered as composite of two elements, namely workers’ presenteeism rate and workers’ commitment level. Assurance of these two elements indicates high performance otherwise low performance. In this wise, workers’ performance is related to the extent to which a job incumbent is able to accomplish the task assigned to him or her. It is thus perceived to be behavioural in nature and that was why Hillriegel, Jackson and Slocum (1999) perceived it as individual’s work achievement after having exerted effort. Over time it has been described as a multidimensional construct consisting of more than one kind of behaviour such as presenteeism and commitment to work.

Absence is defined as time away from work due to incidental reasons or health problems. In the literature, most studies concerned with employee health specify absence due to illness (Steel, 2003). It represents an objective outcome measure related to employee health and a measure of lost productivity. Absenteeism results in considerable costs for organizations. From the perspective of this research, absenteeism is treated as absence due to sickness or accidents resulting from related working conditions within organizations. Poor working conditions such as exposure to heat, dust, gasses,
noise, or unsafe working conditions. Scholars have examined a wide range of absence antecedents, with particular emphasis on work-related risk factors such as safety and health hazards. Although empirical findings regarding the hazards–absence relationship is inconsistent (Darr & Johns, 2008), and as noted by Aldana (2001), the impact of such conditions on absenteeism remains inconclusive. Workers’ presenteeism is in terms of presence at work as opposed to absence measured by meeting job deliverables which will contribute to performance. For instance, irrespective of workers competence level without presence at work little or nothing can be achieved. When a worker suffers occupational hazards, such worker would have to be hospitalized which might keep the workers out of job for extended periods thereby leading to workers’ absenteeism.

Commitment is a state of psychological attachment that defines the relationship between an actor (worker) and an entity (Chaudhuri, 2009). Workers commitment here entails the level of job involvement (Lodahl & Kejners, 1965). It includes the willingness of worker to be devoted to work (Agba, Nkpoyen & Ushie, 2010). Workers commitment is a function of many variables including, characteristics of job situation and the work environment (Agba, Nkoyen & Ushie, 2010). Workers commitment could also be influenced by the level of job involvement or the responsibilities of the worker (Lodahl & Kejners, 1965). However, one of the factors germane to workers commitment level is the workers’ health status and safety consciousness. Markovits, Davis, Fay and Dick (2010) described workers commitment as the strength of an individual’s identification with and involvement in a particular organization. Angle and Perry (1981) reported that workers commitment increases performance. Workers with strong commitment have high work effort and strong job performance outcome (Leong, Randall & Cote, 1994; Baugh & Robert, 1994). Naser, (2007) asserted that when employees are dissatisfied at work, they are less committed. Such dissatisfaction could be as a result of the hazardous nature of their work activities perceived to be unhealthy and unsafe. Based on the above positions, it is established that committed workers tend to devote higher efforts to work.

Theoretical Framework

Considerable theoretical grounds can be linked to occupational hazards and workers performance. First is the Cognitive appraisal theory of Richard Lazarus (2000) which emphasizes the appraisal of information from several sources. Appraisal involves cognition, or the processing of information from the environment, the body, and the memory. Such appraisal could be from individual’s interpretation of the events in their lives as harmful, threatening, or
challenging and their determination of whether they have the resources to effectively cope with the events. Furthermore, memories of past encounters with similar situations, dispositional responses in certain ways, and consideration of the consequence of actions that might result from the emotional state are all part of appraisal. In the opinion of Lazarus, such events could be primary or secondary appraisal. In primary appraisal, an individual interprets whether an event involves harm or loss that has already occurred, or the threat of some future dangers, or even a challenge to be overcome. Case of health or safety hazards is a threat. In secondary appraisal, individuals evaluate whatever resources available to them and determine how effectively they can be used to cope with the event. The secondary appraisal depends on the degree to which the event from the primary appraisal was appraised as harmful threatening, or challenging. Occupational hazards as a challenge during primary appraisal paves the way for such during secondary appraisal but people sometimes do not have the adequate resources for coping with an event that is seen as challenging. As a result, these individuals then find that they are able to reduce the intensity of the disturbing emotional feelings which result in either absenteeism from work or reduction of work commitment level.

Cognitive System Engineering theory is another theory that explains the issues under our investigation. It covers a broader spectrum of issues as it affects workers as regards individual, socio-economic and environmental factors. He used three zones to explain workers behaviour in various work hazard conditions: Zone I or the safe zone, Zone II or the hazard zone, and Zone III or the loss of control zone. Emphasis was placed on workers operating within the safe zone, work activities can be excellently performed. The workers working in the Hazard zone (Zone II) are taken to be working at the edge. The theory describes Zone II as hazard zone which could result in traumatic, exposure, and/or ergonomic type injuries as well as fatalities. Zone III is the loss of control zone where accidents occur more frequently, and control is lost leading to injuries and/or fatalities. In this case, when it occurs, workers adopts counterproductive work behaviour such as being absent from work and low commitment to work.

Since health and safety plays an influential role in workers performance, the review of these theories highlights occupational hazards as the most probable cause of absenteeism, low workers commitment, and low level performance because it places unhealthy and unsafe dynamics on workers.

**Empirical Framework**

Health and safety hazards experienced by individual workers are part of the understanding of occupational hazards. Research has suggested that health and
safety hazards affect workers presenteeism and commitment to work, which
directly determines workers performance. Existing studies have really discussed
occupational hazards on workers and organizational performance (Becker,
Billings, Eveleth & Gilbert, 1996; Ricci & Chee, 2005; Ahmed & Newson-
Smith, 2010; Bevan, 2010; Kanten, 2013). But no study exist that deals with the
effects of occupational hazards on workers performance in Lafarge Cement
WAPCO Sagamu, Ogun State. Some of the existing studies are presented
below:
A lot of studies have established the link between workers commitment and
performance. For instance, Brown, McHardy, McNabb and Taylor (2011)
concluded that workers commitment has been observed as a central feature in
high performance workplace literature. Becker, Billings, Eveleth and Gilbert
(1996) found that workers commitment is strongly linked to their performance.
Okoye, Odumegwu and Omuku (2012) in their study discovered that most
workers in Nigeria were unaware of the hazardous nature of their work
environment and the consequences of working in such places without adopting
the relevant safety measures. Ahmed and Newson-Smith (2010) discovered
that despite the relatively high knowledge of the cement factory workers about
the adverse health effects of exposure to dust, the use of respiratory protective
equipment was poor. A leading factor has been the work environment with
emphasis on illumination, temperature, noise, and atmospheric conditions
(Asigele, 2012; Akintayo, 2012; Jagero, Komba & Mlingi, 2012), with recent
studies pointing at other significant factors such as malfunctioning working
tools and absence of health insurance scheme (Yusuff, Adegbite, Awotedu, &
Akinosho, 2014;Brown, McHardy, McNabb, & Taylor, 2011; Bhandari &
Adhikari, 2014).
Mannan (1996) discovered that a high rate of absenteeism was an important
cause of loss in production. In a related study, Onakoya (2006) discovered that
workers absenteeism significantly affect workers performance. In different
studies, Allen (2008) and Escorpizo (2008) found out that absenteeism is a
counterproductive work behaviour which undermines work performance level.
Marzec (2013) in his study linked frequent workers absenteeism to
occupational risks and hazards at work. Ricci and Chee (2005) found that
employees with these kinds of medical conditions like heart disease,
hypertension, diabetes and some cancers are likely to have higher absenteeism
than healthy employees. Biron and Bamberger (2012) found out in their study
that perceived job hazards and exposure to critical incidents are positively
related to subsequent absenteeism.
In a related study, Ahmed and Newson-Smith (2010) investigated knowledge
and practice related to occupational hazards among cement workers in United
Arab Emirates and discovered that majority of the workers knew that exposure
to the dust was a serious hazard to their health. Kanten (2013) investigates the relationship among the safety climate, working conditions, safety behaviour, occupational accidents and injuries. He discovered significant relationships between safety climate and safety behaviours. Aribigbola, Fatusin and Fagbohunka (2012) discovered that poor environment is of serious health concerns to work force and with reference to cement plants, such threat to workers health include sand blasters, stone crushers, those involved in drilling, quarrying and tunnelling. Thus, a satisfactory working environment translates to a healthy workforce (Bjerkan, 2010; Kanten, 2013). An unfriendly work environment as noted by Garcia-Herrero, Mariscal, García-Rodríguez, and Ritzel (2012) is capable of causing occupational hazards. In a related study carried out by Leigh (1991), he found out that workers’ engaged in dangerous jobs report more absence in a year than those who work in safe environment.

3. Methodology

Data, Method and Justification

According to Cement Manufacturing Association of Nigeria (CMAN) eight (8) cement producers operated in the country as at 2015. The choice of Lafarge WAPCO Sagamu was influenced by a number of factors such proximity to the researchers’ base and because of the value the plant places on health and safety which are related to this study. Lafarge WAPCO is known for putting values such as health and safety, respect for employees, and environmental protection at the forefront of its business operations (Lafarge Cement WAPCO Nigeria Annual Report, 2013).

Survey research design method was used in this study. This involves a systematic data collection and presentation of data to provide explanation to this particular phenomenon. The survey method is employed to present facts concerning the relationship between occupational hazards and workers performance, as it exists at the time of the study. A self-designed questionnaire with three (3) sections namely; socio-demographic characteristics, occupational hazards and workers performance was reviewed by four researchers/lecturers in the Department of Educational Evaluation, Obafemi Awolowo University, Ile-Ife, Osun State. Corrections were effected based on their critique and observation in terms of ambiguity, relevant, well-structured and clarity of the questionnaire to the respondents, before the final draft of the instrument was produced.

Based on their inputs, a close-ended questionnaire was developed; with section “A” comprising six (6) items seeking socio-demographic data such as age, sex, status, level of education etc. Section “B” consists of eleven (11) items, which
sought to collect information about occupational hazards and Section “C” contains eleven (11) items on workers performance and an open question.

The permanent workers in the plant constitute the population of study which was 555 while the sample was based on 33% of the staff strength. Owojori (2002) opined that a good sample will represent at least 10% of the total population. In this case 183 represent 33% of the total population under study. These participants were purposively drawn randomly from the different units to make up the sum based on the willingness of the workers to participate in the survey (See the last segment of Table 2 for details on this).

The respondents were given the questionnaire in their place of work. Instruction on how to fill the questionnaire was given. Confidential treatment of information was assured. With regard to the scoring of responses, the first section of the questionnaire required no score attached to it, since the information required are demographic data of the subject. The second and third section that is “B” and “C” were ranged from 5-1 point scale in the following pattern. Strongly agree – 5, Agree – 4, Indifferent– 3, Disagree – 2 and Strongly disagree – 1. The questionnaires were administered on the workers during work breaks on three visits with the aid of the factory manager based on sample design.

Satisfactorily returned questionnaires were analysed electronically through statistical analytical techniques like frequency distribution, percentage and t-test.
4. Results and Interpretation

Table 2. Socio-demographic Characteristics of Respondents

<table>
<thead>
<tr>
<th>Variables</th>
<th>Filters</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>92</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>91</td>
<td>50</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>183</td>
<td>100</td>
</tr>
<tr>
<td>Age</td>
<td>21 – 25</td>
<td>46</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>26 – 30</td>
<td>74</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>31 – 35</td>
<td>63</td>
<td>35</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>183</td>
<td>100</td>
</tr>
<tr>
<td>Marital Status</td>
<td>Single</td>
<td>105</td>
<td>57</td>
</tr>
<tr>
<td></td>
<td>Married</td>
<td>78</td>
<td>43</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>183</td>
<td>100</td>
</tr>
<tr>
<td>Highest Educational Qualification</td>
<td>SSCE</td>
<td>43</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>Diploma</td>
<td>58</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>BSc/BA/HND</td>
<td>82</td>
<td>45</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>183</td>
<td>100</td>
</tr>
<tr>
<td>Work Experience</td>
<td>Less than 1 year</td>
<td>24</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>1 – 5</td>
<td>79</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td>6 – 10</td>
<td>80</td>
<td>44</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>183</td>
<td>100</td>
</tr>
<tr>
<td>Workers Location/Unit</td>
<td>Quarrying</td>
<td>36</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Crushing</td>
<td>37</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Clinker</td>
<td>36</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Milling</td>
<td>32</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Filtering</td>
<td>42</td>
<td>23</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>183</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Field Survey (2017).

From the findings of the survey as depicted in Table 2, gender variable revealed that 50% of the respondents were males and 50% were females. This revealed that gender is not a factor in cement production activities; it is an activity that can be done by either sex. On age variable, 25% of the samples were within age spread of 21-25 years, 40% were between 26-30 years while
35% of the sample falls into 31-35. Hence, majority of the respondents are in their late 20s. This age bracket is regarded as the active period of human life since high sense of maturity is required for such production activities. On marital status variable, 57% of the respondents were single, while 43% were also married. By implication majority of the respondents were single as against married. This was a good blend for the firm workforce as cases of lateness; excuses of children attention, maternity, among other issues common with married folks will be minimal. Educational qualifications of the respondents revealed that 23% of the respondents were SSCE holders, 32% are Diploma holders, while 45% were graduates. It can be deduced that majority of the respondents were graduates making of enlightened workforce in the plant. Also from the table, 13% of the respondents had less than a year work experience, 43% had 1-5 years, and while44% had 6-10 years. Hence, majority of the respondents had 6-10years’ work experience. It is a good sign that respondents would be experienced workers on the job. Lastly on this segment was respondents work locations/units, the table shows that 20% of the respondents were in quarrying unit, 20% were in crushing unit, 20% are in clinker unit, 17% are in milling unit while 23% were in filtering unit. Therefore, all the work locations and units in Lafarge Cement WAPCO Sagamu were duly captured.

Summary of hypotheses

For hypothesis 1: The t-test summary table showing the frequency level of occupational hazards and workers’ performance.

<table>
<thead>
<tr>
<th>INDEX of Occupational hazards</th>
<th>N</th>
<th>MEAN</th>
<th>S.D</th>
<th>df</th>
<th>T</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequent occupational hazards</td>
<td>100</td>
<td>43.71</td>
<td>5.34</td>
<td>181</td>
<td>5.146</td>
<td>&lt;.05</td>
</tr>
<tr>
<td>Infrequent occupational hazards</td>
<td>83</td>
<td>49.89</td>
<td>10.49</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The result shows that frequency level of occupational hazards has a significant influence on workers’ performance (t = 5.146; df = 181; p<.05). Workers with frequent occupational hazards have a mean value of 43.71 while workers with infrequent occupational hazards have 49.89. This shows that workers with infrequent occupational hazards will significantly be committed to their work.
and perform better on the job than workers with frequent occupational hazards.

For hypothesis 2: The t-test summary table showing the workers’ health status on work performance level.

<table>
<thead>
<tr>
<th>Workers health status</th>
<th>N</th>
<th>MEAN</th>
<th>S.D</th>
<th>df</th>
<th>t</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthy</td>
<td>104</td>
<td>44.92</td>
<td>8.86</td>
<td>181</td>
<td>-2.917</td>
<td>P&lt;.05</td>
</tr>
<tr>
<td>Unhealthy</td>
<td>79</td>
<td>48.61</td>
<td>7.91</td>
<td>181</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The result shows that there is a significant difference between the performance levels of healthy workers when compared to unhealthy workers. (t = -2.917; df = 181; p<.05). This means that workers with low performance were unhealthy while those that are healthy have high performance. Workers with low performance have a mean value of 48.61 while workers with high performance have a mean value of 44.92. This shows that worker’s performance level is significantly determined by worker’s health status.

For hypothesis 3: The t-test summary table showing workers’ safety and work performance.

<table>
<thead>
<tr>
<th>Safety of Workers</th>
<th>N</th>
<th>MEAN</th>
<th>S.D</th>
<th>df</th>
<th>t</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safe</td>
<td>94</td>
<td>47.53</td>
<td>8.77</td>
<td>181</td>
<td>1.647</td>
<td>&lt;.05</td>
</tr>
<tr>
<td>Unsafe</td>
<td>89</td>
<td>45.44</td>
<td>8.41</td>
<td>181</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The result shows that safe workers have high tendencies of performing on the job than workers who are unsafe at work. (t = 1.647; df = 181; p<.05). Workers that have sense of safety have a mean of 47.53 while workers who are unsafe at work have a mean value of 45.44. This shows that there is significant relationship the safety of workers and work performance.

From the three (3) hypotheses, the framework above is affirmed, that is on the relationship between occupational hazards and workers performance elements (workers presenteeism and commitment).

5. Discussion of Findings

The research findings for this study indicated that occupational hazards were bad and need to be well managed in order to ensure workers’ performance. The occurrence and frequency of occupational hazards reduces workers’ level of performance. Result from the first hypothesis test confirmed this (t = 5.146; df = 181; p<.05). Workers with infrequent occupational hazards will
significantly perform on the job than workers with frequent occupational hazards. More so, it was found that low workers’ performance is attributable to the absenteeism of workers. The finding shows that workers performance is significantly determined by their presence at work. This is in line with the findings of Angle & Perry (1981), Leong, Randall, & Cote (1994), and Baugh & Robert (1994) which reported significant link between workers presence to increased performance.

Finding of the survey also revealed that workers’ health status significantly affects work performance level. The second hypothesis tested revealed ($t = -2.917; df = 181; p<.05$) by implication workers with low performance are often unhealthy. This is in consonance with the opinion of Bevan (2010) which observed the relationship between employee health and employee performance and discovered that healthy employees perform better on the job. The survey also revealed that workers absenteeism is a result frequent hazards which affect workers performance. This is in consonance with the views of Mannan (1996), Onakoya (2006), Allen (2008) and Escorpizo (2008) which in their separate opinion linked absenteeism to workers’ performance and confirms that workers’ absenteeism will reduce performance level.

Another major finding was on workers safety and work performance. The study discovered that unsafe act which lead to occupational accidents contribute to low workers performance. Hypothesis three affirmed that safe workers have high tendencies of performing on the job than workers who are unsafe at work. This position is consistent with the views of Sadullah and Kanten (2009) and Chandraseker (2011) that unsafe acts affect workers’ performance.

6. Conclusion

Cement manufacturing industry is known for wide range of hazardous activities compared to other industries, and as such requires special attention towards health and safety to improve workers’ performance. From the perspective of this survey, it can be construed that health and safety hazards affect workers presenteeism and commitment to work. Workers wellness plays a significant role on their performance. A healthy and safe worker will desire to report for duty as expected of him/her and put in his/her best at work, but unhealthy and unsafe workers will feel demoralized and record high rate of absenteeism and low commitment which in turn reduces the performance level of worker.

From these findings, it suffices to conclude that occupational hazards are an important contributor of workers’ absenteeism and low commitment especially
when it is perceived as threatening to their wellbeing. Frequency of occupational hazards was observed to be the main cause of workers absenteeism and low commitment to work and it affects both the life of the employee and their performance level. To make a workplace healthy and safe, management must promote healthy and safety culture among workers.

7. Recommendations

The following recommendations have been outlined which will be useful in assisting the company and other related companies, and industries.

1. Occupational hazards are not good for workers’ and should be minimized to improve workers’ performance.

2. In as much as workers’ health contributes to performance level, management of Lafarge Cement WAPCO, Sagamu should maintain and improve health system in the organization to improve workers’ performance.

3. Management and workers’ of Lafarge Cement WAPCO, Sagamu should place high preference on both organization and individual safety. Protective gadgets must be provided by management and the use of those gadgets at all times must be encouraged and enforced on workers.

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Effects of Occupational Hazards on Workers’ Performance in Nigeria’s Cement Industry


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