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**THE EFFECT OF OCCUPATIONAL HEALTH AND  
SAFETY AWARENESS ON EMPLOYEE  
PERFORMANCE IN SUGAR COMPANIES IN  
KAKAMEGA COUNTY, KENYA**

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**ABSTRACT**

*Most employees working in risky areas especially near machines may not be aware of the impending predicaments. Some of the employees have no knowledge of what should be done to avoid the dangers. Studies on employee wellness have focused on the existing practices on their wellness leaving out employee awareness in sugar companies. The purpose of this study was to assess the effect of occupational health and safety awareness on employee performance in sugar companies in Kakamega County, Kenya. The study was anchored on a systems theory. A causal design was used to examine effect of occupational health and safety awareness on employee performance. The research found out that Occupational Health and Safety awareness explained about 9% given  $r^2$  value was 0.89 of the changes in employee performance and that the model was statistically significant. The statistics show that by raising Occupational Health and Safety awareness by a unit level, employee performance would rise by 6.519 units and this is statistically significant at the 0.05 level. The recommendation for study therefore include managers of the sugar firms to pay close attention to awareness creation. They should ensure occupational health and safety policy is made available to the employees in order to reduce incident of accidents and injuries.*

**KEY WORDS:** awareness, occupational health and safety, wellness, employee performance.

## INTRODUCTION

Occupational health according to Alli (2011) [1] can be described as a sound state of the body and mind of people from illness resulting from the materials, processes or procedures used in the workplace, while occupational safety is the protection of people from physical injury. Perrow (2014) [2] is of the view that a clear occupational health and safety policy if made aware to the employees plays an important role in reducing occupational accidents and injuries at work place. From the words of Kofi Annan (former UN General Secretary) which is cited in Tawiah and Baah (2013) [3] Health and Safety is not only a sound socioeconomic and political policy; rather a basic human right. At the workplace all activities and arrangements must be made clear to the employees to protect and safeguard human lives from work-related accidents and illness.

The specific hazards facing Sugar Company employees vary from one Company to another. The main areas of concern include injuries from machinery and equipment, unsafe handling of and exposure to chemicals for crop protection, and injuries from the crops themselves like sugarcane, especially during harvesting. Other common hazards include long daily and weekly hours of physically strenuous work, the repeated shouldering of heavy loads, falls, insect and snake bites, and adverse weather conditions. If the employees are made aware of this, then injuries at the workplace would drastically reduce.

A good practice of Occupational Health and Safety awareness in an organization clearly made public should demonstrate better task performance and citizenship behaviour which at the end of the day increases performance through the reduction of injuries.

Several studies have been undertaken by different scholars about occupational health and safety awareness. They found out that an organization that fully embrace occupational health and safety awareness realize improved productivity. The researchers used variables like legal framework implementation, occupational safety and health Act familiarity and left out occupational health and safety awareness as a variable. These studies did not consider employee performance in an organization but focused on organizational productivity and profitability. The objective of this study was to assess the effect of occupational health and safety awareness on employee performance in sugar companies in Kakamega County, Kenya.

This study will benefit the Sugar industry players. Human resource managers and related officials in the organizations will be able to make future decisions based on and guided by these research findings. Scholars and researchers will be encouraged to conduct further research on occupational health and safety awareness and employee performance using different variable and even research designs.

## OBJECTIVES

The objective of this study was to assess the effect of occupational health and safety awareness on employee performance in sugar companies in Kakamega County, Kenya.

A null hypothesis was developed from the objective of the study. Occupational health and safety awareness has no significant effect on employee performance.

## METHODOLOGY

Questionnaires development was guided by the objective of the study. The questionnaires were administered to the three sugar company employees. The tool sought for personal information of the respondents and that concerning occupational health and safety. The respondents' responses were limited to ticking the correct answers. The main reason, as to why the researcher used questionnaires was because, they are easy to administer and are economical in terms of money and time. They are also simple to compute and analyze (Yauch, 2011) [4].

Questionnaires were administered to the sampled low cadre employees from all departments. The employees were given the questionnaires to fill using the information they had without indicating their identity. Interview schedule were organized with the employees of managerial and supervisory status as well as the union officials in order to source for more information on the Occupational Health and Safety practices policy in Mumias Sugar Company.

The causal research design was used to undertake the study. This type of research design is used to measure what effect a specific change will have on existing norms and assumptions. It is also good for investigating and attempting to establish the existence of certain relationships among dependent and independent variables. Causal effect occurs when variation in one phenomenon, an independent variable, leads to or results, on average, in variation in another phenomenon, the dependent variable. (Kothari, 2014) [5].

## SAMPLING DESIGN

The Target population of this study was 499 employees from the following firms; Mumias Sugar Company, West Kenya Sugar Company and Butali Sugar Company (FKE, 2015) [6]. A population refers to all items or people under consideration in any field of inquiry (Sekaran, 2013) [7]. In other words, population of a study can be considered as an entire group of people; events or things of interest that a researcher wishes to study. Mugenda and Mugenda (2012) [8] define a sample as a representation or a subject of the population. The assumption in studying samples is that the characteristics of the sample will adequately reflect the characteristics of the population in question and the researcher should be able to draw conclusions that would be generalized to the population of interest. It is therefore possible to obtain sufficiently accurate results by studying only part of the total population (Kothari, 2014) [9].

(Yamane, 1967) [10] the formula  $n=N/1+e^2N$ ; where  $n$  is the sample size,  $N$  is the total population and  $e$  is the error, was used to sample 222 employees from the three Sugar Companies. The sampling was done using stratified sampling to ensure each company is proportionally represented. The sample from each company and department was then chosen using simple random sampling.

### STATISTICAL DESIGN

The validity of research instruments was obtained through piloting on respondents who are not participating in this study. The validity of a study is the degree to which two or more items measure the same concept the accuracy and meaningfulness of results generated by the research instruments in relation to the same phenomena (Mugenda and Mugenda, 2012) [11]. The findings from the pilot study enabled the researcher to acknowledge errors and validate the research instruments. To ensure validity of the study, the researcher conducted a pilot study of 22 respondents at Nzoia Sugar Company. The researcher also sought suggestions on improvement of the research instrument from colleagues and supervisors. The data was collected, cleaned, regressed and analyzed.

### GEOGRAPHICAL AREA

The study was carried out in Kakamega County in Kenya. Kakamega County is located at 1.0000/1°0'0"N Latitude and 38.0000/38°0'00"E Longitude, in the former Western Province. It covers an area of 1,395km<sup>2</sup>. The County headquarters are in Kakamega town. It has a population of 603,422 people. It is bordering Busia County to the West, Bungoma County to the North, Vihiga County to the South and Nandi County to the East. The County receives an annual relief rainfall of between 1,250 and 1,750mm per annum. It has a gravel surface road network covering 323.8Km and earth surface road network covering 2,673Km.

Kakamega County is divided into twelve sub-counties or constituencies with major economic activities in agriculture mostly tea, maize and sugarcane farming. Sugar cane farming is undertaken within and around the county. This has made the County to host several Sugar Companies. There are several small scale sugar mills and three main sugar companies. These are Mumias Sugar Company, West Kenya Sugar Company and Butali Sugar Company. Some farmers practice mixed farming like poultry, dairy as well as tea farming in some areas mostly bordering Nandi and Vihiga Counties.

### RESULTS

The objective of the study was to examine the effect of Occupational Health and Safety Awareness on employee performance in the Sugar companies in Kakamega County. This factor was measured by eight (8) items that loaded highly on the variable. Item one results showed that 152 of the 181 employees from the sugar Companies agreed that there exist the department for the occupational health and safety in the sugar companies representing 84%

with 50% agreeing strongly. The mean rank is 4.2 and a standard deviation of 1.077. This is evidence of consolidated responses signifying good effort made at taking care of employees' safety and wellness to enhance performance. However 5% of the sampled employees were sampled fairly agreed to this while 10.5% disagreed in principle

The second item indicated that employees up to 91% (56.4+34.8) agreed that their company has Occupational Health and Safety policy. The mean rank of 4.7 and a standard deviation of 3.85 mean that while on average the item score was high, there was wide variation in the level of agreement on whether an Occupational Health and Safety policy was in place. Some employees do not appear to know if such a policy is in place. This awareness gap may have to be closed so that all the staff are sufficiently sensitized on the role of Occupational Health and Safety practices at the work place. Increasing awareness makes the work place safer and healthier for everyone. A policy of this nature spells out rules, regulations, procedures and processes to mitigate work place accidents injuries and sickness which is becoming increasingly common according to recent studies and data from Occupational Health and Safety experts in the sugar industry.

Similarly, understanding the companies' occupational health and safety policy is important because it directs the employee's action and behavior away from dangerous or unsafe situations. It is therefore upon the employer to provide guidelines and employees to read and understand the Occupational Health and Safety policy so as to apply the right attitude and behavior at work. When accidents are fewer or significantly reduced, disruptions are fewer and performance is enhanced. The work place becomes safe for all hence less litigation and insurance costs. Respondents indicated that 44.2% or 80 employees strongly agreed to understand Occupational Health and Safety policy. Another 37.7 %, totaling to 68 just agreed while 13.8% of fairly understanding the policy. The mean rank of 4.21 and a standard deviation of 0.86 means that on average majority of staff understood the policy. Providing Occupational Health Safety information to employees in a simple and clear manner is critical to creating a working environment that is safe and healthy through communication of possible hazards.

Once hazards are communicated, the appropriate behavior can be provided to reduce incidence of accidents and injuries at the workplace, out of 178 responses viewed on this question, 65 or 36.5% agreed strongly to receiving information with 37.1 only agreeing. However 14% (12.4%+1.7%) did not receive information about Occupational Health and Safety. The mean rank is 4.17 while the standard deviation is 3.185 also indicating some variability in the responses attesting to a lack of certainty about the issue.



The question of training new employees on Occupational Health and Safety practices was item five. Out of 178 respondents, only a third of them which is 30.9% strongly agreed with the further 33.7% agreeing as compared to 2.9% who only fairly agreed. About 22% disagreed with 5.6% disagreeing strongly. The mean rank was lower at 3.6 indicating views that were not strong. It is important that new employees be trained and inducted on matters Occupational Health and Safety practices of every company they join. This way they shall understand eminent risks and expected behavior and response to occurrence of such risks.

Occupational Health and Safety practices need to be reinforcement continuously through refresher training. The training serves to remind the employees about their role in the event of accidents, injuries or sickness. It is not unusual to be forgetful hence need for regular training to keep everyone on alert and hence reduce accidents or even the severity. This item had a mean rank of 3.83 and a standard deviation of 3.236 which is clearly moderate but highly variable response. Consequently less agreement on this issue highlight a gap in existing policies, programmes and structures among the sugar firms in Kakamega County.

Item seven (7) sought to find out whether employees were aware of safety signs in the companies they worked for. Safety signs should be clearly marked, simple to understand and direct behavior signs and symptoms of what one must do in their event of an accident or emergency. This is done to mitigate risk of increased causality and save lives. Participating employees show that a 58% of the respondents agreed strongly to having seen safety signs and symbols and a further 32.6% just agreeing. A mean rank of 4.43 signifies overall agreement with existence of safety signs by a majority of the respondents.

The last item on awareness score asked whether employees understood the meaning of the safety signs at the place of work. Understanding the signs and symbols is the communication of information necessary to elicit a desired response in the event of an emergency. When one does not understand a sign or a symbol then their response may not be appropriate to the situation and hence may even make a bad situation worse. Therefore managers, supervisors need to use signs and symbols that are understood by employees in order to prevent unnecessary losses and injuries. The mean rank for this score was 4.27 which again is quite high while the variation was low at 0.837. More than 88% comprising of 154 of the employees sampled agreed to be understanding the meaning of safety signs (45 +43.3), those with only fair understanding were 6.1% while a further 5% did not understand the meaning of signs (5% + 0.6%). Hence understanding of the signs and symbols is high among the employees. This means that the communication of

hazards is effective and that the state of preparedness is good.

Overall weaknesses noted in Occupational Health and Safety awareness practices include provision of relevant information, inducting new employees and refreshing employees on Occupational Health and Safety policy, programmes and procedures. These are the areas to pay attention to by supervisors and managers so as to promote job performance.

Employee awareness gives them confidence to work and hope for their safety thereby increasing performance. The employees feel secure and free to perform when they are made aware of the risks ahead of them and how to overcome them. Therefore the employer is required to give their employee occupational health and safety information thereby creating awareness. These results agree with Armstrong (2012)[12] who suggested that the steps to increase effectiveness of safety messages are; to avoid negatives-successful safety propaganda should contain positive messages, not warnings of unpleasant consequences of action, to expose messages correctly, addressing the message to the right people.

The study set out the following null hypothesis: Occupational health and safety awareness has no significant effect on employee performance.

A simple linear regression analysis was conducted on the effect of Occupational Health and Safety awareness on employee performance. The results showed that upon transformation Occupational Health and Safety awareness explained about 9% given  $r^2$  value was 0.89 of the changes in employee performance and that the model was significant ( $F=15.9$ ,  $df$  1, 164 at  $p=0.000$ ). The results indicated that Occupational Health and Safety awareness is statistically different from zero with the  $t$  value of 3.997 which is within the range of 3.298 and 9.74 which imply model fit between the independent and dependent variables. The Durbin - Watson  $d$ -value of 1.819, which is between 1.5 to 2.5, implying there exist positive serial correlation amongst the variables i.e. relationship of values separated from each other by a given time lag in the residuals is positive.

The standardized coefficient for awareness was 6.519. Hence putting the information back into simple regression model of this nature;

$$Y = 0.69 + 6.519X_1 \quad (1)$$

Where;  $\beta_1$ , is slope coefficients for Awareness.

$X_1$  is the value of Occupational Health and Safety Awareness

$\epsilon_i$  is the random term for the model.

$Y$  is Employee performance

The statistics showed that by raising Occupational Health and Safety awareness by a unit level, employee performance would rise by 6.519 units and this is statistically significant at the 0.05 level. Therefore occupational safety and health awareness may significantly predict performance of employees since safety awareness reduces incidence of accidents at the work place and hence enable employee to worry less and work better.

Results indicated that Occupational Health and Safety awareness realised statistical significant effect on performance of employees in Sugar Companies of Kakamega County. This is because  $p < 0.05$  the null hypothesis was therefore rejected and the alternative hypothesis failed to be rejected at the 0.5% significant level. This agrees with findings by Leigh (2013)[13], Armstrong (2012)[14], and Schutz (2012)[15] who found a significant relationship between Occupational Health and Safety awareness and performance. Similarly, awareness interacts with the culture in the organization to promote employee performance in sugar manufacturing firms.

### SUGGESTIONS

The following recommendations were made basing on the findings and the conclusions in this research paper. Occupational Health and Safety awareness should be routine in the Sugar Companies to employees of all departments and cadres. This should be regularly done to enable the employees remain informed and made aware of the current trends. Employees of Sugar Companies of Kakamega County should be sensitized on their role in maintaining a healthy and safe working environment through regular trainings, workshops, seminars and drills which will keep them alert and prepared to respond to dangers that may occur at work. They should be exposed to things like fire drills to test their disaster preparedness. This will enable the authorities to establish the shortfalls and take corrective measures where necessary.

### CONCLUSION

The findings revealed that the association between awareness and performance of employees is positive, significant with a correlation coefficient of 0.433. Awareness also proved a significant predictor of employee performance. The null Hypothesis was therefore rejected in favour of awareness which is significantly associated with performance of employees.

Awareness ranks high among employees surveyed but there is need to induct new employees and to intensify refresher training to keep employees alert to present dangers at the work place. Occupational Health and Safety awareness was found to be quite significant to employees of Sugar Companies in Kakamega County for enhancement of improved performance. Employee performance in the Sugar Companies of Kakamega County partly relies on safety of the work environment. There is need to create Occupational Health and Safety awareness among the employees of the Sugar Companies of

Kakamega County. Occupational Health and safety policies should be made known to the employees so that they can perform with a secure mind.

### AREA FOR FURTHER RESEARCH

This study has found out that the variable of occupational health and safety practices used affect employee performance positively. However these may not be the only variables applicable. Other researchers can undertake the same study using other variables.

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