

# The Impact of Work Environment, Occupational Health and Safety Practices on Performance of Health Workers in Kitagata Hospital and Two Health Centre IVS in Sheema District Uganda

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## Abstract

The study to assess the impact of environmental, occupational health, and safety practices on the performance of health workers in Kitagata Hospital and Two Health Centre IVs in Sheema District. The study adopted a cross-sectional design on a sample of 222 using a self-administered questionnaire. Data were analyzed using a quantitative approach. The quantitative data analysis approaches were descriptive statistics that is; frequencies, percentages, and means. Inferential analyses were correlation and regression analyses. The study findings indicated that only two aspects of occupational health ( $\beta = 0.271$ ,  $p = 0.004 < 0.05$ ) and safety practices ( $\beta = 0.568$ ,  $p = 0.000 < 0.05$ ) had a positive and significant influence on performance of health workers while environment ( $\beta = -0.090$ ,  $p = 0.312 < 0.05$ ) had a negative and insignificant influence on performance of health workers. Therefore, it was concluded that the workplace environment is the most critical factor in keeping health workers satisfied. The use of occupational health procedures, following instructions promotes the effective performance of health workers. Safety practices are one of the critical components for the performance of health workers. It was thus recommended that management of health institutions should promote the work environment for health workers; management of health institutions should put in place clear occupational health policies for health workers and management of health institutions should provide sufficient Safety practices.

**Key word:** Work, environment; occupational, health; safety, practices; performance, health workers

## Introduction

Several organizations have failed to realize the need to ensure that the employees work in a safe, healthy environment that would promote their performance in organizations (Mossburg, 2019). According to Sheema District reports and observations made in a local area of the health facilities, as a result of inadequate PPEs, it was observed that a total of 20 staff got needle pricks and blood splashes that resulted in them taking PEP, that led them to ask for leave off duty because they were unable to work and in the said period there was an increase in the number of referrals for pregnant mothers as the most affected cadres were midwives hence decrease in service delivery (Sheema District Annual Report, 2017/2018). Statistics from MOH (2017/2018) show that 39.5% of health workers experienced biological hazards while 31.5% reported experiencing non-biological hazards. The biological hazards mainly experienced by healthcare workers were cuts and wounds (38.5 %). According to financial years of 2017/18 and 2018/19, no record of occupational safety and health continuous medical education was conducted at the facilities, and there is an absence of a database that captures the accidents and incidents of health workers at the health facilities (Sheema District Annual

Report, 2017/2018). If the problem is not urgently addressed, there would be increased death rates. Therefore the current study determined whether there was a statistically significant relationship between environment, occupational health, safety practices, and performance of health workers in selected health centers of Sheema District. The study was guided by the following research questions?

1. What is the impact of the environment on the performance of health workers in Kitagata Hospital and Two Health Centre IVs in Sheema District?
2. What is the impact of occupational health on the performance of health workers in Kitagata Hospital and Two Health Centre IVs in Sheema District?
3. What is the impact of safety practices on the performance of health workers in Kitagata Hospital and Two Health Centre IVs in Sheema District?

Research hypothesis included the following;

Ho: There is no significant relationship between environment, occupational health, safety practices, and performance of health workers.

H1: There is a significant relationship between environment, occupational health, safety practices, and performance of health workers.

## **Literature Review**

### **The impact of work environment on the performance of health workers**

Features of workplace environment such as ventilation, lighting, noise among others had a significant effect on the performance of health workers as noted by Chandraseker (2011). He further described that the workplace environment is employees' immediate surroundings that have a strong effect on employees' performance. Although the above study revealed features of the workplace environment, the current study assessed the impact of the work environment on the performance of health workers in Kitagata Hospital and Two Health Centre IVs in Sheema District.

Dardeer et al. (2017) noted that the work environment has negative effects on employees' performance in organizations in terms of performing tasks and duties. The work environment has a direct effect on human sense and interpersonal interactions hence performance. The work environment has consequences regarding the performance of employees and their satisfaction level. Therefore work environment was indicated as one of the critical factors for keeping employees satisfied in their places of work. Whereas the above studies showed the impact of the work environment on the general performance of employees, the current study specifically focused on only the performance of health workers in Kitagata Hospital and two health center IVs in Sheema District.

### **The impact of occupational health on the performance of health workers**

Albert and Hallowell (2013) revealed that safety-related procedures in organizations are very effective as regards preventing injuries. Lim (2012) added that when employees understand the health and safety rules and procedures of their work and the tools used for working helps them to work effectively resulting in better performance of employees. Whereas the above studies focused on employees' level of understanding of safety rules and procedures, the current study examined ways how occupational health impacts the performance of health workers in Kitagata Hospital and two health Centre IVs in Sheema District

The Australian National Commission for Health and Safety (2019) indicated that when employees are provided with occupational health through, their performance increases as it reduces employees' absenteeism, and employee turnover. This has a direct effect on an increase in performance, employees' relationship management relationship which results from increases in the productivity of the organization.

De Koster et al., (2011) showed that direct costs such as first intervention, ambulance, and hospital expenses, payments, pecuniary and non-pecuniary damages payable to the worker or worker's relatives have negative effects on the performance of employees. Whereas at the contextual level, the above studies were carried out in Austria, the current study was carried in the context of Kitagata hospital and two Health Centre IVs in Sheema District to compare results from Australia.

### **The impact of safety practices on performance of health workers**

Dwomoh et al., (2013) showed that health and safety precautions are positively correlated with employee performance in organizations. El-zain (2014) revealed that safety precautions had a positive influence on the performance of employees. Iheanacho and Ebitu (2016) showed that there is a significant relationship existing between safety practices for example; warning information on dangerous chemicals and employee performance measured in terms of productivity, employee/ customer, subordinate/management relationship. The current study examined statistical evidence of the relationship between safety practices and performance of health workers in Kitagata hospital and two health center IVs in Sheema District.

Chen et al., (2015) indicated that safety practices such as psychological safety have an intermediate link with organization-related consequences in terms of employee performance. Judeh (2011) indicated that employee participation had a positive effect on teamwork effectiveness. Min and Yong (2014) showed that there is a relationship between safety practices and employee job performance in organizations. Although the above study showed that psychological safety has an intermediate link with organization-related consequences, the current study showed that there is a relationship between occupational health and performance of health workers in Kitagata hospital and two health center IVs in Sheema District.

## **Methodology**

### **Study Design**

This study adopted the cross-sectional research design.

### **Study Population**

The study population included the health workers of Shuuku HC IV, Kabwohe HC IV, and Kitagata Hospital in Sheema district both the technical team and support staff.

### **Eligibility Criteria**

#### **Inclusion Criteria**

All the health workers in Shuuku HC IV, Kabwohe HC IV and Kitagata Hospital.

All the health workers who signed consent form for the study

#### **Exclusion Criteria**

All those who are mentally or physically handicapped and are unable to communicate effectively in providing the necessary information needed in the study

The study excluded any health workers who declined to consent, those who were sick, and those on leave.

#### **Sample Size Determination**

The sample size was estimated by standard statistical formula for cross sectional quantitative study: Using Sloven's formula (1960) (Ellen, 2018).

$n = \frac{N}{1 + Ne^2}$  where n is the sample size is the population of the health staffs in the study areas=500 staff, e is the marginal error (0.05)

Substituting the known values in the above formula;

$n=500 / (1+500 \times 0.052)$

n=222 participants.

### **Data Collection Tools**

A structured questionnaire was used. A Five-Point Likert Scale was used to determine the degree to which environment and occupational safety and health practices impact the work performance of health workers in Sheema District. The drop and pick method was used to administer the questionnaires and the response was picked after fourteen (14) days. The Principal investigator also came up with an observation checklist and used it to collect data on some of the environment, occupational health, and safety practices for the availability of a handwashing facility.

### **Measurement of Variables**

The variables were measured using questions developed based on the nominal and ordinal scales. The nominal scale was used to measure questions on background characteristics. The ordinal scale is a ranking scale that possesses the characteristic of order that were used to measure the items of the independent and dependent variables. The ranking was a five-point Likert Scale (Where 1 = strongly disagree 2 = disagree 3 = undecided 4 = agree 5 = strongly agree).

### **Reliability and Validity of instruments**

The research team pre-tested the tools in Kigarama HC III to assess their effectiveness by calculating the Cronbach's alpha coefficient was 0.8 which was above the recommended 0.7 for the reliability of instruments. The researcher consulted the Research Supervisors to ensure that the instrument measures what it was intended to measure. The research team collected data, cleaning was done through double-checking for errors and mistakes before entering the data into the computer for analysis. The data entry was done by two people to the quality control mechanisms for quality control. The researcher stored collected data in the REDCap database which helped in keeping the data very safe to avoid accidental deletion of the work that could in other computer applications.

### **Data Analysis and Management**

Data management involved processing quantitative data. The processing of quantitative data involved coding, entering the data into the computer using the Statistical Package for Social Sciences (SPSS 24.0), summarising them using frequency tables to identify errors, and editing them to remove errors (Greasley, 2007). Quantitative data analysis involved the calculation of descriptive statistics and frequencies for descriptive analysis. For inferential statistics, correlation and regression analysis was used in the testing of the hypothesis (Simpson, 2015).

### **Dissemination of results**

A copy of this research dissertation will be submitted to the directorate of graduate studies research innovations and publications of Bishop Stuart University. This work will also be presented in research dissemination workshops and conferences, and published in public health journals.

## Results

**Table 1: Correlation between environment, occupational health, safety practices and Safety Practices and Performance of Health Workers**

		Correlations	
		environment, occupational health, safety practices	Performance of Health Workers
environment, occupational health, safety practices	Pearson Correlation	1	0.289**
	Sig. (2-tailed)		0.000
	N	222	222
Performance of Health Workers	Pearson Correlation	0.289**	1
	Sig. (2-tailed)	0.000	
	N	222	222

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

The results in Table 1 suggest that independent variables (environment, occupational health, safety practices) had a positive and significant relationship with the performance of health workers at ( $P=0.000 < 0.001$ ,  $r=0.289$ ). Therefore, the null hypothesis was rejected while the alternative hypothesis which stated that ‘there is a significant relationship between environment, occupational health, safety practices and performance of health workers’ was accepted.

**Table 2: Regression Model for Environment, Occupational Health. Safety Practices and Performance of Health Workers**

Independent Variables	Standardised coefficients Beta ( $\beta$ )	Significance (p)
Environment	-0.090	0.314
Occupational Health	0.271	0.004
Safety Practices	0.568	0.000

Adjusted  $R^2 = 0.479$

$F = 28.264$ ,  $p = 0.000$

Dependent Variable: Performance of Health Workers

The results in Table 2 show that environmental, occupational health and safety practices explained 47.9% of the variation in performance of health workers (adjusted  $R^2 = 0.479$ ). This means that 52.1% of the variation was accounted for by other factors not considered under this model. However, only two aspects of occupational health ( $\beta = 0.271$ ,  $p = 0.004 < 0.05$ ) and safety practices ( $\beta = 0.568$ ,  $p = 0.000 < 0.05$ ) had a positive and significant influence on performance of health workers while environment ( $\beta = -0.090$ ,  $p = 0.312 < 0.05$ ) had a negative and insignificant influence on performance of health workers. The magnitudes of the respective betas suggested that safety practices had the most significant influence on the performance of health workers followed by occupational health.

## **Discussion of the Findings**

### **The impact of work environment on the performance of health workers in Kitagata Hospital and Two Health Centre IVs in Sheema District**

The study findings showed that work environment ( $\beta = 0.090$ ,  $p = 0.312 < 0.05$ ) had significant relationship with performance of health workers. This finding differs from the findings of previous scholars. For example, Dardeer et al., (2017) cited that the workplace environment is the most critical factor in keeping an employee satisfied in today's business world. Today's workplace is different, diverse, and constantly changing. Workers are living in a growing economy and have almost limitless job opportunities. This combination of factors has created an environment where the business needs its employees more than the employees need the business.

### **The impact of occupational health on the performance of health workers in Kitagata Hospital and Two Health Centre IVs in Sheema District**

The study findings showed that occupational health ( $\beta = 0.271$ ,  $p = 0.004 < 0.05$ ) had a positive and significant relationship with the performance of health workers. This finding is consistent with previous scholars. For example, according to De Koster et al., (2011), a study demonstrated that focusing on safety helped with reducing accidents. In this context, direct costs include first intervention, ambulance, and hospital expenses, payments for temporary or permanent incapacity for work or death, pecuniary and non-pecuniary damages payable to the worker or worker's relatives, and damages payable to insurance, where indirect cost items include loss of reputation, long-term efficiency, and legal expenses.

### **The impact of safety practices on performance of health workers in Kitagata Hospital and Two Health Centre IVs in Sheema District**

The study findings revealed that safety practices ( $\beta = 0.568$ ,  $p = 0.000 < 0.05$ ) had a positive and significant relationship with the performance of health workers. This finding is in agreement with previous scholars. For example, Chen et al., (2015) indicated that psychological safety is a kind of feeling of confidence, safety, and freedom detachment out fear and anxiety, in particular, it contains the feeling a person meets current and future needs. Psychological safety is a perception when employees see working the environment as helping their wellbeing. Employees do not worry about self-image, position and negative impact of work, truly express themselves and show the different egos of different contexts.

## **Conclusions**

The workplace environment is the most critical factor in keeping health workers satisfied. Features at work environment influence employees' attitudes, behaviors, satisfaction, performance, and productivity in Kitagata Hospital and two Health Centre IVs in Sheema District. The use of occupational health procedures, following instructions promotes the effective performance of health workers. When health workers understand the health and safety rules and procedures of their job and the tools used for work, it helps them to work effectively and efficiently resulting in better performance of employees. Safety practices are one of the critical components for the performance of health workers. Employees do not worry about self-image, position and negative impact of work, truly express themselves and show the different egos of different contexts. Therefore safety practices are conducive to increasing individual abilities to focus and improving individual job performance.

## **Recommendations**

Management of health institutions should promote the work environment for health workers. This should be through support by the government through the provision of enough equipment to perform our duties, sufficient safety measures in case of fire emergencies moderate working hours, moderate workload, increase the level of salary, and supervisors being in a good relationship and friendship with health workers.

Management of health institutions should put in place clear occupational health policies for health workers. Such should include; promoting safety culture, policing regarding roles and responsibilities, health and safety audits, safety audits to identify risks in the workplace, adequate training to understand proper working methods, relevant laws, and regulations.

Management of health institutions should provide sufficient Safety practices. Such practices should include waterproof aprons, eye goggles, all necessary personal protective equipment, health, and safety devices, and safety tools, equipment, and machinery.

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