Influence of Sanitation on Employee Performance at National Social and Security Fund, Kenya
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Abstract

Purpose: Organizations exist to produce goods and services to meet the customers' demands and to give favorable working environment for workers as outlined in the Occupational Health and safety standards Act (2007). Since organizations depend on the employees as the main working force to help them meet their objectives, the provision of safe and healthy program will depend on the size of the organizations. The purpose of this study was to examine the extent to which sanitation influences employee performance at NSSF.

Methodology: In the research methodology, Descriptive research design was used where 4750 staff at the National Social Security Fund (NSSF), headquarters in Nairobi, were considered as the population. Stratified and purposive samplings were used in this study where a sample of 369 from the population was considered. The study used structured questionnaires and observation methods as instruments of data collection. Descriptive statistics was used to analyse mean, percentages and Standard deviation. This was aided by using Statistical package for social sciences (SPSS) software. Qualitative data was examined using inferential statistics. The link between sanitation as an independent variable and employee performance as a dependent variable was examined using a linear regression model.

Findings: Research’s findings suggested that a number of illnesses and disorders were brought on by poor sanitation. The research validated the 1959 Two-Factor Theory put out by Frederick Herzberg. According to the theory, two factors—motivators, or things that will gratify an employee, and hygiene factors, or items that are related to employees' mental health—have an impact on how well employees perform inside an organization.

Unique contribution to theory, policy and practice: This study is distinctive since it emphasizes how sanitation would help to boost performance while an unfavorable work environment would make the employees unhappy, which would lower their performance. According to the report, firms should create Sanitation policies and regulations that comply with the Occupational Safety and Health Act of 2007, as employee performance is a major factor in organizational advancement. Offices are becoming more often filthy as a result of the company's growing customer base, necessitating stronger waste control. Additional cleaners
should be engaged, and restrooms should stock extra paper towels and hand soaps, among other necessities, in order to undertake cleaning more frequently.

Key words: Sanitation, Employee performance and Occupational health and Safety
INTRODUCTION

Occupational Health and Safety (OHS) deals with standards, protocols that are adopted in the formal workplace both in Public and Private Organizations. Goethe (2019) confirmed that safety as a disciple is concerned with Injury causing while health is concerned with disease-causing conditions. Occupational Health and safety in Developing Nations have not been efficient thereby leading to various work-related injuries. In America and Europe, Occupational Safety and Health (OSH) is accomplished through efficient task performance in organizations. The employee safety and health in the United States of America (USA), led to Occupational health and Safety Act 1970, enacted to help prevent approximately 15,000 work-related deaths which occurred in the USA every year. Mansdorf (2019) noted that effective safety and health management policies should be geared towards improving the performance of organizations in the world. According to statistics from the International Labor Organization (ILO) that were released in 2013, almost 2.2 million workers passed away annually as a result of illnesses related to their jobs.

In Africa, the adoption of OSH is slow in most of the countries as compared to their European Counterparts. In Kenya, Occupational Health and Safety Act of 2007, outlines that any workplace should be clean with an adequate supply of air. Floors walls and doors should be painted regularly to make the environment to be sufficiently clean. Secondly, the offices should have the right number of people who are every spaced. There should be good waste disposal mechanisms in place. Abolition blocks should be marked and should be cleaned regularly. They should have running water and toiletries such as tissue paper, hand washing soaps, wipers among others. Moreover, the buildings should have staircases for those living with a disability. The chair should be comfortable to prevent the cause of any health-related diseases in the workplace. Offices should be properly lit to take care of those having eyesight problems and the Computers should be fitter with antireflective layers.

Kipkosgei (2018) did study about the effects of social interventions on employee performance at Eldoret Water and Sanitation. This study identified sanitation as Occupational health and safety measure. The study noted that hygiene factors will affect the productivity of the employees therefore should be improved.

Lankoski (2009) asserts that a good organization requires a wider approach by ensuring that health and safety programs are provided. This will help not only in providing a conducive atmosphere for the employees to apply their skills but will also contribute to the efficiency in the organization since the various deadlines will be met by the employee. Madichie and Nyakang’o (2016) observed that Occupational Health and Safety, is an area that corporations should invest in to improve performance.

Statement of the Problem

Healthy working environments are the pillars that would promote employee performance among the various employees. According to National Profile on Occupational Safety and Health (2013), about 20-35% of health-related illnesses and diseases among the workers are transmitted in the workplaces. Poor hygiene, inadequate lighting, uncomfortable furniture, overcrowding in offices that allowed the spread of airborne diseases, were the main causes of
these illnesses. Amos et al. (2018) indicated that since the year 2006, the government of Kenya had embarked on the implementation of rapid initiative as an approach to measure staff efficiency and performance in all ministries, state departments, and agencies. It is now a policy that all Semi-Autonomous Government Agencies must carry out performance appraisals yearly to know whether their staffs are efficient so that organizations can make more profits. The influence of sanitation on employee performance have been identified by several scholars as a cause of staff inefficiency in most of the organizations in Kenya. Oluoch (2015) did research on the effects of OSH on employee performance in Kenya Power and Lighting Company, Lukoko (2014) did a research on the impact of occupational safety and health on the performance of employees at Mumias Sugar Company. All these studies recommended for more research to be done in bigger SAGA with a big number of employees and also offer several services to a bigger customer base. It is from this backdrop that NSSF was considered for this study which the research findings were generalized in ascertaining influence of sanitation Occupational health and safety measures on employee performance. The study examined the influence of sanitation on the performance of employees at NSSF.

Justification and Significance of the Study

National Social Security Fund is responsible for development projects, investments, public services, social obligations, planning, and member contribution collecting. NSSF provided the best organization where the research findings would be generalized due to the high number of employees they have engaged as compared to SAGs such as the Kenya Institute of Curriculum Development (KICD). Secondly, NSSF also employed heterogeneous staff who were considered as respondents, therefore, a representative sample was drawn.

The study's findings might be used to create theories and plans for the various occupational safety and health programmes, which would be beneficial to academics and researchers. The research findings would be useful to policymakers to create new regulations that tighten the standards controlling workplace health and safety. Utilizing research findings would enable management, staff, and stakeholders at NSSF to enhance physical occupational health measures.

Theoretical Framework

The study was supported by Frederick Herzberg’s Two –factor theory proposed in the year 1959. The theory postulates that in an Organization, there are two factors that influence employee performance. The first factor is the motivators which are the things that will satisfy the employee. Satisfiers include complexities of job content; whether it is simple or complex that an employee is able to perform, how employees are motivated after successfully completing a challenging task, and recognition and appreciation of good performing employees. The second factor is hygiene; which deals with the mental status of workers. Hygiene factor which includes the working environment would affect the mental status of the workers. A good working environment free from diseases and hazards would satisfy the employees, thereby improving their performance, while an unfavorable working environment would dissatisfy the employees, thereby reducing their performance.

Empirical review
Onuorah et al. (2020) conducted research on the management of work-related hazards in organizations in Nigeria. The study identified office space and sitting arrangements as the independent variables. This study concluded that hazards contributed to non-performance among the employees. In addition, poor and unsafe working conditions contributed to the employees being infective since they cannot carry out their tasks within the required schedule. However, this study has some contextual and methodological gaps which require more studies to be done locally to help to ascertain the research findings.

Nkudefe (2013) carried out research about effects of occupational health and safety on labor productivity in firms in Accra, Ghana. The study considered; quantity, quality, attendance, and concentration as independent variables, while employee performance as dependent variable. Measurement was done by considering investment, training, and management. The study found that when quality of work is improved, the performance of employees also improved. However, this study has a methodological gap, therefore, the need for more studies to be done to confirm the research findings.

Kipkosgei (2018) did a study about effect of social interventions on employee performance at Eldoret and Water Sanitation. Descriptive research design was used in this study and a sample of 400 respondents was considered. Independent variables were sanitation and socialization while dependent variable is employee performance. The study concluded that social interventions and sanitation should be improved at Eldoret Water and Sanitation Company.

Nanzushi (2015) studied how workplace environment affected performance of employees in Mobile telecommunication firms in Nairobi City County, Kenya. Nanzushi pointed out that a welcoming and comfortable work environment would boost employee productivity, enhancing organizational effectiveness. Employee performance was the dependent variable, and the independent factors were hygienic conditions, lighting, ventilation, staff training and development, leadership, and management. This study used a descriptive research approach, and 164 employees from Kenya's top telecommunications companies were selected at random as a sample. The study came to the conclusion that in order to increase employee performance, the working conditions inside the various telecommunication networks needed to be addressed.

Oluoch (2015) studied the impact of Occupational Health and Safety at Kenya’s power headquarters in Nairobi, Kenya. Descriptive research design was adopted. Stratified sampling method was used. Independent variables used in this study were; wellness-assisted programmes, safety policy programmes, occupational safety, and surveillance while, dependent variable was employee performance. The study concluded that good health and safety programmes improve performance of employees at Kenya Power Limited. Oluoch recommended that, Kenya Power Company should improve on Occupational health and safety measures such as spacing workers in the various Offices, proper ventilation in the offices, proper lighting, and provision of adequate air conditioners. Secondly, organizations should include Occupational health and safety measures in their strategic plans to help in improving employee performance. The study was done in energy sector so there is need for the same study to be done in different sectors such as social welfare to ascertain the research findings. The summary of the literature and gaps to be filled are tabulated and shown below.
Table 1: Summary of literature and gaps to be filled

<table>
<thead>
<tr>
<th>Author /year</th>
<th>Variables</th>
<th>Main findings</th>
<th>Study gap</th>
<th>The focus of the current study</th>
</tr>
</thead>
</table>
| Onuorah(2020) | Office space, sitting arrangements | -Spacious offices reduce airborne disease among the employees.  
- Congestion in offices increases exposure to employees contacting diseases leading to poor performance. | Study not conclusive, there is a need to consider other OSH measures such as security, sanitation, lighting, and aeration of the offices | -physical work environment.  
-Office space and layout |
| Nkudefe (2013) | -Quality,  
-Quantity,  
-Attendance | The study found out Occupational health and safety had an impact on efficiency of employees. | -Contextual gap; the study considered manufacturing industries, therefore, need to carry out the same study in other organizations. | workplace |
| Oluoch (2015) | Wellness assisted programmes, safety policy programmes, Occupational safety, and surveillance | The study found out that OSH programs positively affected efficiency of employees at Kenya Power and Lighting company in Kenya. | -Methodological gap-The study only used questionnaires as the method of collecting data which might have resulted in errors so there is a need to incorporate the Observation | -Physical workplace  
-office space and layout |
The operationalization frame provided how variables were measured against indicators. Sanitation was measured against indicators as, waste disposal, clean drinking water, Office Cleanliness and toiletries. The dependent variable; Employee performance was measured against indicators as staff turnover, staff layoff, staff lateness and Staff absenteeism. This was summarized below:

<table>
<thead>
<tr>
<th>Researcher</th>
<th>Indicators</th>
<th>Findings</th>
<th>Methodological Gap</th>
<th>Contextual Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kipkosgei (2018)</td>
<td>Sanitation, socialization, and efficiency in the workplace.</td>
<td>The study concluded that good sanitation, socialization will have a positive effect on the efficiency of employees.</td>
<td>-Sanitation in the workplace</td>
<td>The study only considered sanitation as the main factor affecting employee efficiency and left out other factors such as Office space, security, and physical work environment.</td>
</tr>
<tr>
<td>Nanzushi (2015)</td>
<td>Sanitation, office lighting, office ventilation, staff training and development, and leadership and management.</td>
<td>The study found out that proper sanitation, good aeration, and staff training will have a positive impact on employee performance.</td>
<td>-Methodological gap-The research was carried out by considering a small sample from which the research findings have been drawn.</td>
<td>-Sanitation in the workplace</td>
</tr>
</tbody>
</table>
METHODOLOGY

In order to collect high-quality data across the numerous departments and sub-departments of NSSF, a descriptive study design was employed (Cooper and Schindler 2003). Sanitation with indicators such as garbage removal, portable water, a clean office, and toiletries were independent variables. Staff turnover, staff tardiness, and staff absenteeism were indicators for the dependent variable, employee performance. A Likert scale was employed to measure the data, which were classed as nominal ratio and ordinal.

The target audience was the 4,750 employees at the NSSF Headquarters, from whom a sample of 369 respondents was chosen using stratified sampling (Human resource department, NSSF 2022). Since each responder within the population was given equal representation in this study, stratified random sampling was practical for this investigation. Stratification was carried out according to the different departments. In order to obtain trustworthy evidence for this study and provide legitimate information, primary and secondary sources of data were used. This allowed the researcher to ask questions and seek clarifications that primary data sources could not have provided (Mugenda & Mugenda, 2003). Observation and a structured questionnaire were utilized as the study's primary techniques for gathering quantitative data. Before conducting the entire investigation, a pilot test was conducted to analyze the research study in order to reduce errors and determine the costs involved (Cooper & Schindler, 2003). In order to evaluate the internal consistency and reliability of the Likert scale that was used in this experiment, reliability statistics were performed using Cronbach's alpha coefficient.

Where percentages, the mean, and the standard deviation were computed, descriptive statistics were utilized. To determine the direction and strengths of variables, regression analysis was used (Montgomery, 2011). Employee performance was the dependent variable for this study, denoted by \( Y \), and sanitation was denoted by \( (X_1) \), with \( Y=f(X_1) \). There were instances of research plagiarism where the respondent's anonymity and confidentiality were respected, and all sources of the information were acknowledged. Before sending study items to the respondents, we requested their informed and voluntary consent. During the research process, legal considerations were noted, and the research results were communicated with the appropriate authorities.
FINDINGS AND DISCUSSIONS

The results of the observational study indicated that sanitation has to be improved, including the availability of clean drinking water, effective waste disposal, and personnel congestion. All of these increased the risk of contracting water- and air-borne infections, which decreased workers' productivity. The results corroborated those of another study by Nanzushi (2015), which found a relationship between employee performance and workplace hygiene. Additionally, workplace sanitation needs to be enhanced.

Three hundred and sixty nine questionnaires were distributed to the respondents at National Social and Security Fund. This was done physically and online. 200 questionnaires were distributed physically while 169 were distributed online. This was carried out in response to the ongoing measures to control the spread of Covid-19 disease where staff who are 50 years and above are advised to work remotely. 195 filled questionnaires and 160 filled questionnaires for both physical and online distributions respectively were returned. This gave 96% response rate, sufficient for analysis. Good response rate was accredited to the pilot research conducted and the necessary modifications to the questions, which were straightforward, clear, and direct. Additionally, the questionnaires were given at a time when the majority of respondents could access them and could participate in the study. Shuttleworth (2009) noted that in research a response rate of over 85% is excellent and can be used for data analysis.

Findings indicated, 200 of the respondents were males constituting 56%, 155 females constituting 44%. Results concurred with another study which was done by Oluoch (2015) at Kenya power and lighting limited which demonstrated that there was no gender bias in this investigation. The study's results showed that considering all genders reduced bias that could arise as a result of gender inequality. The study's findings also showed that there is less of a gender gap among NSSF employees, and as a result, NSSF has taken the 2010 Kenyan Constitution's two-thirds gender rule into account. The results differ from those of the Korea Institute of Technology (2018) study, which had biasness because there were more females than males.

Most of respondents at the National Social Security Fund headquarters are over 36 years old, with 42.3% falling in the 36–45% age range, those over 46 years old making up 5.6% of the sample, followed by the 26–35 age range at 23.9% and the 20–25 age range at 28.2%. The study's findings demonstrated that all participants from various age groups were included, and many professionals of all ages had the opportunity to offer their services at NSSF. The findings were consistent with those of another survey carried out by Kipkosgei (2018) at Eldoret Water and Sanitation, which included respondents from the organization's various age groups.

The data collected showed that majority of the employees hold bachelor’s degree certificates at 41%, diploma and higher diplomas at 28%, post graduate certificates at 28% and 3% hold secondary certificates. This information shows that the majority of NSSF personnel are literate and have had literary education, which meets the
organizations varied job requirements. Findings showed respondents were educated about numerous occupational health and safety topics, resourceful in their responses to the study's questions, and could advise management on various OHS practices that could be strengthened. The results supported those by Hameed and Amjad (2009), which revealed that most of the respondents were knowledgeable about how OHS measures could be improved in an organizations.

A series of questions regarding objectives of the study were given to the respondents. Responses were rated on a continuous range of 1-Strongly disagree, 2-disagree, 3-neutral, 4-agree, and 5-Strongly agree using the Likert scale. The study gathered data on sanitation where the indicators were considered

Respondents moderately agreed poor waste disposal influenced employees' performance with a mean of 3.52; however, some respondents believed that inadequate access to safe drinking water also had an impact on employees' performance with a mean of 3.59; respondents agreed that offices should be cleaned regularly and that adequate toiletries should be available to improve employees' health conditions so that they can work more effectively. Respondents strongly agreed that office cleanliness and provision of toiletries influenced greatest the performance of employee, since it had highest respondents with a mean of 3.61.

The results of the study demonstrated how NSSF employees' performance was impacted by poor sanitation. Respondents highlighted that improper waste management contributed to the spread of airborne illnesses including the common cold and influenza. According to the study, offices need to be cleaned frequently to avoid airborne infections brought on by waste and dust. This supported a study by Nanzushi (2015) that discussed the importance of having clean offices at work for better health. The study agreed with the findings done by Korea Institute of Technology (2018).

The study found out safe drinking water enhanced employee performance. To avoid water-borne illnesses, water dispensers should be cleaned frequently. Additionally, glasses, cups, or mugs used to serve water should also be cleaned more frequently. This stopped the spread of many illnesses and disorders at work. The study also discovered that providing commodities like tissue, hand washing soaps, and installing taps with running water in the restrooms enhanced employee wellness, which in turn increased performance in the company performance.

Study collected data on the dependent variable, employee performance, by asking a number of questions to the respondents to ascertain the numerous factors that influenced performance of the employees.

According to the data acquired, the majority of respondents (Mean=3.643) agreed that workplace accidents contributed to employee sick days. 47 percent of respondents agreed that work-related sickness caused staff absenteeism, with a mean of 3.845, and 46% agreed that inadequate cleanliness contributed to staff turnover in the firm.
Variance analysis was done to test the difference in means for level of significance. It was achieved through identifying the total variance that resulted into random errors and the components that showed differences between the means. Variance analysis was done by using ANOVA. Testing statistical significance of mean differences (for groups or variables) is the aim of the variance analysis. Variance analysis, involved dividing entire variance into parts due to actual random error and due to variations in the means. Analysis of changes in sample outcomes relative to predicted population parameters formed the basis of ANOVA (Kucuk et al. 2016). Results of ANOVA demonstrated independent variables were significant at the 0% level (Sig.F >.005) in the F-Statistics obtained (F=132.129), verifying the model's appropriateness.

The Regressional model used depicted as: \( Y=\beta_0+\beta_1X_1+e_i \). Where: \( Y \) - Performance of employees, \( \beta_0 \): Constant factor, \( \beta_1 \): Coefficient for Sanitation, \( X_1 \) Sanitation, and \( e_i \): Error terms. The table below summarized coefficients and model

Fahrmeir et al. (2021) noted that, modified R squared coefficient of determination measured the amount of the dependent variable's fluctuation explained by a change in the independent variable. Adjusted \( R^2 \) was preferred since R squared couldn’t detect biasness. Coefficient of determination equals to 0.77 (\( R^2=77\% \)). This meant, changes in employee performance can be explained by changes in variables sanitation, security and office space and layout totaling to 77%. Multiple linear regression equation becomes: \( Y=0.76+0.69X_1 \). Employee performance would be 0.76 if sanitation conditions ranked at zero, as indicated by the constant 0.76 in the equation above. The coefficient for sanitation \( (X_1) \) is 0.69, which indicated unit change in sanitation would result to 0.69 units increase in employee performance.

Sanitation aggravated water-borne illnesses like cholera, dysentery, and diarrhea, which reduced labor performance. Employee productivity suffered as a result. The report also stated that workplace dangers including illness and injuries should be eliminated. The findings of the study were consistent with those of Winarmo and Perdana (2015), who identified quality, cost effectiveness, quantity, and punctuality as requirements for establishing an effective workplace. According to the study, employees suffered from illnesses and diseases at work, which affected their performance. The study discovered that underperforming employees would use sick days, be away from work, or eventually resign owing to illnesses and diseases related to their job.

**Conclusion**

Research findings showed that that gender issues were taken into consideration. Males made up 56% of the population, leaving women with the remaining. This demonstrated that, in some respects, male to female ratio at NSSF is almost balanced, indicating that the issue of gender equality was taken into account by NSSF management. Majority of responders were between the (32-37) age group. This demonstrated that the majority of employees are responsible, experienced adults who can comprehend the status of physical occupational health and safety measures at NSSF. The research's findings also
indicated that more than 90% of NSSF staff were educated and held post-secondary degrees in a variety of professions. This demonstrated that the respondents are competent in evaluating the various physical occupational health and safety measures that have been implemented and those that should be implemented in relation to their impact on employees' performance. The research findings by departments and sections demonstrated that personnel were taken into account from various departments, minimizing bias. According to the study, the Operations division had highest percentage with (79%) respondents. This demonstrated that most of the staff at the NSSF directly interacts with clients when it comes to the registration of new members and the processing of dues. They also demonstrated their knowledge of the various physical, occupational, and health measures currently in place as well as any gaps that need to be filled.

The majority of respondents in a study at NSSF on the connection between sanitation and worker performance believed that offices with poor waste disposal should improve in order to prevent airborne diseases. The availability of clean, drinkable water, according to the respondents, is provided; nonetheless, it is insufficient for the workers and clients who visit the various Offices. The general health of the staff was impacted by the office's cleanliness. The research also revealed that most NSSF staff members deal directly with customers when it comes to new member registration, processing dues, and awareness of the many physical occupational, and health measures currently used or proposed in order to stop the spread of water-borne infections, the survey also revealed that employer should give their staff access to more toiletries. The results of the research indicated that poor sanitation contributed to the emergence of a number of illnesses and disorders, and the management at NSSF should thus enhance cleanliness.

The study concluded that employees' performance was affected by sanitation. More toiletries, clean and safe drinking water, and a clean working environment should all be supplied, according to the study's findings about sanitation. Key things that affected how well employees performed were employee turnover, staff tardiness, and absenteeism. The management at NSSF failed to successfully implement OHS as sanitation as a measure to improve employee performance.

**RECOMMENDATIONS**

The study recommend that, performance of employees is a key determinant of organizational progress. The goal of occupational health and safety measures is to encourage employee wellness at work. A healthy worker is more effective and productive. Therefore, businesses should develop OHS policies and rules that align with the Occupational Safety and Health Act of 2007. Inadequate workplace architecture and layout, poor security, and poor cleanliness are all blamed for work-related illnesses and diseases. According to the research's conclusions, NSSF management has to take stronger action to ensure sanitation is considered a part of occupational health and safety. Employees should have access to enough drinking water. Stronger waste management is needed since offices are becoming more frequently messy as a result of the business' expanding clientele. To perform cleaning
more frequently, additional cleaners should be hired. The restrooms should have enough paper towels and hand soaps, among other essentials.

**Suggestions for Future Research**

The study suggested that future studies can investigate how workplace health and safety affect employee performance by considering new Objectives. Future studies can employ a larger sample size of more than 369 to generalize the research findings. Future researchers might think about using different state corporations to conduct a comparable study so that the research findings can be compared, and finally, they might use a different research design and data collection techniques in their future studies instead of the questionnaires and observation methods that were employed in this one.

**REFERENCES**


