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The Effects of Occupational Health, Safety and Wellbeing on Operations and Performance at Gambia Ports Authority Mediated by Policy and Procedures

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Abstract

Research aim: *The study aims to evaluate the effectiveness of the current Occupational Health, Safety and well-being policy of the GPA. Additionally, assessed the effects of OHS on Port Operations and Employee Performance and as well as the health hazards associated with poor Occupational Health and Safety standards.*

Design/Methode/Approach: *A descriptive and exploratory survey design was utilized with a structured questionnaire and Likert 5- point scale to collect data. The study also utilized stratified random sampling method and drawing a sample of 210 staff from the GPA staff roll provided by Human Resources. The data was analyzed using both descriptive and structural equation modelling (SEM) techniques with help of SPSS software and SmartPLS4.*

Research Finding: *The study found out that the current OHS policy of the GPA was effective since a significant percentage of the respondents are aware and have access to such a policy. It also indicated that implementation of OHS policy was communicated to majority of the employees. The staff also agreed that the availability of effective working conditions enhance employee performance and operational efficiency. The nature of Ports Operations indicated that the most vulnerable groups experienced workplace hazards more frequently. The perception of safety standards at the Ports Authority is generally below average.*

Theoretical contribution/Originality: *The study has contributed to knowledge by bridging the gap in establishing the relationship of OHS on employee and organisational performance. It gave a fresh perspective on Gambia Ports operations as well as the challenges in relations with employee health, safety and well-being.*

Practitionel/Policy implication: *The Expansion of the Port infrastructure should be expedited to provide the much-needed space and avoid the presence of health hazards associated with poor standards. The Management of GPA should organize more awareness campaigns for operational staff in order to educate them about OHS and how they can practice caution on their own. The GPA leadership should facilitate the formulation of better health and safety policies and procedures. It would also assist employees to improve their welfare and ensure a safe working environment for all.*

Research limitation: *The study conclusions cannot be generalized as its from a single entity.*

Keywords: *Occupational Health, Safety, Employee Performance, and Port Operations*

1. Introduction

Occupational Health and Safety (OHS) also referred to as workplace health and safety is an area concerned with safety, health, and welfare of people in the workplace (Burns, 2000). Numerous job-related incidents leading to work hazards (injuries) continue to be reported from various organizations across the globe despite the existence of strong legislative rules to promote a sound and safe work environment for employees.

Gambia Ports Authority is a state-owned Institution whose mandate is to provide Port and Marine services to all ships calling the Port of Banjul. Despite portraying a good image in terms of service delivery, accidents are usually experienced leading to loss of lives in certain instances, damages to equipment and financial loss. The contributing factors to all these accidents are due to poor implementation of occupational health and safety policies or non-compliance to policies and safety protocols. These accidents and other stressful and seemly dangerous work environment can lead to dissatisfaction of employees, increased occupational related illness, increase rates of absenteeism, high rates of injuries, reduced rates of employee commitment and high rate of labour turnover among other consequences. However, there is limited studies done at the GPA that looked at the effectiveness of the occupational health and safety policy, OHS hazards and the perceptions, attitudes, and practices of both operational and non-operational staff towards OHS and its relationship to operations and employee performance.

There are numerous operations within the maritime industry ranging from on board services to discharging and loading of cargo and transfer to container terminals. The Productivity of Ports mainly depends on the efficiency of its operations handled by the employees. Research has established that efficient operations leads to better quality output such as increased employee performance and higher profitability for the Organization.

The tangible benefits of favourable health, safety and wellbeing of employees include lower absenteeism, avoiding the cost of litigation, meeting clients demand and improve staff morale and employee relations. The Gambia Ports Authority has compensated families of ex-staff who suffered work-related accidents that lead to the loss of life. This was due to lack of compliance by the employees and the organization poor monitoring mechanisms with regards to occupational health, safety, and wellbeing of its employees. The huge cost of some of the compensation packages and the loss of equipment has affected the smooth operations of the Authority‘s activities.

Health, according to the World Health Organization (1999), is a complete condition of physical, mental, and social well-being and is not just the absence of diseases or infirmities. Therefore, occupational health and safety refers to the process of preventing and shielding individuals from injury and occupational disease at the workplace, which can occur in any form as a result of risks and hazards that may endanger or injure individuals, damage to facilities or equipment set up at the workplace (Burns, 2000).

Moreover, the maintenance of health and safety standards in the workplace requires a rigorous implementation and ongoing monitoring of systems and practices by the Management. The rigor in implementation and adequate monitoring will enable Management to evaluate the performance of present policies and make adjustments as needed. Innovations in occupational health and safety management are required due to an aging, less healthy workforce (Lees, 2002). This innovation is needed to accommodate for all categories of employees to improve performance. It also emphasized the link

between employee performance and workplace health and safety. The Author indicated the outcome of the relationship between occupational health and safety and employee performance when provided with appropriate safe working environment using effective OHS systems. For instance, decreased absenteeism rates directly affect employees' productivity and general performance thus enhancing an organization's profitability. Additionally, when health and safety regulations and practices are strongly pushed, employees feel appreciated, which promotes dedication and job happiness. This commitment and satisfaction motivate employees to work towards the attainment of the organization objectives

The factors that cause poor OHS standards in an organization include among others, lack of OHS policies and procedures, poor management attitude (for example not enforcing OHS policies), non-compliance by employees, lack of funds to acquire the required personal protective equipment (PPEs) and other needed materials. Thus, the enhancement of OHS in an organization is the duty of both employer and employees. An understanding of the employer-employee relationship in this regard would ensure that Management prioritize health and safety issues whilst employees accept responsibility for their behaviors and attitudes in creating an accident-free workplace

The Port of Banjul is the gateway for the Nation's economy, accounting for over 80 percent of total International trade and is the only maritime Port managed by the GPA. The performance of the GPA is a key driver of the Gambian economy. The report conducted by the International Finance Corporation for Banjul Port (2018), indicated that the volume of operations measured by the throughput in metric tons doubled between 2007 and 2016 from 1.1M tons to 2M tons respectively. The GPA Management Accounts for the twelve months ended 31st December 2021 stated a total cargo throughput of 2.5M tons. The volume of cargo handled continue to increase while other factors such as terminal space, cargo handling equipment and employee health, safety and wellbeing are often overlooked which affects performance. Among all these factors employee health and safety is key since employees drive the operations and their satisfaction towards health, safety and wellbeing determines productivity. The employees work environment needs improvement especially operational staff who at times work under hazardous conditions due to limited space. The GPA is also unable to realise any efficiency gains with the upward trend in cargo throughput. The research assesses the effect of occupational health, safety and wellbeing on Port operations and employee performance at Gambia Ports Authority.

The theory postulated by Burke (2014) reveals the relationship between occupational health and safety and employee performance when employees are provided with adequate safe working environment. Occupational health and safety is concerned with the wellbeing, health, and safety of those who work in order to promote a secure and healthy workplace (Burns, 2000). Performance on the other hand refers to job related tasks expected of a worker and how successful those activities are executed (Knight, 2005). Sound occupational health and safety procedures and employee performance in terms of business goals are typically positively correlated.

According to (Goldstein, 2001) employees are committed and feel valued when Organization health and safety policy and practices are highly promoted. This satisfaction in the workplace motivates them to work towards the achievement of the Institution objectives. Employee performance or actions is key towards the drive for a successful

occupational health and safety policy since the implementation is conducted by employees. The theory would also assist in reducing existing gap in literature. The model by A. Burke (2014) indicates that OHS policy and practices help build employee satisfaction, increased health, low accidents rates, reduced absenteeism, reduced injuries among others and the ultimate benefit is usually increased employee performance.

1.1. Statement of Problem

The Gambia Ports Authority is the only Port in The Gambia and continue to experience series of fatal accidents claiming the lives of several employees and the Public at times. Recent cargo truck accidents are due to heavy operations at the terminals and lack of enforcement of safety protocols. The extended time sheet for terminal tractor operators at times lead to fatigue and poor performance of both the employee and the equipment.

Businesses all over the world today is challenging and Management should wisely review employee performance. The problems of employee performance that affects operations at the GPA include exhaustion, lateness, absenteeism, excessive use of mobile phones while operating machines and poor handling of cargo equipment. All these factors have a direct impact on employee performance and usually lead to reduce productivity. These factors could also increase industrial accidents with the exception of lateness and absenteeism. According to IFC report (2018), the GPA underperforms on various operational benchmarks when compared with other Ports in the Sub region. Key operational issues include ship turnaround time, truck turnaround time, container dwell time and crane productivity. Through structural changes, there is potential for improved performance at the Port resulting in the Port being an economic growth engine for the country.

The congestion due to lack of adequate space at the Port of Banjul also contributes to inefficient operations and occupational health and safety hazards. The unavailability of adequate berthing capacity for vessels forces employees to work for long hours to accommodate more vessels at anchorage. This poses a health hazard and affect the efficiency of operations and employee performance at the Authority. The inadequate buildings and ground infrastructure at the Banjul Ports affects operations and employee performance. The lack of good infrastructure contributes to delay in service delivery.

Human Resource Directorate ensures an effective and efficient use of human talent that led to organization wide efficiency and effectiveness. However, Management usually oversight that personnel (employees) should work in a safe and healthy environment to maximise their output or performance. Workplace health hazards such as accidents affects both the employer and employee and as a result both should avoid such from occurring. The Gambia Ports Authority (Management) lack of enforcement of health and safety measures or procedures has led to employee accidents. The absence of the required training on compliance measures is another contributing factor to workplace hazards. The employees at the GPA are not aware that Occupational health and safety at the workplace should be the responsibility of all.

Other threats to employee health, safety and wellbeing include fire incidents at the generator room and Cargo handling equipment diving into the sea due to

malfunction. The staff of the Civil Engineering Department are usually exposed to electric shock and falling from a height. Severe back and waist pain affects terminal tractor operators because of the nature of operations.

1.2. Research Objectives

The specific objectives of the study are to:

1. Evaluate the effectiveness of the current Occupational Health and Safety policy of GPA.
2. Assess the effects of Occupational Health and Safety on Port Operations and employee performance.
3. Analyse the health hazards associated with poor Occupational Health and safety standards at the GPA.

2. Method

The study employed both a descriptive and explanatory survey approach. The main goal of adopting this approach is to describe the situation of occupational health and safety as it relates to Gambia Ports Authority. The descriptive survey design is usually less expensive in terms of funds and less time consuming. Furthermore, the descriptive research enables the researcher to gain better understanding of a topic (Creswell, 2007). The explanatory aspect of the research is to provide deeper insights and understanding not just simple descriptive statistics. This is particularly applicable as the research seeks to determine the relationship between occupational health and safety and employee performance at the Port.

The data was collected with a self-report questionnaire to assess the effects of occupational health and safety on Port operations and employee performance. The used a simple stratified random sampling employee roll as sample frame. Data was solicited from a sample size of 210 operational staff, 141 responses were valid from the questionnaires that were distributed, representing 67% response rate. Due to sample size, it was appropriate to use structural equation modelling (SEM) to test the hypothesis as well as predict the relevance of the model.the evaluation of measurement model was done with the use of SmartPLS 4 and the path model.

Study Instruments

The study used 12 items for measuring the three variables as obtained in the questionnaire to establish the validity of the proposed hypotheses. The construct and measures are presented in table 1.

Table 1:Constructs and Measures

Construct	Items	Number
Operations & Performance	HPO1	6
	PoS1	
	PoS2	
	PoS3	
	PoS4	
	PoS5	
Health & Safety	HWH1	3

Construct	Items	Number
	HWH2	
	HWH5	
Policy & Procedure	WPPP1	3
	WPPP2	
	WPPP3	

Source: SmartPLS4 output (2024)

3. Results and Discussion

Socio Demographic Characteristics of the Respondents

A huge gap is observed between the male and female respondents at the Banjul Port. About 83% were males and 17% were females. This is obvious because the nature of operational work at the Port is male dominated and most of the departments selected for the research study were filled with more males than females.

The Age distribution of the operational staff at the Port indicated a relatively youthful group of people with an aggregate percentage of 61% for age bracket 20-30 years and 30-40 years. Over 28% are also aged 40-50 years while only 10% are aged 50-60 years. This result may be expected considering the strength required to operate heavy machines and working under adverse weather conditions in some cases. Older people with less strength will find it uncomfortable doing a job that involves a lot of manual labour and regular up and down movements around the quay.

The results in the Table 2 below showed that majority of the respondents 39% had a diploma in certain field. Over 28% had high school certificate, 18% had BSc degree, 10% a Master's degree while only 5% occupy the professional field. This signifies that the entry requirement for most operational staff is usually a diploma or a high school certificate.

In Table 2 below, the results revealed that majority of the respondents (38%) had worked at the Port for 6-10 years. Another 28% of the respondents spent more than 15 years as a Port Staff. Overall, an aggregate of 66% of the respondents have spent considerable amount of time working at the Port. On the other hand, 17% worked between 1-5 years and 18% 11-15 years.

Table 2: Demographic characteristics of respondent

Socio Demographic		Count	Percentages %
Gender	Male	117	83.0%
	Female	24	17.0%
Age	20-30	26	18.4%
	30-40	61	43.3%
	40-50	40	28.4%
	50-60	14	9.9%
Education level	High School	39	27.7%
	Diploma	55	39.0%
	Bsc	26	18.4%
	Masters	14	9.9%
	Professional	7	5.0%

Socio Demographic		Count	Percentages %
Yrs of Wk	1-5	24	17.0%
	6-10	53	37.6%
	11-15	25	17.7%
	above 15	39	27.7%

Source: Field Survey (2024)

Measurement Model Assessment

The assessment of reliability and validity of data was conducted with the use of the Smart PLS4. In order to measure the reliability of each item, the factor loadings which shows the correlation coefficient for the variable and the factors should be measured. The constructs utilized in the measurement model included operations and performance as the dependent variable measured with six items, health and safety standards as the independent variable measured with three items, while policy and procedures construct had three items. As a rule of thumb, a threshold value of equal or greater than 0.7 (Bagozzi and Yi, 1988) for each item's loading is considered as reliable. The measurement model results in Table 3 below indicated that all the items satisfy the set criteria with the exception of HPO1 with its factor loading of 0.635, which is below the recommended 0.7. However, the Cronbach Alpha, Composite reliability and Average Variance are unaffected.

The Cronbach's Alpha provide a measure of the internal consistency and indicate how closely related a set of items are when grouped together. It is considered a measure of reliability. As shown in Table 3 below, the Cronbach's alpha values are equal or greater than 0.7 with the exception of the policy and procedure construct which has a value of 0.642. The composite reliability is another measure of construct reliability that considers the relationships among variables within the group. The Table 3 below indicated that the values are all greater than 0.7 and therefore reliability is established.

The average variance extracted is a measure of convergent validity. It shows the degree to which a latent construct explains the variance of its indicators. It is also referred to as the grand mean value of the squared loading of a set of indicators (Hair et al., 2014). A value of 0.5 or greater for the AVE is recommended. The values for the average variance extracted in the measurement model results below are all greater than 0.5 and thus the constructs convergent validity established.

Table 3: Measurement Model Results

Constructs	Items	Loadings	Cronbach's Alpha	Composite Reliability	Average Variance Extracted
Operation & Performance	HPO2	0.707			
	PoS1	0.728			
	PoS2	0.775	0.875	0.903	0.574
	PoS3	0.799			
	PoS4	0.830			
	PoS5	0.809			

Constructs	Items	Loadings	Cronbach's Alpha	Composite Reliability	Average Variance Extracted
Health & Safety	HWH1	0.713			
	HWH2	0.812	0.689	0.821	0.606
	HWH5	0.806			
Policy & Procedure	WPPP1	0.734			
	WPPP2	0.837	0.642	0.806	0.582
	WPPP3	0.713			

Source: SmartPLS4 output (2024)

The Fornell-Larcker criterion, cross loadings, and the Heterotrait-Monotrait Ratio is examined for the establishment of the discriminant validity. This refers to the degree to which two measures designed to measure similar but conceptually different construct are related. A low to moderate correlation is often considered evidence of discriminant validity (Netemeyer et al., 2003). The HTMT was suggested by Henseler et al., 2015 and due to its good performance and straightforward application, it is usually widely used by researchers. The method of using the cross loadings of the indicators to verify discriminant validity is often considered more liberal (Henseler et al., 2009) and requires that the loadings of each indicator on its construct are higher than the cross loadings on other construct which was satisfied as shown in Table 4 below.

In terms of cross loadings, the loadings of each indicator should be higher than the loadings of its corresponding variable indicators. The Table 5 below indicated that the criterion was met with the exception of the HPO1 loading of -0.226 for health and safety indicator. For the Heterotrait-Monotrait ratio (HTMT), a value of less than 0.85 for HTMT is recommended. Based on Table 6 below it is confirmed that the HTMT criterion is fulfilled thus indicating that the discriminant validity is established.

Table 4: Fornell-Larcker Criterion Results

	HS	OP	PP
HS	**0.779**		
OP	-0.325	**0.773**	
PP	-0.184	0.531	**0.763**

Source: SmartPLS4 output (2024)

Table 5: Cross Loadings Results

	Health & Safety	Operations & performance	Policy & procedure
HWH1	**0.714**	-0.164	-0.075
HWH2	**0.819**	-0.269	-0.151
HWH5	**0.800**	-0.292	-0.176
PoS 1	-0.243	**0.728**	0.363
PoS 2	-0.211	**0.783**	0.441

	Health & Safety	Operations & performance	Policy & procedure
PoS 3	-0.291	**0.812**	0.341
PoS 4	-0.267	**0.847**	0.444
PoS 5	-0.270	**0.833**	0.519
WPPP1	-0.139	0.353	**0.730**
WPPP2	-0.225	0.449	**0.833**
WPPP5	-0.037	0.408	**0.722**

Source: SmartPLS4 output (2024)

Table 6: Heterotrait-Monotrait ratio Results

	HS	OP	PP
HS			
OP	0.403		
PP	0.268	0.700	

Source: SmartPLS4 output (2024)

Structural Model Assessment

The detailed description of the model is assessed by measuring the disparity/variance among the variables of model. The R^2 and the path coefficients are the essential measures for assessing the structural model. The R^2 shows how well a regression model (Independent variable) predicts the outcome of observed data (dependent variable). As shown in Figure1 below the model has R^2 value of 34% for operations and performance and 3% for policy and procedures. The R^2 measures the predictive accuracy of the model. It is embraced by numerous disciplines and most scholars rely on a rough rule of thumb regarding an acceptable R^2, with 0.75, 0.50, and 0.25 respectively describing substantial, moderate or weak levels of predictive accuracy (Hair et al., 2011, Henseler et al., 2009).

In Table 7 and Figure 1, the summary of the results can be found. All hypotheses were found to be significant. Based on the data analysis of hypotheses H1, H2 and H3 were supported by the empirical data. The results shows that all the paths are significant between the independent and dependent variables. The result indicates that health and safety negative but significantly relates to operation and performance with scores of ($B = -0.238$; $p < 0.05$). Additionally, the results affirmed that the path relationship between health and safety and policy & procedure is negatively significant as well with scores ($B = -0.186$; $p < 0.05$) Finally, the path relationship explained between policy & procedures and operations & performance shows significant and positive relationship with scores ($B = 0.490$; $p < 0.05$) demonstrating a strong influence between the two constructs.

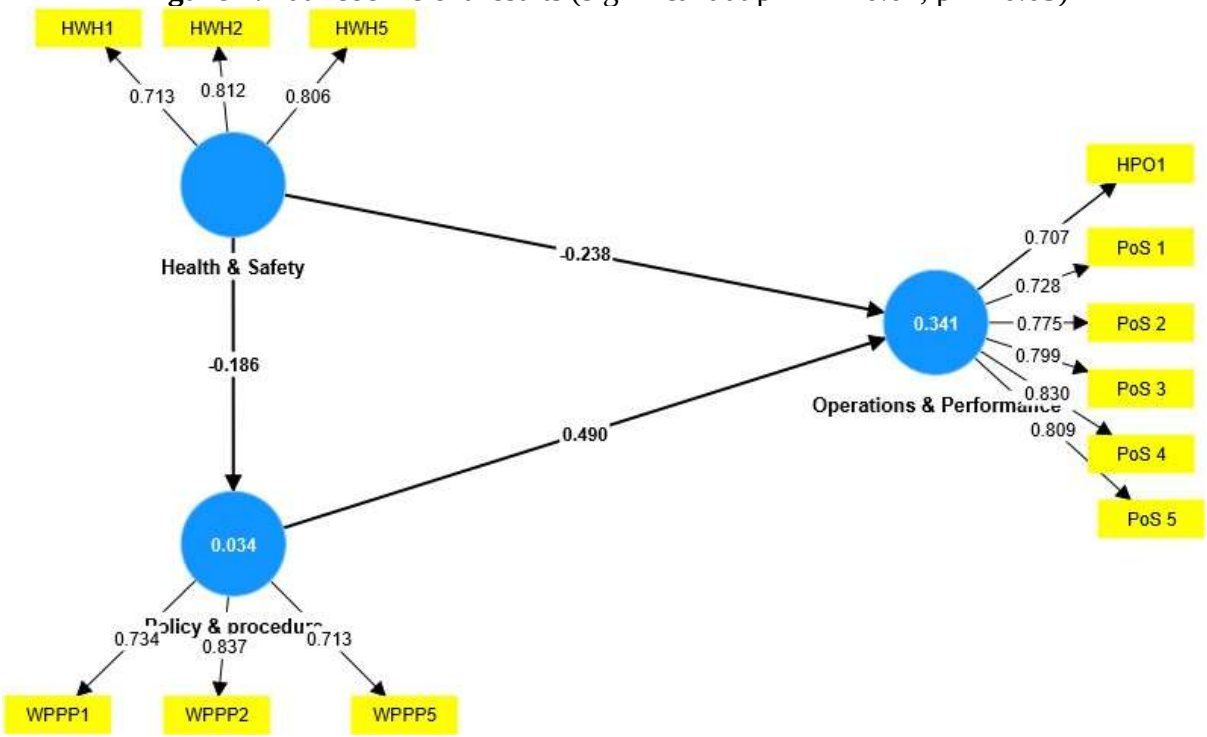
The Structural model analysis suggests that health and safety standards negatively influence the operation and performance of Port workers and the policy and procedures are also not affected by health and safety. However, it was observed that policy and procedures enhanced operations and performance positively. The research study would gives the decision makers at the GPA to conduct further review exercises in order to determine the negative impact of health and safety standards towards both operations and performance and policy & procedures at the GPA.

Table 7 Hypotheses Test of Results

Hypothesis	Path	Path Coefficient	p- Value	Remarks
H1	HS → OP	-0.238	0.001	Supported
H2	HS → PP	-0.186	0.047	Supported
H3	PP → OP	0.490	0.000	Supported

Source: SmartPLS4 output (2024)

Figure 1. Path coefficient results (significant at p** < = 0.01, p* < 0.05)



Source: SmartPLS4 output (2024)

4. Conclusion

Generally, the objectives of the research study was addressed accordingly with the staff of the GPA indicating the effectiveness of the current OHS policy. The effects of Occupational Health and Safety on Port Operations and employee performance at the Authority showed a potential increase in productivity whenever staff are provided with favourable OHS conditions. The results affirmed all the three hypotheses of the study.

The study contribute empirically to literature by giving a fresh perspective in relations to employee health and safety in one the most important and influential organisation in the Gambia. The staff of the GPA agreed to the health hazards associated with poor occupational health and safety standards. This included lifting operations in a limited space, slips and trips and falls from height, which leads to long-term illness such as backaches. Dust from bulk cargo vessels were also hazardous to employees. The operational staff do not believe that Management is better prepared to handle health issues that affected Port operations and performance and even considers safety. This could affect

staff morale and productivity since they are usually not satisfied with safety standards at the Port Authority. The research outcome is provoked a wake-up to the leadership to come up with policy measures and well strigent implementation mechanisms to averts lapses to enhance the operations and performance of Banjul Port.

The Study would assist the host Organization in getting information on how to formulate sound health and safety policies and procedures to increase the standard of health as well as enhance performance. It would also help employees to improve their welfare thereby assuring them of a safe and secure working environment that would enable them to perform their duties effectively to achieve organizational goals. The increased employee awareness would reduce the risks towards third parties and the society at large. The results cannot be generalized across other entities and self-reported answers is constrained with respondent bias. Further studies is recommended across different organisations.

Reference

Agbola RM. Impact of health and safety management on employee safety at The Ghana Ports and Harbour Authority. Dev Ctry Stud. 2012;2(9):154-166.

Burns R. Introduction to research methods. New York: Sage Publications; 2000.

Casio W. Managing human resources: Productivity, quality, working life, and profits. New York: McGraw-Hill; 1996.

Creswell JW. Qualitative inquiry and research methods: Choosing among five approaches. 2nd ed. Thousand Oaks, CA: Sage; 2007.

Kuye A, Nget M, Jatta PS, Barrow A. Occupational health and safety risks and hazards among workers in the Gambian building construction sites: A mixed-method study design. J Sci Res Rep. 2021;27(9):19-31.

Lees F. Loss prevention in the process industries. London: Butterworths; 2002.

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