

**INFLUENCE OF PHYSICAL OCCUPATIONAL HEALTH AND SAFETY
MEASURES ON EMPLOYEE PERFORMANCE AT NATIONAL SOCIAL
AND SECURITY FUND, KENYA**

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**A RESEARCH PROJECT SUBMITTED TO THE SCHOOL OF
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DECLARATION

I declare that this research project report is my original work and has not been presented to any other University.

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DEDICATION

I would like to dedicate this project to my Parents for their support and advice as far this project is concerned. My sincere gratitude goes to my Father for continuously encouraging me to put more effort in academia.

TABLE OF CONTENTS

DECLARATION.....	ii
ACKNOWLEDGEMENT.....	iii
DEDICATION.....	iv
TABLE OF CONTENTS	v
LIST OF FIGURES	viii
LIST OF TABLES	ix
ABSTRACT.....	x
ABBREVIATIONS AND ACRONYMS.....	xi
OPERATIONAL DEFINITION OF TERMS.....	xii
CHAPTER ONE: INTRODUCTION	1
1.1 Background to the Study	1
1.2 Statement of the Problem	7
1.3 Objectives of the Study	8
1.4 Research Questions	8
1.5 Justification and Significance of the Study	8
1.6 Scope of the Study.....	9
CHAPTER TWO: LITERATURE REVIEW.....	10
2.1 Introduction	10
2.2 Theoretical Review.....	10
2.2.1 Fredrick Herzberg’s Two-Factor Theory.....	10
2.2.2 Goal–Freedom Alertness Theory.....	11
2.2.3 Maslow’s Hierarchy of Needs Theory.....	12
2.3 Empirical Review.....	13
2.3.1 Employee Performance	13
2.3.2 Sanitation and Employee Performance	15

2.3.3	Security Measures and Employee Performance	17
2.3.4	Office Space and Layout Measures and Employee Performance	19
2.4	Summary of Literature and Gaps to be filled	20
2.6	Conceptual Framework	31
2.7	Operationalization Framework of the variable	32
	CHAPTER THREE: RESEARCH METHODOLOGY	33
3.1	Introduction	33
3.2	Research Design	33
3.3	Variables Description and Measurement	33
3.4	Target Population	35
3.5	Sampling Design and Sample Size	35
3.6	Data Collection.....	37
3.6.1	Data Source.....	37
3.6.2	Research Instruments	37
3.7	Pilot Testing	38
3.7.1	Data Collection Procedures	40
3.8	Data Analysis and Presentation.....	40
3.9	Ethical Considerations	41
	CHAPTER FOUR: DATA ANALYSIS AND DISCUSSIONS	42
4.1	Introduction	42
4.2	Observational results.....	42
4.3	Response Rate	43
4.4	Demographic characteristics of the respondents	44
4.4.1	Gender of the respondents	44
4.4.2	Ages of the respondents	45
4.4.3	Levels of education of respondents.....	47

4.4.4 Respondents per Department	48
4.5 Descriptive Statistics	49
4.5.1 Sanitation	49
4.5.2 Staff Security	51
4.5.3 Office Space and Layout.....	52
4.5.4 Causes of Health related Illness	54
4.5.5 Major work related illness and dieses at NSSF	55
4.5.6 Employee Performance	56
4.6 Inferential Statistics	57
4.6.1 Variance Analysis	57
4.6.2 Regression Analysis.....	58
4.6.3 Causes of illness and diseases.....	59
4.6.4 Establishment of Performance of Employees	60
CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSION AND	
RECOMMENDATIONS.....	61
5.1 Introduction	61
5.2 Summary of Research Findings	61
5.3 Conclusion.....	63
5.4 Recommendations	64
5.5 Suggestions for Future research	65
REFERENCES.....	66
APPENDICES	72
Appendix 1: Questionnaire	72
Appendix 2: Observation Schedule	79
Appendix 3: Approval and license.....	80

LIST OF FIGURES

Figure 1: Conceptual Framework	31
Figure 2: Response rate.....	44
Figure 3: Educational levels.....	47

LIST OF TABLES

Table 1: Summary of literature and gaps to be filled.....	21
Table 2: Measurement of Variable	34
Table 3: Stratification of employees at NSSF Headquarters in Nairobi	35
Table 4: Purposive sample for each category of employees.....	37
Table 5: Reliability	39
Table 6: Table showing Observational results.....	42
Table 7: Gender of respondents	45
Table 8: Ages of the respondents.....	46
Table 9: Department currently serving at National Social and Security Fund	48
Table 10: Descriptive Analysis on Sanitation.....	49
Table 11: Analysis on Staff security.....	51
Table 12: Analysis on Office space and layout	52
Table 13: Causes of health related Illness and diseases.....	54
Table 14: major illness and sickness at NSSF	55
Table 15: Responses on Employee performance	56
Table 16: Variance analysis	57
Table 17: Coefficient and model summary.....	58

ABSTRACT

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 programmes will depend on the size of the organizations. This research project was supported by three objectives namely: to determine the extent to which sanitation influences employee performance, to determine extent to which staff security influences employee performance and to evaluate the influence of Office space and layout on employee performance at NSSF. Herzberg's two-factor theory, developed by Frederick Herzberg in 1959, Kerr's goal-freedom alertness theory, developed by Kerr in 1950, and Abraham Maslow's Hierarchy of Needs theory, developed in 1943, all provided support for the study. Descriptive research design was used in this study where 4750 staff at the National Social Security Fund (NSSF), headquarters in Nairobi, will be 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 physical occupational health and safety measures as an independent variable and employee performance as a dependent variable was examined using a linear regression model. Research's findings suggested that a number of illnesses and disorders were brought on by poor sanitation. As a result, more security equipment, including metal detectors, should be obtained to ensure the safety of the workers. Research on the impact of office layout and space indicated that staff congestion increased the risk of contracting airborne infections, which had a detrimental impact on employees' performance. In order to assist reduce illnesses and diseases connected to health and safety and to increase employee performance, the study advised that more monies be provided by management at NSSF for improving sanitation, staff security, office space, and layout.

ABBREVIATIONS AND ACRONYMS

FTE	-	Full time Equivalent
GDP	-	Gross Domestic Product
HRM	-	Human resource management
KCB	-	Kenya Commercial Bank
ILO	-	International Labour Organization
OSH	-	Occupational safety and Health
OHS	-	Occupational health and safety
WHO	-	World Health Organization
SAGA	-	Semi-Autonomous government Agency

OPERATIONAL DEFINITION OF TERMS

Employee performance -This is how a worker fulfills his duties and sets targets to reach the organization's full potential to be productive and meet its goals.

Occupational Health and safety- This discipline deals with the prevention of work-related diseases and hazards

Office layout This is the design and décor of the workplace. It includes the sitting capacity, sitting arrangements, and painting in offices, types of doors, ceiling, and windows in offices

Physical Refers to the central work location in a formal office setting such as Air, heating, lighting, office space.

Sanitation Public health conditions in the workplace such as clean drinking water, water dispensers, toiletries, washrooms, adequate sewage disposal, and disposal of waste materials from the offices.

Staff Security This is the process of protecting the employees from work-related injuries and intruders. It includes security personnel at the entrance points in offices, biometric check-ins, security in lifts and conveyors, fire extinguishers, alarms for emergencies

CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

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 discipline 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. It is from this backdrop that various Developing nations came up with Health and Safety standards that have been enacted in their Constitutions. According to Berhan (2020) OSH entails safety which includes Occupational Health measures such as sufficient rest among the workers, a balanced diet, and workers being psychologically prepared before work. It also includes corporate management like training organized by management to the staff on OSH. Teixeira *et al* (2017) argued that Occupational Health and Safety entails promotion and maintenance physical, social, and mental wellness of employees in the organization. Sinclair *et al.* (2013) emphasizes that big organizations are susceptible to a higher rate of occupational illness and injuries as compared to smaller organizations. Sinclair further highlighted that bigger organizations are allocated fewer resources to help curb Occupational injuries and illness.

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.

Cascio (2006) elaborated that occupational health and safety encompasses physical work environment like level of noise, room temperatures, quality of air, and availability of space. Moreover, it should also consider the social work environment like the involvement of workers in OSH decision making, rewarding the best workers upholding OHS strategies, and supervision of workers. According to the statistics from the International Labour Organization.

According to Mejioa (2010) Occupational safety and health deal with the emotional and physical well-being of workers at the place which is geared towards reducing job-related injuries. Secondly, OSH enhances Occupational health which includes stress management, smoking habits, sleep quality, sufficient rest, workers being relaxed before work, and sufficient quality diet. In addition, it includes corporate management which includes value to the company, having standard and safety meetings, and stopping dangerous work that will promote health hazards. Thirdly it protects the employees' Physical health environment which includes heat levels, lighting quality, and absence of smell, level of noise, waste disposal, and availability of ablution blocks that are well maintained. World Health Organization (WHO) (2010) asserts that with good OSH programs in place in the organization, workers will be empowered socially and economically which leads to sustainable development.

In Africa, the adoption of OSH is slow in most of the countries as compared to their European Counterparts. In South Africa, the success of OSH remains construed since most of Organizations need to improve Occupational access to health and workplace health (Angle, 2015).The main responsibility is to assess the suitability of the design of OSH, an inspection of companies to establish their level of compliance about OSH, and recommendations on the new OSH strategies to be adopted by the various companies. In Zambia, the OSH board is responsible for the coordination and collaboration of OSH issues. The board is also responsible for coming regulations and enforcement. Non-governmental organizations are also responsible for enlightening the workers and employers on the need to practice good OSH issues health (Zunju & Dingani, 2015)

Agwu (2012) in Nigeria, identified profitability, efficiency, productivity as the various factors that organizations should consider about the safety of employees. The research noted that through practicing safety cultures, there will be enhanced employee performance which results in reduced expenses. Improved performance among the employees will lead to reduced illness, accidents, absenteeism, and reduced injuries in the workplace.

Akpan (2011) noted that most organizations in Africa have not put into place the various OSH measures to help in proving the performance of the employees. Akpan, further noted that for formal organizations in Africa to be productive, then the various OHS measures such as provision of portable water dispensers, maintenance of fire extinguishers, and security should be provided in workplaces. In addition, the effectiveness of employees will depend on task preference, employee reliability and level of safety, management policies

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. Ablution 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. Nderitu and Gichuhi (2019) conducted research on the impact of management commitment on occupational health and safety policies in Nyeri's water and sanitation sector. Nderitu and Gichuhi, emphasized that social, economic, and psychological experiences at work should support employees' mental health and well-being within the firm. The survey also mentioned that risks including illness, injury, and property damage shouldn't exist at work. Organizations, therefore, should invest in safety and health programs and interventions to help in coping with the various issues related to the safety and wellness of the workers. NSSF as a Semi-Autonomous Government Agency (SAGAs) provides the best organization in which the research proposal

findings can be used to generalize for other SAGAs since the operations and management are less the same. This study will assess the OSH measures that have been adopted at NSSF such as office spaces, aeration of offices, chairs used by employees, lighting in the various offices, condition of water taps, water dispensers, and condition of floors, social distancing, and, security.

Kayastha *et al.* (2013) outlined that work-related stress such as Occupational Safety and Health and non-work-related conflict are some of the factors affecting performance in the workplace. Winarno and Perdana (2015) described the various ways of measuring performance which include cost-effectiveness, quality, quantity, and punctuality. Armstrong (2012) argues that managers in most organizations aim to establish high performance in which employees are responsible and use their skills for the improvement of efficiency. 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.

Berman (2014) argues that public organizations have the sole responsibility of ensuring that the lives of the citizens and the communities' area are improved. Berman further reiterates that for this to be achieved, the various dimensions such as ensuring that programmes are adequately tailored for different populations and clients, managers being proactive by ensuring that strategic plans are implemented to the latter through providing a conducive working environment. According to Ndegwa *et al.* (2014), any firm should invest more resources in occupational health and safety (OHS) in order to boost performance. Failure for organizations to adhere to

Occupational Health and Safety measures could lead early retirements, high payment of insurance premiums by the staff to the health insurance companies since work-related diseases will be on the rise.

Berman (2014) argues that public organizations have the sole responsibility of ensuring that the lives of the citizens and the communities are improved. He further reiterates that for this to be achieved, the various dimensions such as ensuring that programmes are adequately tailored for different populations and clients, managers being proactive by ensuring that strategic plans are implemented to the latter through providing a conducive working environment. Nyakang'o (2009) observed that Occupational Health and safety, is an area that corporations should invest in to improve performance.

The study was done out at the National Social and Security Fund (NSSF) headquarters in Upper Hill Nairobi. Research found out that there was staff congestion, there was no proper arrangement of seats, there was poor aeration brought about by many clients visiting NSSF offices seeking for various services such as registration or processing of their retirement benefits, there was lack of proper lighting, inadequate security of employees brought about by the high number of customers who visited NSSF Offices, there was inadequate toilets to serve the staff and the clients. This led to 30% early retirements, 35% payment of insurance premiums by the staff to the health insurance companies since work-related illness and diseases are on the rise which is coupled with the hazardous working environment.

1.2 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, and a lack of security were the main causes of these illnesses. In order for workers to be productive, the setting in which they provide their services must be favorable; more specifically, it must support occupational safety and health precautions. 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. According to Auditor general report in June 2020, Most of the SAGAs such as Kenya Airways, Mumias Sugar, Sony Sugar Company and Public Universities, are struggling with financial debt brought about by losses they are experiencing. Most of these organizations have resorted to the promotion of staff efficiency where they are cutting the costs by staff layoff and engaging productive staff. OSH is a factor that has contributed to staff inefficiency leading to unproductivity.

The influence of OSH measures 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 the influence of Physical Occupational health and safety measures on employee performance.

1.3 Objectives of the Study

1. To determine influence of sanitation on employee performance at NSSF.
2. To assess the extent to which staff security influences employee performance at NSSF.
3. To determine the influence of office space and layout on employee performance at NSSF

1.4 Research Questions

1. How does sanitation influence employee performance at NSSF?
2. What is the influence of Staff security on employee performance at NSSF?
3. To what extent do office space, layout influence employee performance at NSSF?

1.5 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.

1.6 Scope of the Study

Study conducted at NSSF headquarters, Nairobi; this was to ensure that a large sample frame would be considered in the study to reduce the chances of biasness. Junior staff, supervisors, line managers, senior managers were considered in the study. OHS measures such as Sanitation, Staff security and Office space and layout were considered.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

Chapter concentrated on conceptual framework, theoretical underpinnings, empirical reviews, summaries of linked literature, and gaps that needed to be filled.

2.2 Theoretical Review

The study was supported by Frederick Herzberg's Two-factor theory proposed in the year 1959, Goal-freedom alertness theory proposed by Kerr in 1950 and Maslow's Hierarchy of needs by Abraham Maslow in 1947.

2.2.1 Fredrick Herzberg's Two-Factor Theory

Fredrick Herzberg's two-factor theory was discovered in 1959 by Fredrick Hertzberg. 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. Fredrick noted that both the motivators and hygiene factors should be provided by the

employer and in a situation where they are not provided; the performance of the employees would be affected.

Fredrick Herzberg's two-factor theory was related to this study since explains how physical working conditions would motivate or demotivate employees in the organization. The working conditions included; Space, ventilation, temperature, amount of work, lighting, furniture, and pollution. Secondly, there should be supervision of employees. Good leadership would increase the performance of employees as opposed to poor leadership which would decrease the performance of employees. Good responsibility allowed professional growth and increased chances for training acquisition of new skills for personal growth. There should be positive recognition of employees which increased their efficiency and performance.

2.2.2 Goal–Freedom Alertness Theory

Goal-freedom alertness theory discovered by Kerr (1950). The theory was premised on desirable and psychologically safe working environments that would lead to the performance of tasks. The theory further stated that accidents are low-quality activities that results from unfavorable working environment. In addition, goals are attained through high-quality work, but accidents caused low-quality work to be produced in the organization. Kerr (1950) argued that there are three ways of preventing accidents in the organization; primary prevention, which deals with risk factors for illnesses and injuries, secondary prevention, which deals with spotting illnesses before symptoms emerge, and tertiary prevention, which deals with clinical treatment of employees. Heinrich et al. (1980) supported Kerr's view by confirming that Hazard would divert the workers' attention thus increased injuries.

Goal-freedom alertness theory was used in this study because it explained that employees should be psychologically stable to be effective. In addition, it identified, lighting, sanitation in the workplace, furniture and environment which have an influence on the performance of employees. Organizations should therefore strive to improve the physical working environment to enable the employee to be productive.

2.2.3 Maslow's Hierarchy of Needs Theory

Maslow's Hierarchy of needs theory was discovered in 1943 by Abraham Maslow. The theory is based on human needs which included physiological need, safety needs, need for love and affection, need for self-esteem, and need for self-actualization. According Maslow, Physiological needs are the biological needs that should come first when a person is searching for satisfaction, they deal with the mental status of human beings .Safety needs are considered when physiological needs have been met, need for love and affection are considered when physiological and safety needs have met. Need for self-esteem includes need for stability and high level of respect while need for self-actualization are the creativity a person possess. Maslow further noted that deprivation needs which are lower-level needs would help people to meet their want of fulfillment. Growth needs, on the other hand, are the needs motivated by an individual for personal achievement.

Maslow's hierarchy of needs theory was relevant to this study because it linked organizational culture to Human resource management practices, where it advocated for culture which are beneficial to the employees should be encouraged, for example, the need to have security and prevention of hazards brought about by Office space and layout in the organization. In addition, it ensured that employee performance was promoted through having a favorable physical working environment and aligning

reward and recognition to be consistent with the employee's contribution in the organization. The theory further emphasizes on provision of both lower level and higher level need to the employees.

2.3 Empirical Review

2.3.1 Employee Performance

Badakale (2012) conducted research on the effects of occupational health and safety policies on employee performance in Lafarge Public Limited Company (PLC) in Nigeria. Badakale (2012) identified office space and sitting arrangements as the independent variables. This study concluded that the amount of time wasted when attending to the various accidents in the Large PLC contributed to non-performance among the employees. In addition, poor and unsafe working conditions contributed to the employees being ineffective since they cannot carry out their tasks within the required schedule. This study concluded that OSH should be given serious attention if any serious organization would want to meet its strategic plans. However, this study was only applicable to Cement Company which recommended for other studies to be done in Public service organizations like NSSF. However this study has some contextual and methodological gaps which require more studies to be done locally to help to ascertain the research findings.

Kaluza *et al.* (2012) conducted research in Ethiopia on how effective leadership, safety, and culture can improve workplace Occupational safety and health. This study considered variables such as organizational culture, physical work environment, and management and leadership. The study concluded that good organizational leadership should embrace communication, collaboration, and innovation when identifying the various Occupational health and safety programmes and their eventual

implementation. Secondly, they also noted that most of the studies that have been conducted in Ethiopia about Occupational Safety and Health in the various organizations concentrated on the medical aspects of the employees without failing to recognize the physical work environment, safety cultures, management policy regulations, and giving no attention on how occupational injuries can be prevented in the workplace. This study was done in Ethiopia therefore a local study should be done to validate 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.

Makori *et .al* (2012) did a study on the influence of Occupational Safety and Health programmes on the performance of employees in manufacturing firms in western Kenya. The study considered manufacturing firms in Bungoma and Kakamega Counties. The independent variables included health and safety policies, protective clothing, lights, and sanitation, while, the dependent variable is a performance of employees. Measured was done by considering productivity, target, profitability, and diversification. The findings indicated that employee performance was influenced by occupational health and safety programmes. There was a study gap, nevertheless, because manufacturing firms were taken into account in this investigation. The same

investigation should be carried out utilizing a different organization, such as social welfare, to ensure the validity of the research findings.

2.3.2 Sanitation and Employee Performance

Korea Institute of Technology (2018) did a research about the moderating effect of Sanitation education between sanitation knowledge, sanitation management on performance of culinary employees. The study examined on how the sanitation knowledge and management influenced the performance of culinary employees, for institutional food service and also examined the influential relationship of sanitation knowledge on sanitation management performance. This study adopted a Correlation method, where the target population was employees in Universities, enterprises, and hospitals. 361 respondents were considered as a sample size. The variables in this study included Understanding Sanitation, Application of Sanitation, and Sanitation knowledge. The study concluded that sanitation knowledge, sanitation management influenced performance of employees. The study justified the necessity of sanitation education by considering individual sanitation knowledge and sanitation management performance. The study only considered sanitation as a variable influencing the performance of employees yet there are other factors such as physical work environment, Office space and layout, and security of the employees having an influence on the performance of employees.

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.

Manzushi (2019) studied how workplace environment affected performance of employees in Mobile telecommunication firms in Nairobi City County, Kenya. Manzushi 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.

Musyoka (2014) studied the relationship between health and safety programs and performance of employees in manufacturing firms in Mombasa County, Kenya. Sample of 1,300 respondents who are workers were drawn from the various manufacturing firms within Mombasa County Such as Heritage foods, polythene Industries, and Kings Manufacturing limited. Among the factors that Musyoka considered as variables included, health measures, safety measures, and social welfare programmes. This study adopted descriptive research and also used simple random sampling. The study found that good health and safety programmes will improve employee performance.

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.

2.3.3 Security Measures and Employee Performance

Keitany (2014) did a study regarding the connection between Kenya Pipeline Company's employee welfare programs and performance. The study's goal was to ascertain link between employee performance and employee welfare programs. 10% of the pipeline employees in Kenya were used as a sample in the study, which used a descriptive research methodology. The study's independent variables included safety gear, meeting spaces, and security. Security features including electric fences, fire extinguishers, first aid kits, and security effects like gloves, helmets, and aprons were used as indicators for independent variables in security. The study discovered that employee performance was impacted by welfare programs. This study has a

contextual gap because it was conducted in the energy sector, hence another investigation in a different field is necessary.

Nduku (2015) carried out a study about the effects of working conditions on employee performance in Kenya Commercial bank's head office in Nairobi, Kenya. The study's goal was to investigate how working circumstances affect employee performance. Physical security, occupational health and safety, and internal organizational communication were independent variables in this study. Sample of 172 respondents from the target population, which consisted of 300 employees, was drawn using stratified random sampling. Study discovered that Kenya Commercial Bank staff perform better when they have favorable working environment. Since only the banking industry, where security is increased, is pertinent to the findings of this study, there are gaps. In other organizations, this might not hold true.

Jackson *et al.* (2000) did a study on how employee wellness affects performance. This study was supported by Robinson (2006) stated that employee wellness improves performance. Jackson *et al.* further reiterated the need for organizations to promote employee wellness program to promote productivity. The study identified independent variable as; morale, quality of health care, educational classes, and health policies as variables. This study concluded that companies should invest in wellness programmes. However one of the weaknesses of this study is that it did not explain the relationship between the wellness programmes and Occupational health and safety which is a major contributory factor in staff wellness. Secondly, the study has a contextual gap and did not identify the OSH measures and their effect on employee performance.

2.3.4 Office Space and Layout Measures and Employee Performance

Hameed and Amjad (2009) conducted research on effect and importance of office design on workers' performance in Abbottabad, Pakistan's banking industry. Furniture, noise, lighting, and temperature were among the independent variables, whereas employee performance was the dependent variable. As a result of these investigations, it was discovered that lighting had a significant impact on employees' performance. Dim lights were discovered to make workers strain and experience headaches and temperature, while natural and artificial light were proven to improve employees' mood and provide vitality to the body.

Meulenbroek *et al* (2018) did a study about the effectiveness of physical office environments for employee outcomes in America. Furniture, light, and noise were identified in the study as independent variables. According to the study, employees' performance is significantly impacted by the greater background noise levels in open-plan workplaces and shared spaces. Since the employees' physical and mental health improved, it was determined that non-shared workplaces were advantageous to them. Office management, office environment, workplace design, and office building were independent variables in this study. Research design was exploratory analysis. Stratified sample of 134 respondents was considered. Study concluded that there was a need to prevent health problems in the work place. However, the study did not specify the correct office measurements and the number of employees to be accommodated in each office. This makes the study to be inconclusive; therefore the research findings cannot be applied in other sectors.

DeCroon *et al* (2005) did a study about the effect of concepts on worker health and performance in the United Kingdom (UK). The study identified three Independent

variables namely; office location, office layout, and office use. A sample of 300 respondents was used in the study. The study concluded that excess workload on employee's worsened interpersonal relations, close distance between workstations reduced privacy, and desk sharing improved communication. This study had gaps, for instance, office space and layout were identified as measure influencing performance of employees yet there are other measures such as staff security.

2.4 Summary of Literature and Gaps to be filled

Shows related literature used in this study and the gaps which should be filled

Table 1: Summary of literature and gaps to be filled

Author /year	Variables	Main findings	Study gap	The focus of the current study
Badakale (2012)	Office space, sitting arrangements	<p>-Spacious offices reduce airborne disease among the employees.</p> <p>-Congestion in offices increases exposure to employees contacting diseases leading to poor performance.</p>	<p>Study not conclusive, there is a need to consider other OSH measures such as security, sanitation, lighting, and aeration of the offices</p>	<p>-physical work environment.</p> <p>-Office space and layout</p>
Kaluza et.al (2012)	Organizational culture, physical work environment, management, and leadership	<p>Good organizational culture coupled with good leadership and good communication will influence the performance of employees in an</p>	<p>-There is a contextual gap since it was carried out in Ethiopia</p> <p>-The study did not consider</p>	<p>-physical work environment</p>

		organization.	the most important OSH measures such as lighting, toiletries, design of offices, and noise	
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 Organization.	workplace
Makori et.al(2012)	Health and safety policies, awareness of policies, protective clothing	-The study concluded that by having good health and policies in the organization the performance of manufacturing firms will be improved.	-Methodological gap-The study adopted cluster sampling where not every respondent was given equal	workplace

			<p>opportunity to appear in the sample.</p> <p>-Contextual gap-The study was done in manufacturing firms so there is a need to carry out more studies in different organizations such as NSSF.</p>	
Kingsley (2012)	Office furniture, Office equipment, and office room temperature	<p>-The study found out that low productivity results from cellular offices which hinder communication and teamwork.</p> <p>-Office environment will negatively</p>	<p>-Contextual gap-The study only considered environment as an aspect of OSH but did not consider others such as Lighting, noise, and office structures. The research</p>	<p>-Office layout and design</p> <p>-Physical work environment</p>

		affect employees' health.	findings might not be conclusive. A contextual gap-This study was done in Ghana, there is a need to do another research locally in Kenya to confirm the validity of the research findings.	
Jackson et.al(2000)	Quality of health care, morale, and health policies	-Study found out quality healthcare, good health policies would have a positive impact on employee wellness which will improve their performance.	Methodological gap-Study did not conclusively present data to confirm the relationship between wellness programmes and Occupational safety and health, which is the	-Sanitation in the workplace. -Employee performance

			major contributory factor in staff wellness.	
Mathis and Jackson(2011)	-External environment(Organizational dynamism, Organizational limited management) -External environment(Autonomy, Management)	--Study concluded that external and internal environment staff motivation will energize the performance of employees	-Contextual gap-Study only considered environment as a factor influencing the performance of employees without considering OSH measures. -The study was done in India therefore there is a need for a related study to be done in Kenya to confirm the research findings.	-Physical Workplace environment

Musyoka (2014)	Health measures, social welfare, and safety measures.	-The recommended for improvement of social welfare programmes.	-Contextual gap-The study only considered manufacturing firms so there is a need for this study to be done in other organizations such as social welfare organizations to prove the research findings.	-Safety in the workplace -Physical work environment
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	-Physical workplace -office space and layout

			Observation method so that researcher can physically visit the research location to collect data.	
Korea Institute of Technology(2015)	-Understanding sanitation, application, and sanitation knowledge	-The study found out that sanitation knowledge has an impact on culinary employees.	-Methodological gap-This study adopted a correlation method where there are instances of biasness since the sample was not representative. -The content gap-The study did not clearly show how sanitation influences employee performance in the organization. There is a need	workplace

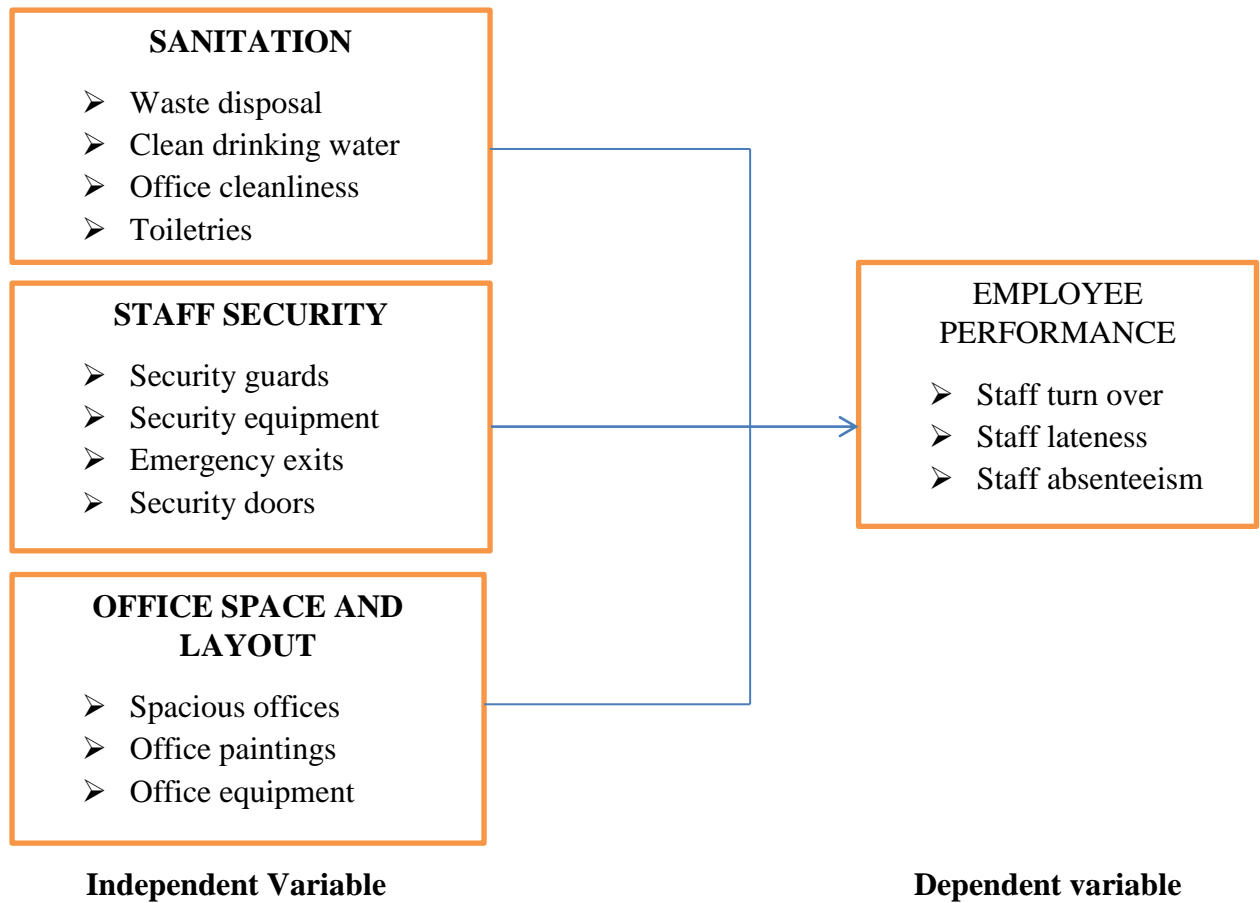
			for a related study to be done to bring out this relationship	
Kipkosgei (2018)	-sanitation, socialization, and efficiency in the workplace.	-The study concluded that good sanitation, socialization will have a positive effect on the efficiency of employees.	-Contextual gap-The study only considered sanitation as the main factor affecting employee efficiency and left out other factors such as Office space, security, and physical work environment.	-Sanitation in the workplace
Manzushi (2019)	-sanitation, office lighting, office ventilation, staff training and development, and leadership and	-The study found out that proper sanitation, good aeration, and staff training will have a positive impact on employee performance.	-Methodological gap-The research was carried out by considering a small sample from which the research findings have been drawn. It	-Sanitation in the workplace

	management.		is important to carry out the same study in a bigger organization such as NSS with a greater representative sample to confirm the validity of the research findings.	
Koitany (2014)	-security, safety equipment, electrical fences, and first aid kits	-The study found out that good security of employees improves their performance.	-Contextual gap: Sstudy did not exhaust all the OSH programmes but only considered a security. There are other OSH programmes such as office layout that influence the performance of employees.	-Security in the workplace

<p>Meulenbroek <i>et al</i> (2018)</p>	<p>-Office layout, -Noise -Lighting</p>	<p>-Conclusion was that shared rooms had higher background noise which negatively influences the performance of employees.</p>	<p>-There was a contextual gap since the study did not consider all the OSH Measures that influence employee performance.</p>	<p>-Office space and layout</p>
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2.6 Conceptual Framework

Figure 1: Conceptual Framework



Source: Researcher (2022)

2.7 Operationalization Framework of the variable

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. Staff security was measured against security guards, security equipment, emergency exits, and security doors as indicators, while Office space and layout was measured against indicators as; office space, office wall paintings, Office furniture and Office equipment. The dependent variable; Employee performance was measured against indicators as staff turnover, staff layoff, staff lateness and Staff absenteeism.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The chapter was primarily concerned with the research design, target population, sampling design, data collection techniques, data analysis, data presentation, and ethical issues.

3.2 Research Design

Descriptive research design is applied when seeking answers to who, where, what, and when of the phenomenon (Cooper and Schindler 2003). Descriptive study strategy was used to make it possible to gather high-quality data in the many departments and sub-departments of NSSF. Additionally, it restricted data tampering in cases where the researcher had no say in how a variable influenced the issue under investigation.

3.3 Variables Description and Measurement

Independent variables included; Sanitation which included, waste disposal, clean drinking water, Office Cleanliness and toiletries. Staff security included security guards, security equipment, emergency exits, and security doors, while Office space and layout included; office space, office wall paintings, Office furniture and Office equipment. The dependent variable; Employee performance included as staff turnover, staff layoff, staff lateness and Staff absenteeism

Data was categorized as nominal ratio and ordinal. Independent variable; sanitation in work place was measured by considering indicators, clean drinking water, waste disposal, aeration and office cleanliness. Data was categorized as nominal, ratio and ordinal. A Likert scale was used for the measurement. Staff security (independent

variable), was measured by considering indicators; security personnel, security equipment, emergency exits and fire extinguisher. Data was categorized as nominal, ratio and ordinal. Office space and layout as independent variable was measured by considering indicators; Spacious offices, wall paintings, furniture and equipment. Data was categorized as nominal, ratio and ordinal. Table below summarized this information as shown below

Table 2: Measurement of Variable

Variables	Indicators	Category of data	Measurement
Employee performance	-Sick off days, Absenteeism, and Staff turnover	-Nominal -Ratio -Ordinal	-Likert scale
Sanitation in work place	Waste disposal, safe drinking water, Office cleanliness, and hand washing	-Nominal -Ratio -Ordinal	- Likert scale
Staff security	Security guards, security equipment, emergency exits an fire extinguisher	- Nominal -Ratio -Ordinal	- Likert scale
Office space and layout	Office room sizes, wall paintings, Equipment, Furniture	-Nominal -Ratio -Ordinal	-Likert scale

Source: Researcher (2022)

3.4 Target Population

Four thousand seven hundred and fifty (4750) workers at the NSSF Headquarters, were the intended audience (Human resource department, NSSF 2022). This was made up of all the personnel in the Nairobi headquarters of the NSSF. Records sought by the researcher from the Human Resource Department at NSSF Headquarters in Nairobi, revealed that a total of 9750 employees are employed by NSSF countrywide. 4750 employees are based at NSSF headquarters in Nairobi. The table below summarized the stratification of the employees.

Table 3: Stratification of employees at NSSF Headquarters in Nairobi

Category	Population
Top Management	50
Finance Department	300
Marketing Department	450
Operations Department	3950
Total	4,750

Source: NSSF, Human Resource Department (2022)

3.5 Sampling Design and Sample Size

Stratified sampling was used to select 369 respondents from a target population of 4750 employees. Stratified random sampling was convenient for this study since each respondent within the population was given equal representation in this study. The

target population was stratified into top management, finance department, marketing department and operations department.

The sample size was determined by applying the formula;

$$n = \frac{N}{1 + N(\alpha^2)}$$

Where n was the sample size, N was the total target population, 1 was the constant and α is the error margin determined at 5% level of significance.

$$n = 4750 / 1 + 4750(0.005)^2$$

$$= 369$$

To determine the sample size for each department, the formulae below was used:

$$n = N_i / N * n_i$$

Where n represented the sample size for each department, N_i is the total target population and n_i is the total population for the stratum.

Purposive sample was used to identify respondents in each sample. Employees were categorized according to departments according to proportionate sample size. This is shown in the table below.

Table 4: Purposive sample for each category of employees

Category	Population	Sample	Percentage
Top Management	50	3	4
Finance Department	300	32	10
Marketing Department	450	114	17
Operations Department	3950	220	69
Total	4,750	369	100

Source: Researcher (2022)

A representative sample of 369 of the target population was considered. Stratification was done as follows; 4% of the top management was considered for this study totaling 3 respondents, 10% of the employees in the finance department was considered totaling 32, and 17% of employees in marketing department totaling 114 and 69% of employees in operations department totaling 220 respondents.

3.6 Data Collection

3.6.1 Data Source

Primary and secondary sources of data were used in this study. Primary source of data was used to enable the researcher gather authentic information and to provide credible evidence in this study. Secondary sources were used to enable the researcher sought clarification and answers which could have not be provided by primary data Sources (Mugenda & Mugenda, 2003).

3.6.2 Research Instruments

This study adopted quantitative data collection methods. A structured questionnaire and Observation were used as instruments for collecting data. Questionnaires were

used for this study since they can easily be administered, they are less costly as compared to the interviews since they can be administered through the mail. In addition, questionnaires enabled the researcher to accommodate several questions, and also easily analyzed (Mugenda & Mugenda, 2003).

Observation was used as a research instrument where the researcher physically traversed the various offices at NSSF in their headquarters to analyze how Occupational Health Safety and measures that have been adopted and the gaps that needed to be addressed.

3.7 Pilot Testing

Pilot testing was done to evaluate research study before carrying out the full study. The main purpose of pilot testing is used to minimize errors that might occur before a full research study is carried out and it is also important for the researcher to estimate costs that will be involved in the full-scale research study (Cooper & Schindler, 2003). Reliability statistics was done by adopting Cronbach's alpha coefficient. Since the study used a Likert scale to conduct the measurements on the variables, it was also necessary to compute and report the Cronbach's alpha coefficient to assess the internal consistency and reliability of any scale that was utilized in this investigation To test the reliability of the research instrument used in this study, 20% of the targeted sample of 369 respondents, or 74 respondents, were taken into consideration to assess the validity of the questionnaire used to gather data for this study. Mugenda and Mugenda (1999) noted that a sample of more than 10 % is convenient and can be adopted in any research study. The collected data was analysed quantitatively and qualitatively by using Cronbach's alpha Correlation Coefficient .The results are shown below;

Table 5: Reliability

Measurement scale	Cronbach's alpha (α)	Cronbach's alpha based on Standardized items	Number of items
Sanitation	.762	.726	5
Security	.728	.713	4
Office space and layout	.731	.721	4

Source: Research Data (2022)

Table 5 above showed the items had a high inter-item correlation, which meant, items on a scale had a strong relationship with a latent and, as a result, a high possibility of measuring the same thing. A measuring scale is considered to be internally consistent if the Cronbach's coefficient is greater than 0.70, making further research viable. Contrary, if the coefficient alpha is lower than 0.70, the scale is unreliable and susceptible to errors from administration, sampling, item count, and theoretical sources (Gable *et .al* 2017).The variables were measured and the results showed a Cronbach's alpha coefficient of above 0.7.The results can be concluded that the items were interrelated and there was as strong construct and possibility of the measurements being consistent when applied to the various variables. In addition, there was minimal errors which arose from the data collection instruments and analysis.

According to Carmines and Zeller (1999), a research's validity is crucial since it determines how accurate a research instrument is. To determine the questionnaire's criteria, construct, and content validity, evaluations were conducted. This was verified to make sure the questionnaire accurately assessed how physical OHS measures affected employee performance.

3.7.1 Data Collection Procedures

Data was collected by semi-structured questionnaires, structured into parts A and B. Part A, had background information about the respondent while part B, had questions regarding the objectives of study. Questionnaires were distributed to sampled 369 respondents, in collaboration with the human resource department. The respondents returned the filled questionnaire within Seven (7) days. Telephone contacts of the respondents were recorded to help in following up the whole exercise.

Observational forms were analyzed by using Likert scale. The scale was on a continuous continuum ranging from strongly disagree at 1 and strongly agree at 5, for the lowest and the highest respectively.

Microsoft Excel and SPSS were used to compute values of coefficient correlation, was presented in form of frequency distribution tables, charts, and bar graphs.

3.8 Data Analysis and Presentation

Descriptive statistics was used where percentages, Mean, and standard deviation were calculated. Regression analysis was done to estimate direction and strengths of variables (Montgomery 2011). Dependent variable for this study was employee performance being represented as (Y), and the Independent variables; Sanitation represented as (X_1), Security represented as (X_2), and Office space and layout

represented as (X_3) . The mathematical function for this relation was a: $Y=f(X_1, X_2, X_3)$.

3.9 Ethical Considerations

Research plagiarism was observed where all the materials gathered from other scholars were acknowledged, the respondent's confidentiality and anonymity was protected. Voluntary and informed consent was sought from the respondents before distributing research instruments. Legal aspects was observed during the research process and the research findings was shared with the relevant authorizes.

CHAPTER FOUR: DATA ANALYSIS AND DISCUSSIONS

4.1 Introduction

The chapter focused on the Data analysis, presentation of results in tables, graphs and charts and general discussion of the results.

4.2 Observational results

The table below showed the Observational results

Table 6: Table showing Observational results

INDICATORS TO BE OBSERVED	SCORE5-Strongly Agree,4-Agree,3-Nutral,2-Disagree,1-Strongly disagree
There is adequate clean drinking water	2
The offices are well aerated	2
Waste disposal to be improved	5
Offices are cleaned regularly	2
There are adequate security guards at NSSF	2
There are enough security equipment like metal detectors	2
There are enough emergency exits in the building	2
There are adequate fire extinguishers	2
Office space are spacious	2
Office painting affects employee performance	4
Office furniture influence employee performance	4
Computers affect the eyes of employees	4

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 Manzushi (2019), which found a relationship between employee performance and workplace hygiene. Additionally, workplace sanitation needs to be enhanced, with additional security personnel, tools, emergency exits, and fire extinguishers all being taken into account. The findings supported the views of a study done by Musyoka (2014) which advocated for the need of organizations to introduce health and safety programmes to improve performance of employees. Additionally, the findings indicated that office design and layout needed to be improved. Offices should be roomy, wall paintings should be updated, furniture like chairs should be replaced with ones that are comfortable to stop employees from developing backaches, and computers should be fitted with anti-clear screens to lessen the intensity of light emitted from the screens from harming employees' eyes. Results validated study conducted by Maulenbroek *et al* (2018).

4.3 Response Rate

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. Shuttle worth (2009) noted that in research a response rate of over 85% is excellent and can be used for data analysis. Figure 2 summarizes the response rate.

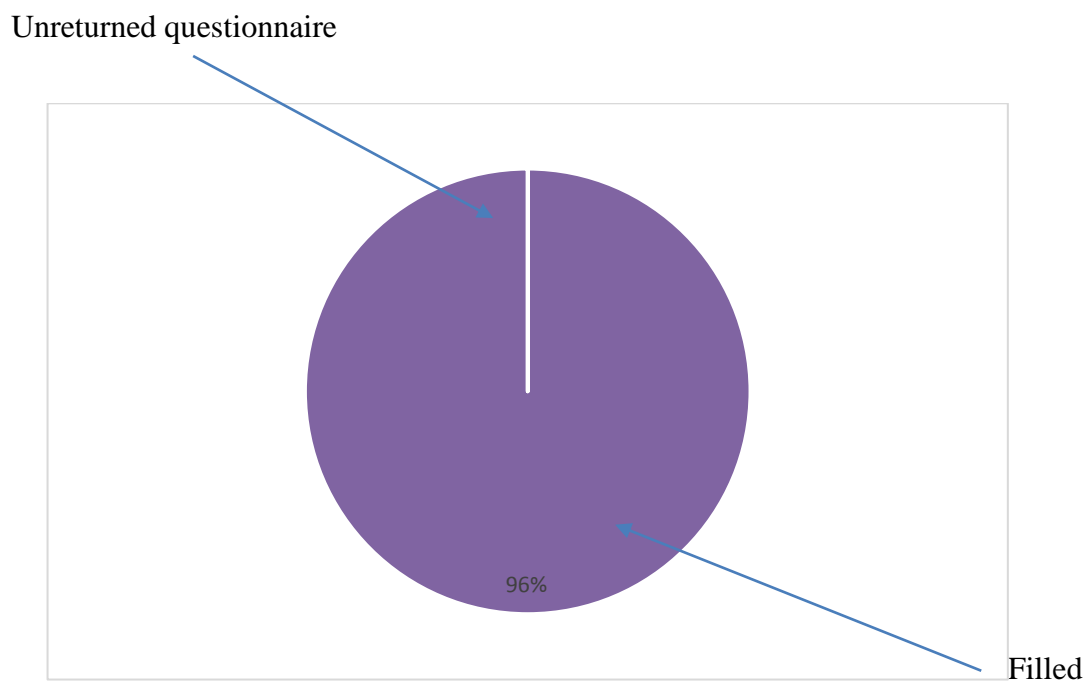


Figure 2: Response rate

Source: Research Data (2022)

4.4 Demographic characteristics of the respondents

Showed characteristics of respondents in relation to gender, age, educational levels and the departments they are representing at NSSF.

4.4.1 Gender of the respondents

To determine gender of respondents, data was gathered. Results are shown below.

Table 7: Gender of respondents

Gender	Frequency	Percentage (%)
Male	200	56
Female	155	44
Total	355	100

Source: Research Data (2022)

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.

4.4.2 Ages of the respondents

The survey collected respondents' ages in order to help with data analysis. Results are shown below;

Table 8: Ages of the respondents

Age Category	Frequency	Percent
20-25 years	100	28.2
26-35 years	85	23.9
36-45 years	150	42.3
46 and above	20	5.6
Total	355	100.0

Source: Research Data (2022)

From the table, 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 an another survey carried out by Kipkosgei (2018) at Eldoret Water and Sanitation, which included respondents from the organization's various age groups.

4.4.3 Levels of education of respondents

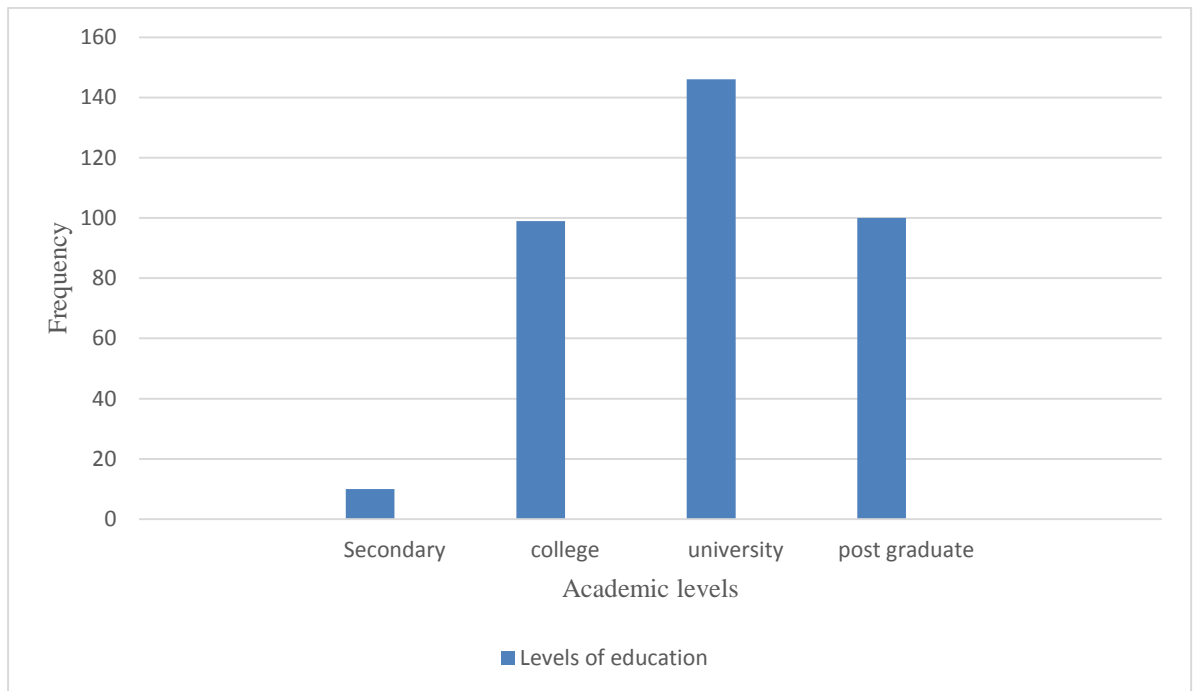


Figure 3: Educational levels

Source: Research Data (2022)

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.

4.4.4 Respondents per Department

Respondents were asked to list departments they work for at NSSF. Results are displayed below;

Table 9: Department currently serving at National Social and Security Fund

Departments	Frequency	Percent	Cumulative Percent
Finance department	25	7.0	7.0
Marketing Department	130	36.6	43.7
Operations Department	180	50.7	94.4
Others	20	5.6	100.0
Total	355	100.0	

Source: Research Data (2022)

Results showed 50.7% of respondents worked in operations, 36.6% in marketing, 7.0% in finance, and 5.6% were in high management at NSSF. This information demonstrated that a representative sample was taken into account in this study, and respondents were chosen from across all departments. This lessens the possibility of bias in the study because every department was represented, and it also allowed the researcher to learn how OHS measures were implemented in the various NSSF divisions. The research findings backed up claims made by Nduku (2015) at Kenya Commercial Bank (KCB), where it was suggested that including respondents from every department reduced bias, and by Musyoka (2014), who also argued for the need of a good study to have a representative sample for the intended population.

4.5 Descriptive Statistics

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.

4.5.1 Sanitation

The study gathered data on sanitation where the indicators were considered. The results were tabulated as shown in the table below.

Table 10: Descriptive Analysis on Sanitation

Information on sanitation	N	Mean	Std. Deviation
Poor waste disposal affects performance of employees at NSSF	355	3.52	1.354
Safe drinking water affects performance of employees at NSSF	355	3.59	1.297
Clean offices influence performance of employees at NSSF	355	3.61	1.296
Provision of toiletries influences performance of employees at NSSF	355	3.61	1.296
Does sanitation influence employee performance at NSSF?	355	1.52	1.364

Source: Research Data (2022)

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 Manzushi (2019) 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. The findings are consistent with a study

conducted by Kipkosgei (2018) at the Eldoret water and sanitation organization, which revealed that increased workplace sanitation boosts employee performance.

4.5.2 Staff Security

The study sought data on the independent variable staff security. The table below displayed the analysis and tabulation of the research findings.

Table 11: Analysis on Staff security

Information on Staff security	N	Mean	Std. Deviation
More security guards should be employed at NSSF	355	3.58	1.276
Security gadgets are adequate at NSSF	355	3.62	1.306
More exit points should be set up in the building	355	3.62	1.306
More security doors should be provided in the building	355	3.62	1.306

Source: Research Data (2022)

Respondents strongly agreed that more security equipment, such as metal detectors, emergency exits, and security doors, should be purchased and installed, with a mean of 3.62. The respondents agreed that NSSF should hire more security guards, with a mean of 3.58.

The results of the study demonstrated that having better security guards at the points of entry at NSSF led to better employee performance and satisfaction. The employees'

ability to work without outside distractions was made possible by improved security. The overall security circumstances of the personnel at their place of employment were improved by the provision of security equipment such as metal detectors, security doors, and biometric equipment. Employee performance ultimately improved as a result of this. The study supported a related study conducted by Nduku (2015) that discussed the requirement for businesses to ensure secure working environments by enhancing their own security. The study also discovered that having emergency exits in the workplace helped employees perform better. In a related study, Keitany (2014) showed how emergency exits increased employee well-being in times of need. A related study by Jackson *et al.* (2000) found that providing proper security within the workplace improved employee wellness programmes and performance.

4.5.3 Office Space and Layout

The study gathered data on the independent variable office space and layout where the respondents were presented with different questions on the questionnaire on the influence of Office space and layout and how they have been implemented at NSSF. Findings are displayed below.

Table 12: Analysis on Office space and layout

Office space & Lay out	Frequency	Mean	Standard Deviation
Availability of spacious offices	355	3.643	1.234
Effects of paintings on employee performance	355	3.723	1.312
Effects of furniture on employee performance	355	3.723	1.312
Effects of equipment on employees	355	3.845	1.445
Availability of spacious offices	355	3.643	1.234

Source: Research Data (2022)

Respondents strongly agreed that measures should be taken to prevent the effects of machines influencing the performance of employees,(mean =3.643), and the respondents strongly agreed that offices should be expanded to be spacious ,(mean= 3.723). They also strongly agreed that office wall paintings and furniture influenced employee performance and should be improved. The study found out that large offices reduced airborne diseases and increased employee productivity, while small offices increased the likelihood of contracting various illnesses and diseases like common colds, coughs, influenza, and Covid-19, which reduced employee productivity. The findings differed with study done by Decroon *et al.* (2005) which argued that close distance in work stations improved communication without considering risk of transmission of airborne diseases among the employees.

The study also discovered that employee performance was impacted by office paintings. When used on workplace walls, secondary colors like blue, green, and red along with white created a calm atmosphere where workers were more effective in their work. Dark hues like black, grey, and indigo, on the other hand, create a dreary environment where workers are less productive. Meulenbroeke *et al.* (2018) made similar.

Employee performance was also impacted by the office furniture. While uncomfortable seats with a decent back rest and arm rest allowed employees to be comfortable and enhanced performance, poor seats without a good back rest contributed to employees' backaches and decreased their performance. Additionally, for the workers to perform better, seats should be comfortable. Employee performance was also impacted by office equipment. A study revealed that prolonged computer use decreased job performance and increased the risk of eye-related

illnesses and diseases. The results of a study by Hameed and Amjad (2009) on the impact of workplace design and layout on workers' performance are comparable to those of this study. The study also showed that employees' performance was impacted by lighting. Employee performance was negatively impacted by both dim and excessively bright lighting. Regarding the number of lights in the offices, employees with eye-related illnesses required a different lighting intensity.

4.5.4 Causes of Health related Illness

The study asked respondents their thoughts regarding various Physical Occupational Health and Safety measures and their contribution to illnesses and diseases at NSSF. Results were compiled and are displayed in the table below.

Table 13: Causes of health related Illness and diseases

Physical Occupational Health and safety measure	Frequency	Percentage
Sanitation	115	32
Staff security	80	23
Office space and layout	160	45
TOTAL	355	100

Source: Research Data (2022)

The analysed data showed that office space and layout has the major cause of health related illness and diseases at 45%, followed by sanitation, contributed to health related illness and diseases at 32%, while Staff contributed least to health related illness and diseases at 23%. The results indicated that the management should enhance the various measures related to office space and layout, which is the primary

contributor to OHS illnesses and diseases. The study noted that even though, NSSF management had implemented OHS procedures, more measures should be implemented to improve employee performance.

4.5.5 Major work related illness and diseases at NSSF

The survey asked respondents to provide information on the various illnesses and ailments that staff members have experienced at work. The tabulated and presented analysis results are shown below.

Table 14: major illness and sickness at NSSF

Major Work related Illness and Diseases	Frequency	Percent
Fatigue	70	19.7
Headache	70	19.7
Back pains	80	22.5
Eye related diseases	70	19.7
Water borne diseases	65	18.3
Total	355	100

Source: Research Data (2022)

Data showed that, respondents believed back pains; which accounted for 22.5 percent of all illnesses among NSSF staff; were the most common, followed by fatigue, headaches, and eye diseases which accounted for 19.7 percent of all illnesses; and water-borne diseases, which accounted for 18.3 percent. This study's conclusions were consistent with those made about the influence of furniture, where the majority of respondents remarked that staff members experienced back pain as a result of the worn-out chairs and lengthy workdays. The study found that the personnel had

extended working hours as a result of the high volume of clients that came to the NSSF offices, which led to exhaustion and headaches. Sanitation had a role in the emergence of water-borne illnesses, which were characterized by diarrhea, constipation, and stomach aches.

The study's findings supported those of another study conducted by Nderitu and Gichuhi (2019) in Organizations in Nyeri County, which determined that social and psychological experiences at work are essential for an effective workplace. The study also made the case that there should be no risks of disease or injury at work. Another study by Lankoski (2009) that indicated that organizations need a wider approach by providing health and safety programs corroborated the findings of this study.

4.5.6 Employee 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. Following are analyses and results;

Table 15: Responses on Employee performance

Information on Employee performance	N	Mean	Std. Deviation
Accidents contributes to Sick off days among employees	355	3.643	0.234
Poor sanitation leads to Staff turnover	355	3.723	0.312
Work related illness contribute to Staff absenteeism	355	3.845	1.445

Source: Research Data (2022)

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.

4.6 Inferential Statistics

4.6.1 Variance Analysis

This 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. Results are tabulated below;

Table 16: Variance analysis

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	264.258	2	132.129	588.865	.000 ^b
	Residual	78.981	352	.224		
	Total	343.239	354			

Source: Research Data (2022)

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.

4.6.2 Regression Analysis

Regression model used: $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e_i$. Where: Y: Performance of employees, β_0 : Constant factor, X_1 : Sanitation, X_2 : Security, X_3 : Office space and layout β_1 : Coefficient for Sanitation, β_2 : Coefficient for Security β_3 : Coefficient for Office space and layout, e_i : Error terms.

The table below summarised coefficients and model.

Table 17: Coefficient and model summary

	Coefficients	Error	t Stat	value	95%	Upper 95%
Intercept	0.76	0.39	3.96	0.00	0.38	0.95
Sanitation	0.69	0.099	5.28	0.00	0.30	0.76
Security	0.39	0.07	2.48	0.01	0.02	0.30
Office space& layout	0.42	0.12	3.84	0.00	0.20	0.72
		R	Adjusted			
Regression						
Statistics	Multiple R	Squared	R Squared	Standard Error	Observations	
	0.877 ^a	0.770	0.769	.474	355.00	

Source: Research Data (2022)

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: $Y=0.76+0.69X_1+0.39X_2+0.42X_3. +0.47$. Employee performance would be 0.76 if office space, security, and sanitary conditions were all 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. Security coefficient (X_2), which is 0.39, states that a change of one unit in security would result in an increase of 0.39 units in employee performance. Coefficient of Office space and layout (X_3) is 0.42 units, which indicated that a change of a unit in office space and layout would result to increase of 0.42 units in employee performance.

4.6.3 Causes of illness and diseases

Ailments and disorders were found to be that arise at work are due to outcomes of study's numerous measurements. Numerous illnesses and problems were greatly influenced by structure and architecture of the office. The study found that it contributed to the emergence of airborne infections, eye conditions, and back pain. The performance of the employees was lowered by each of these elements. Sanitation exacerbated water-borne infections such cholera, dysentery, and diarrhea. As a result, worker performance decreased. The study further noted that work place should be from hazards such as illness and injuries.

According to Cascio (2006), workplace health and safety factors like noise, room temperature, office aeration, and office space might affect employees' performance. In 2003, the International Labour Organization (ILO) identified work-related issues as the primary reason for worker inefficiency. Staff security had an effect on employees' performance as well. The study's conclusions were in line with those made by Winarmo and Perdana (2015), who listed quality, cost effectiveness, quantity, and punctuality as criteria for creating an efficient workplace.

4.6.4 Establishment of Performance of Employees

According to the study, employees suffered from illnesses and diseases at work, which affected their performance. This was because different physical occupational health and safety precautions were not implemented properly. 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.

CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

Chapter focused on findings, conclusions and recommendations.

5.2 Summary of Research Findings

The purpose of this study was to determine how employee performance at the National Social and Security Fund was impacted by physical occupational health and safety measures. According to study's findings, respondents included men and women. This 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.

Research findings on the influence of staff security on employee performance showed that, majority of respondents supported hiring of more security guards and placing them in strategic locations at access and departure points. The opinion of the respondents was that more security equipment, such as metal detectors, should be purchased. According to the report, security needs to be improved because employees perform worse in environments with insufficient security.

Research findings on the influence of office space and layout showed that, NSSF chosen an open office policy where employees were backed up resulting into contraction of airborne illnesses like the common colds were spread as a result of traffic congestion, which negatively influenced workers' productivity. The study also discovered that office wall art had an impact on workers' productivity. According to the respondents, bright paintings on the walls in happy colors were linked to better employee performance, while dull paintings were linked to sadness and resulted in worse employee performance. According to the study, furniture had an impact on employees' performance. Employees who spent a lot of time sitting down suffered from backaches, which negatively influenced their performance.

According to the research findings, airborne diseases, exhaustion, headaches, back pain, and eye-related illnesses were the most common occupational health and safety illnesses that staff members had experienced. These illnesses made the workers less productive since they decreased their performance.

Additionally, the respondents were asked to assess the different occupational health and safety measures according to their impact on NSSF employees' performance. The majority of respondents believed that sanitation had the greatest impact on employees' performance, followed by office design and layout and security, which had the least impact.

5.3 Conclusion

According to the study, 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. The performance of employees was also impacted by staff security. By purchasing more metal detectors,

the security of the workforce can be increased. Additionally, more emergency exits should be set up. The design of the office and the layout affected how well the staff performed. The conditions of furniture and equipment should be improved to prevent the spread of eye ailments, backaches, and weariness, and offices should be decluttered to prevent the spread of airborne infections. Regular office wall painting should also be done to promote employee morale. Key things that affected how well employees performed were employee turnover, staff tardiness, and absenteeism. The management at NSSF failed to successfully implement OHS measures, such as sanitation, security, and office space and layout, which led to their occurrence.

5.4 Recommendations

The 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.

The management should also enhance the organization's overall security situation. The study found that due to the high turnover of clients visiting offices for various services, there are security people present, but they are insufficient to deal with a major security threat. Metal detectors and other security devices should be purchased as well. To be fully prepared for emergencies, staff members should also receive training on how to utilize fire extinguishers. Additionally, more emergency exits should be installed for usage in emergency situations.

The management of NSSF should also upgrade the office layout and decor. Office wall paintings should also be completed using vibrant colors that boost workers' morale and productivity. To avoid workers developing back pain from prolonged sitting, more comfortable seats should also be purchased. To lessen the intensity of light that contributes to eye-related disorders, computers should also be equipped with anti-clear screens. Since the introduction of open workplaces caused congestion, office spaces should be enhanced to accommodate the workers and clients. Businesses should digitize their services so that customers may place requests remotely without having to visit the offices.

5.5 Suggestions for Future research

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.

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APPENDICES

Appendix 1: Questionnaire

Informed consent form

My name is Hezra On'gonge; a Postgraduate student at Kenyatta University currently undertaking a research project. The title of my research is "influence of Physical Occupational health and safety measures on employee performance at national social and security fund, Kenya".

Voluntary Participation

Your participation in this research project is voluntary. If you decide to participate as a respondent you will be required to fill out your details and sign as an indication of your consent. In case you decide not to participate, your decision shall be respected.

Consent

I voluntarily give my consent to participate in this study. I intend to answer the various questions satisfactorily.

NAME.....

SIGN:.....

DATE.....

RE: REQUEST TO FILL OUT QUESTIONNAIRE

My name is Hezra On'gonge; a Postgraduate student at Kenyatta University currently undertaking a research project. The title of my research is "influence of Physical Occupational health and safety measures on employee performance at national social and security fund, Kenya".

It is from this background that am kindly seeking your assistance to help in filling out the questionnaire. Your identity will be concealed and the information provided will be treated with utmost confidentiality.

Thank you.

Kind Regards,

HEZRA ONYANGO ON'GONGE

C153/OL/CTY/27467/2019

**INFLUENCE OF PHYSICAL OCCUPATIONAL HEALTH AND SAFETY
MEASURES ON EMPLOYEE PERFORMANCE AT NATIONAL SOCIAL
AND SECURITY FUND, KENYA**

Date _____

Kindly complete this questionnaire.

Tick [√] appropriately in the bracket or fill in the space provided.

PART A: DEMOGRAPHIC INFORMATION

1. Gender; Male []

Female []

2. What is your age bracket?

20-25 years []

26-35 years []

36-45 years []

46 and above []

3. Highest level of Education attained

Secondary []

College []

University []

Post graduate []

4. Department currently serving at National Social and Security Fund

Finance department []

Marketing Department []

Operations Department []

PART B: PHYSICAL WORK

5. Does physical work environment influence employee performance at NSSF?

Strongly agree []

Agree []

Neutral []

Disagree []

Strongly disagree []

6. Which of the following physical environment is affecting you in the place of work?

Office space []

Heat levels []

Lighting in office []

Noise in office []

7. Does the physical work environment influence employee performance at NSSF?

Yes []

No []

PART C: SANITATION

8. Does sanitation influence employee performance at NSSF?

Strongly agree []

Agree []

Neutral []

Disagree []

Strongly disagree []

9. Kindly respond to the following statements by ticking the ones applicable

Where 5 – Strongly Agree, 4 – Agree, 3 – Neutral, 2 – Disagree and 1 – Strongly disagree

Information of Sanitation	5	4	3	2	1
Poor waste disposal affects performance of employees at NSSF					
Safe drinking water affects performance of employees at NSSF					
Clean offices influence performance of employees at NSSF					
Provision of toiletries influences performance of employees at NSSF					

PART D: STAFF SECURITY

10. Kindly respond to the following statements by ticking the ones applicable

Where 5 – Strongly Agree, 4 – Agree, 3 – Neutral, 2 – Disagree and 1 – Strongly disagree

Information of Staff Security	5	4	3	2	1
More security guards should be employed at NSSF					
Security gadgets are adequate at NSSF					
More exit points should be set up in the building					
More security doors should be provided in the building					

PART E: OFFICE SPACE AND LAYOUT

11. Kindly respond to the following statements by ticking the ones applicable - Where

5 – Strongly Agree, 4 – Agree, 3 – Neutral, 2 – Disagree and 1 – Strongly disagree

Information of Office space and layout	5	4	3	2	1
There are spacious offices at NSSF					
Paintings affects performance of employees					
Furniture affect the performance of employees					
Computers among other equipment affect Performance of employees					

PART E: MAJOR CAUSES OF DISEASES AND ILLNESS AT NSSF

12. Which of the following are the major causes of diseases and illness among the staff at NSSF?

(Select the ones applicable)

Sanitation [] Security [] Office space and layout []

13. What are the major illness and sickness at NSSF?

(Select the ones applicable)

Fatigue [] Headache [] Back pains [] Eye related diseases [] Water borne diseases []

PART F: EMPLOYEE PERFORMANCE


14. Kindly respond to the following statements by ticking the ones applicable - Where 5 – Strongly Agree, 4 – Agree, 3 – Neutral, 2 – Disagree and 1 – Strongly disagree


Information of Office space and layout	5	4	3	2	1
Accidents lead to sick off days among employees					
Poor sanitation leads to staff turn over					
Work related illness lead to staff absenteeism					

Appendix 2: Observation Schedule

VARIABLE	INDICATOR TO BE OBSERVED	SCORE(1,2,3,4,5)
Sanitation	Clean drinking water	
	Aeration	
	Waste disposal	
	Office cleanliness	
Staff security	Security guards	
	Security equipment	
	Emergency exits	
	Fire extinguishers	
Office space and layout	Office space	
	Office painting	
	Office furniture	
	Office equipment	


Appendix 3: Approval and license


REPUBLIC OF KENYA


**NATIONAL COMMISSION FOR
SCIENCE, TECHNOLOGY & INNOVATION**

Ref No: **422315** Date of Issue: **15/June/2022**


RESEARCH LICENSE




This is to Certify that Mr. HEZRA ONYANGO ONGONGE of Kenyatta University, has been licensed to conduct research in Nairobi on the topic: INFLUENCE OF OCCUPATIONAL HEALTH AND SAFETY MEASURES ON EMPLOYEE PERFORMANCE AT NATIONAL SOCIAL AND SECURITY FUND ,KENYA for the period ending : 15/June/2023.

License No: **NACOSTI/P/22/18304**

422315
Applicant Identification Number


Director General
**NATIONAL COMMISSION FOR
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