

Influence of Safety Rules and Procedures on Employee Performance in Nakuru Rural Water & Sanitation Company Limited, Kenya

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Abstract

The alarming numbers of workplace injuries and fatalities are an issue which invokes research interest to not only establish their causes, but also investigate their implications on the employee performance. The scarcity of empirical research in respect of the foregoing and particularly in the water sector, informed carrying out of this study with the objective of examining the influence of safety rules and procedures on the employee performance in Nakuru Rural Water & Sanitation Company Limited. The study was guided by the distractions theory. A descriptive research design was adopted. The 152 staff working with the aforesaid water company constituted the accessible population. A sample of 74 respondents was drawn from the study population using stratified random sampling technique. Pertinent data were collected using a structured questionnaire and subsequently analyzed with the aid of the Statistical Package for Social Sciences. The results were presented in tabular format. According to the study findings, there existed a statistically significant relationship between safety rules and procedures, and employee performance ($r = 0.953$; $p = 0.000$) at p -value = 0.05. It was also revealed that influence of the said rules and procedures on employee performance was statistically significant ($t = 22.341$; $p = 0.000$). The study concluded that safety rules and procedures were of great importance to the performance of employees working with the Nakuru Rural Water and Sanitation Company. It was recommended that the safety measures put in place by the water and sanitation companies ought to be in conformity to the measures stipulated by the Occupation Safety and Health Act.

Keywords: *Employee performance, Nakuru Rural Water and Sanitation Company, safety procedures, safety rules*

Introduction

Kumar (2017) defines Occupational Safety and Health (OSH) as the overall initiatives that are carried out by organizations to guarantee wellness of the labour force. According to Siegrist (1996) OSH propagates an optimum health of all workers. Provision of conducive work environment steadfastly mitigates work related injuries and ailments. Occupational safety entails physical and emotional well-being of the labour force. In addition, Curbing accidents as well as creating a conducive working environment tremendously reduces the intensity of possible harm to the workforce (Armstrong, 2010). It is postulated that employees working in environments that are devoid of accidents and ailments are more productive and more committed (Kiliç & Selvi, 2009).

The global OSH evolution was widely abridged between 2004 and 2009 (García , Merino, & Martínez , 2007). A number of nations have enacted or reviewed their labour laws. China, for instance, amended its Factory Act in 2004 while India revised its Act on Employees Social Security and Employee Health Act in 2007. In the same year South Korea, Malaysia and New Zealand revised and enacted their Employee Safety and Health Act, Health and Safety in Employment Act, and Workmen's Compensation Law respectively. Indonesia was not left behind because in 2009, it amended its Industrial Health and Safety Law which addresses the health issues of employees.

In Zimbabwe, it was noted that OSH influenced employee performances in the country's food industries. From the findings of the study, it was absolutely very clear that OSH exceedingly influenced workforce production capacity (Katsuro, Gadzirayi, Taruwona, & Mupararano, 2010). In Kenya, Factories and Work Place Act of 1972 had for a long time regulated issues pertaining occupational safety and health. Chapter 515 of the Act was revised and replaced with the current OSH Act of 2007 commonly referred to as OSHA. The Act mandate all employers to ensure that all employees work at safe environment and also that their health is not compromised while at the workplace. The Act further instructs the director of Occupational Safety and Health Services to promote and enforce compliance to occupational safety and health regulations at workplaces. The OSHA was further revised in 2012 where, since then, the provision for safety and health extends beyond the employees to also cover other members of the public who may be legally within the precincts of the workplace when an incident occurs.

Statement of the Problem

Notwithstanding the tremendous efforts by the International Labour Organization (ILO) in enforcing the safety and health of workers, it is alarming that the number of workplace injuries and fatalities continues to escalate. Moreover, from a global perspective, over 330 million occupational accidents and 160 million work related ailments were recorded annually (ILO, 2015). In 2015, a total of 63,900 occupational fatalities and 1,560,000 injuries were recorded across Africa. In Kenya, it is reported that there are about 64 fatalities for every 100,000 employees each year (Kemei & Nyerere, 2016). This figure is comparatively higher than the records for the United Kingdom where in every 100,000 workers only 0.44 fatalities were documented in 2013. In the same year and for a similar number of employees, the People's Republic of China and South Africa reported 3.8 and 25.5 fatalities respectively (Smallwood, Haupt, & Shakantu, 2013). This is a clear indication that, Kenya's situation with regard to occupational safety and health is dire and needs to be addressed. According to the Chapman

Institute (2014) organizations that compromise the health and safety standards continue making profits albeit in the short run. A number of studies have hitherto been conducted on occupational safety and health but they fail to address employee performance particularly in the water industry (Kemei & Nyerere, 2016; Mwangi & Waiganjo, 2017). Therefore, this study was conducted with the object of addressing the identified research gap.

Purpose of the Study

The purpose of this study was to assess the influence of safety rules and procedure on the employee performance in Nakuru Rural Water & Sanitation Company Limited.

Research Objective

To examine the influence of safety rules and procedure on the employee performance in Nakuru Rural Water & Sanitation Company Limited.

Research Hypothesis

H_{0_1} : Safety rules and procedures have no significant influence employee performance in Nakuru Rural Water and Sanitation Company

Literature Review

Under this section, the theories and empirical review pertinent to safety rules and procedures as well as employee performance are reviewed.

Distractions Theory

The distractions theory was proposed by Hinze (1997) and states that safety is situational. Since mental distractions change, the reactions to them may need to vary in order to keep up safe execution. Also, dangers or physical conditions with inalienable characteristics that can hurt an individual could conceivably be perceived by the labourer to impact their safety when carrying out assignments. The theory applies to a circumstance wherein perceived safety danger or mental distractions exist and where there is a well-characterized work to perform. According to the theory, the absence of risks presents no reasons for workers not to complete their assigned tasks and/or errands.

The distractions theory has two parts. The first part constitutes managing dangers presented by perilous physical conditions while the second part involves managing a specialist distraction with issues not legitimately identified with the assignment being performed. The theory essentially expresses that when a worker has lower likelihood of damage there is increased likelihood of the assignment being accomplished. At the point when a specialist has a higher spotlight on a psychological interruption, the worker has a higher likelihood of damage and a lower level of accomplishing the assignment. To stay away from damage and accomplish significant levels of efficiency, workers must maintain a strategic distance from mental distractions (Hinze, 1997).

When assigning duties, directors of an organization must consider human capacities from the perspective of the workers' wellbeing and safety. It is contended that mishaps have recognizable socio-specialized reason that bring about human execution. Businesses should assess their abilities and the degree of preparing information and experience on the wellbeing and safety in the workplaces. It is further affirmed that organizations ought to plan how to address any blunders or mishaps which may occur at the workplace (Petersen & Lupton, 1996).

Safety Rules and Procedures and Employee Performance

Safety rules and procedures that are well established by organization can improve the safety behaviour of employees at the workplace. Matters related to safety rules and procedures include regular safety inspection, supervisor enforcing safety rules and effective safety and health rules, and procedures in workplace to prevent accidents. The safety rules and procedures can set up the standards of behaviour of the employees, and establish safety system to correct workers' safety behaviours. This would consequently enable employees to understand the safety rules and procedures at the workplace. The management has to make an effort on how it communicates the rules and procedures in a language that can easily be understood by the employees.

A study conducted by Kaynak, Toklu and Elci (2016) examined the effects of occupational health and safety practices on organizational commitment, work alienation, and job performance in Finland. Data set obtained from private sector enterprises was analyzed by structural equation modeling using least squares method. The findings of the analysis indicated that such OHS practices as safety procedures and risk management, safety and health rules, first aid support and training, and organizational safety support had a positive effect on organizational commitment. The findings further revealed that safety and health rules and organizational safety support decreased alienation whereas first aid support and training played an important role in increasing work alienation.

Another study carried out by Makhamara and Simiyu (2016) conducted a study on the influence of occupational health and safety policies on employees' performance in the Kenya's manufacturing industry. The focus was on Kapa Oil Refineries Limited. The objective was to establish the influence the aforesaid have on performance of employees working with Kapa Oil Refineries Limited. A sample of 100 respondents was drawn from the accessible population using stratified random sampling technique. Both descriptive and inferential statistics were used in data analysis. It was revealed there existed a positive relationship between health and safety training and employee performance. It was recommended that the employees ought to be trained on both health and safety measures.

Conceptual Framework

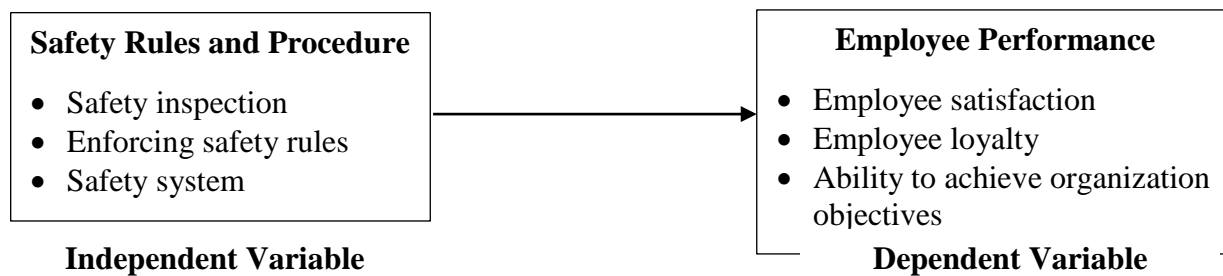


Figure 1: Conceptual Framework

Research Methodology

The methodology encapsulates the research design, population and sampling design, instrumentation, data collection, and data analysis. The ethical issues are also addressed. Descriptive research design was adopted. This was founded on the fact that the study sought to

reflect the accurate profile of respondents and issues pertinent to safety rules and procedure as well as employee performance. This is in conformity to the assertion that the object of descriptive research is to accurately illustrate the profile of events, situations or persons (Robson, 2002).

The accessible population, which is a subset of the target population that a researcher can access during the study period (Asiamah, Mensah, & Oteng-Abayie, 2017) constituted a total of 152 employees working with Nakuru Rural Water and Sanitation Company Limited. These employees were drawn from the top management, administration, finance and credit, technical, production and operations, and commercial departments or sections in the order of 8, 25, 16, 38, 43, and 22 staff respectively.

A formula by Nassiuma (2008) was used to calculate a sample of 74 respondents out of the accessible population of 152 staff. Stratified random sampling technique was used to obtain the sampled respondents from the accessible population. The choice of this technique was founded on the fact the distribution of the staff across the aforesaid five departments or sections was heterogeneous. It is postulated that stratified sampling technique is employed when there is conspicuous variation within a population, and it is purposed to ensure that every stratum (category of staff) is adequately represented (Taherdoost, 2016).

The primary data which were used in this study were collected using a structured questionnaire. Questionnaire refers to a predetermined set of documented questions presented to respondents for purpose of collecting data (Kothari & Garg, 2014). The questionnaire was self-designed and self-administered. Pertinent authorizations, research permit, approval and consents were obtained prior to data collection. Prior to data collection, both the validity and reliability of the research questionnaire were determined. Whereas validity (content validity) was determined by consulting lecturers and assigned university supervisors, reliability was tested using the Cronbach's alpha coefficient. The two study constructs (safety rules and procedure, and employee performance) returned alpha values above 0.7, which is the recommended minimum threshold for internal consistency reliability.

The collected data were analyzed using both descriptive and inferential statistics and with the facilitation of the Statistical Package for Social Sciences (SPSS). Descriptive statistics included frequencies, percentages, means, and standard deviations. Inferential statistics included correlation and simple linear regression analyses. The following regression model guided the study.

$$Y = \beta_0 + \beta_1 X_1 + \varepsilon$$

Where;

Y = Employee performance

β_0 = Constant

X_1 = Safety rules and procedure

ε = Error margin of respective regression models

β_1 to β_n = Coefficients of independent variables

The results of the analyses were presented in tabular format.

Results and Discussion

This section presents results emanating from the analyses of the collected data. The results are accompanied by respective interpretations and discussions. A total of 74 questionnaires were issued to the respondents. Fifty-two of these questionnaires were filled and collected. This represented 70.27% response rate. Moreover, the study put into perspective the background of the respondents with regard to their level of education. The results to this effect are presented in Table 1.

Table 1: Level of Education of Respondents

	Frequency	Percentage
Diploma	31	59.62
Undergraduate	15	28.85
Master’s degree	6	11.54
Total	52	100.00

As shown in Table 1, it was revealed that majority (59.62%) of the staff working with Nakuru Rural Water and Sanitation Company Limited had a diploma as their highest academic qualifications. On the same note, it was revealed that 28.85% and 11.54% of the staff had undergraduate and Master’s degree qualifications respectively. The results underlined the adequacy of academic qualifications of the employees working with the company hence their suitability to dispense the duties and responsibilities they were entrusted.

Descriptive Analysis

The study examined the views of the respondents with regard to safety rules and procedures as well as employee performance. The results to this effect are presented in Tables 2 and 3 respectively.

Table 2: Descriptive Statistics on Safety Rules and Procedure

	SA (%)	A (%)	N (%)	D (%)	SD (%)	Mean	Std Dev
The management consult employees while enforcing safety rules	31(59.6)	16(30.8)	2(3.8)	3(5.8)	0(0.0)	4.44	0.828
The company regularly revises its safety system	25(48.1)	25(48.1)	1(1.9)	1(1.9)	0(0.0)	4.42	0.637
The outcome of safety inspections are shared openly with employees	29(55.8)	18(34.6)	2(3.8)	3(5.8)	0(0.0)	4.40	0.823
The inspections help in developing safety strategies and initiatives that are tailored to the organizations specific needs	24(46.2)	22(42.3)	1(1.9)	5(9.6)	0(0.0)	4.25	0.905

The enforcement of safety rules depends on the goodwill of the senior manager	25(48.1)	18(34.6)	3(5.8)	3(5.8)	3(5.8)	4.13	1.138
The management provide adequate resources for health and safety management system	19(36.5)	17(32.7)	5(9.6)	8(15.4)	3(5.8)	3.79	1.258

According to the results shown in Table 2, it is evident that majority of the respondents were in agreement that the management of Nakuru Rural Water and Sanitation Company Limited consulted employees while enforcing safety rules (90.4%), the company regularly revised its safety system (96.2%), and that the outcome of safety inspections are shared openly with employees (90.4%). The respondents were generally in agreement that, the inspections helped in developing safety strategies and initiatives that were tailored to the specific needs of the company (mean = 4.25). Although the study participants held significantly divergent opinions, they averagely concurred that the enforcement of safety rules depended on the goodwill of the senior managers (mean = 4.13; std dev = 1.138), and that the management provided adequate resources for health and safety management system (mean = 3.79; std dev = 1.258).

Table 3: Descriptive Statistics on Employee Performance

	SA (%)	A (%)	N (%)	D (%)	SD (%)	Mean	Std Dev
I am satisfied with my work environment	33(63.5)	15(28.8)	1(1.9)	2(5.8)	0(0.0)	4.50	.804
Conducive work environment enhances employees' productivity	30(57.7)	17(32.7)	5(9.6)	0(0.0)	0(0.0)	4.48	.671
Employees are able to achieve their job assignments on time	31(59.6)	17(32.7)	0(0.0)	3(5.8)	1(1.9)	4.42	.915
Conducive work environment result in higher employee satisfaction level	28(53.8)	16(30.8)	4(7.7)	3(5.8)	1(1.9)	4.29	.977
Employees are able to serve their clients	22(42.3)	18(34.6)	4(7.7)	2(3.8)	6(11.5)	3.92	1.311
Conducive work environment result in employee loyalty	20(38.5)	20(38.5)	2(3.8)	6(11.5)	4(7.7)	3.88	1.263

The descriptive results shown in Table 3 indicate that 63.5% of the sampled respondents strongly agreed that they were satisfied with their work environment. At the same time, 57.7% of the aforesaid respondents were in strong agreement that conducive work environment enhanced their productivity. While expressing largely similar views, the sampled staff generally concurred that they were able to achieve their job assignments on time (mean = 4.42; std dev = 0.915), and that conducive work environment resulted in higher employee satisfaction level (mean = 4.29; std

dev = 0.977). Despite the fact that a majority of the respondents either agreed (34.6%) or strongly agreed (42.3%) that employees were able to serve their clients, their views on this proposition were established to be quite divergent (std dev = 1.311). Cumulatively, 77.0% of the staff who participated in the study at least concurred that conducive work environment resulted in employee loyalty.

Correlation Analysis

The Pearson’s Product Moment Correlation Coefficient (PPMCC) was employed to determine the relationship between safety rules and procedure, and employee performance at Nakuru Rural Water and Sanitation Company. The pertinent results are presented in Table 4.

Table 4: PPMCC Results

		Safety Rules and Procedures	Employee Performance
Safety Rules and Procedures	Pearson Correlation	1	.953**
	Sig. (2-tailed)		.000
	n	52	52
Employee Performance	Pearson Correlation	.953**	1
	Sig. (2-tailed)	.000	
	n	52	52

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

The results shown in Table 4 reveal that there existed a positive, strong and statistically significant relationship between safety rules and procedures, and employee performance (r = 0.953; p = 0.000) at p-value = 0.05. The results were interpreted to mean that enhancement of safety rules and procedures at the Nakuru Rural Water and Sanitation Company Limited was likely to result in a large and substantial improvement of the company’s employees’ performance. The reverse of the aforesaid statement was equally true. As such, it was imperative for the company’s management to ensure that it facilitated a safe working environment where there were rules and procedures to guide the conduct of the employees while at the workplace with the view of enhancing the performance of the workers.

Regression Analysis

Simple linear regression analysis was conducted to assess the influence of safety rules and procedures on employee performance at the Nakuru Rural Water and Sanitation Company Limited. The results to this effect are presented in Tables 5, 6, and 7.

Table 5: Model Summary

Model	r	r Square	Adjusted r Square	Std. Error of the Estimate
1	.953 ^a	.909	.907	.28812

a. Predictors: (Constant), Safety Rules and Procedures

According to the results of the coefficient of determination illustrated in Table 5 ($r^2 = 0.909$), 90.9% of variability in the performance of employees working with the Nakuru Rural Water and Sanitation Company Limited could be explained by the safety rules and procedures laid down by the company. The remaining proportion (9.1%) could be attributed to other factors which were not part of this study. The results underlined the importance of ensuring the adherence to the aforementioned safety rules and procedures particularly in reference to the performance of the employees.

Table 6: ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	41.433	1	41.433	499.106	.000 ^b
Residual	4.151	50	.083		
Total	45.583	51			

a. Dependent Variable: Employee Performance

b. Predictors: (Constant), Safety Rules and Procedures

The results of F-statistic shown in Table 6 ($F_{1,50} = 499.106$; $p = 0.000$), it was established that the relationship between safety rules and procedures, and employee performance was statistically significant at p -value = 0.05. This implied that the sample data collected fitted the adopted simple linear regression model ($Y = \beta_0 + \beta_1 X_1 + \epsilon$) which linked the aforesaid study constructs. Therefore, it was practical to use the model to analyze the influence of safety rules and procedures on employee performance as shown in Table 7.

Table 7: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-.312	.208		-1.498	.140
Safety Rules and Procedures	1.076	.048	.953	22.341	.000

a. Dependent Variable: Employee Performance

In line with the results demonstrated in Table 7, the adopted simple linear regression model ($Y = \beta_0 + \beta_1 X_1 + \epsilon$) was interpreted as $Y = -0.312 + 1.076X_1$, implied that, for every unit change in employee performance ($Y = 1$), safety rules and procedures were required to be changed by 1.076 unit ($\beta_1 = 1.076$) while other factors were held constant ($\beta_0 = -0.312$). It was also revealed the results of the t-statistic ($t = 22.341$; $p = 0.000$) that the influence of safety rules and procedures on employee performance was statistically significant at p -value = 0.05. Therefore, the results led to the rejection of the null hypothesis which stated that safety rules and procedures do not significantly influence employee performance at the Nakuru Rural Water and Sanitation Company. The results supported the findings of the r^2 and F-statistic shown in Table 5 and Table 6 respectively in emphasizing the importance of ensuring there is adherence to safety rules and procedures with regard to employee performance.

Conclusion and Recommendations

The study concluded that the management of Nakuru Rural Water and Sanitation Company Limited consulted the staff on safety matters in addition to ensuring that there was provision of adequate resources for the health and safety management system. The safety system of the company was considered to be important given the regularity at which it was inspected. Moreover, the study concluded that safety rules and procedures were of great importance to the performance of employees working with the aforementioned water company. In line with the drawn conclusions, the study recommended that the safety measures put by the water and sanitation companies ought to be in conformity to the generally recommended measures particularly the ones stipulated by the Occupation Safety and Health Act. Given the dynamics of the water sector, for instance, adoption of advanced technologies, plants and machineries, it is important for the management of water and sanitation companies to keep updating their safety measures and guidelines.

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