OCCUPATIONAL SAFETY AND PERFORMANCE OF HEALTH WORKERS IN PUBLIC HOSPITALS IN UGANDA: THE CASE OF ARUA REGIONAL HOSPITAL

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A DISSERTATION SUBMITTED TO THE SCHOOL OF MANAGEMENT SCIENCES IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE MASTERS DEGREE IN INSTITUTIONAL MANAGEMENT AND LEADERSHIP OF UGANDA MANAGEMENT INSTITUTE

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DECLARATION

I, Moses Chesro, declare that this study is my original work and has never been submitted to any degree or certificate awarding Institution for any award. All sources of information used in this study are duly acknowledged.

Signed……. Date……

APPROVAL

This is to certify that this study on "Occupational safety and performance of health workers in public hospitals in Uganda: The case of Arua Regional Hospital" was written under our supervision. It has now been approved for submission for examination.

Signed……. Date……

Dr Karim Ssesanga (PhD)

Signed…… Date……

Dr Edgar Mwesigye (PhD)

DEDICATION

I dedicate this dissertation to my mother Florence Namware whose moral and financial support has enabled me to reach this far.

ACKNOWLEDGEMENT

I acknowledge the Almighty God for protecting me and giving the guidance that enabled me to complete this study successfully. Compiling this study would not have been impossible without the assistance of various people. With great honour, I would like to acknowledge all those who morally and materially assisted me to successfully complete this study. First, I remain indebted to my supervisors Dr Karim Ssesanga and Dr Edgar Mwesigye for the devotion with which they supervised this study. Without their dedication, this study would not have been a success.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABSTRACT

This study investigated whether occupational safety influenced performance of health workers at Arua regional public hospital in Uganda. The objectives of the study were to establish the influence of psychological safety on performance of health workers; to find out the influence of safety precautions on performance of health workers; and to evaluate the influence of personal protective equipment on performance of health workers at the Arua regional public hospital. The study adopted cross-sectional and correlational research designs on a sample of 122 using a self-administered and an interview guide. Data were analysed using both quantitative and qualitative methods. The quantitative data analysis methods were descriptive statistics that included frequencies, percentages and means, and inferential analyses that were correlation and regression analyses. The descriptive results revealed that performance of health workers, psychological safety and safety precautions were good but personal protective equipment were moderate. Inferential results revealed that psychological safety and safety precautions had a positive and significant influence on performance of health workers while personal protective equipment had a negative and insignificant influence on performance of health workers. Therefore, it was concluded that psychological safety is an essential component of occupational safety necessary for the performance of health workers; safety precautions are an imperative probable pre-requisite for the performance of health workers; and lack of personal protective equipment is hinders performance of health workers. It was thus recommended that management of health institutions should promote psychological safety for health workers; Management of health institutions should put in place clear safety precautions for health workers; and management of health institutions should provide sufficient personal protective equipments.

CHAPTER ONE

INTRODUCTION

1.1 Introduction

The study sought to establish the impact of occupational safety and performance of health workers in public hospitals in Uganda. In this study, workplace safety was conceived as the independent variable (IV) and performance of health workers as the dependent variable (DV). This chapter presents the background, statement of the problem, purpose, research objectives, questions, hypothesis, conceptual framework, significance, justification, scope and operational definitions.

1.2 Background to the Study

1.2.1 Historical Background

Problems relating to health service provision due to poor performance of health workers have been of concern worldwide since time immemorial. Poor performance of health service providers leads to inaccessibility of care and inappropriate care which leads to reduced health outcomes as people are not using services because they feel mistreated due to harmful practices (Dieleman & Harnmeijer, 2006). Therefore, different stakeholders such as scholars, policy makers and implementers have been concerned with factors affecting performance of health factors. Factors that have drawn attention include occupational safety (Yusuf, Eliyana & Sari, 2012) and work expectations, skills, resource or equipment, motivation and workplace safety (Dieleman& Harnmeijer, 2006). According to (Ahmad, Sattar, Nawaz, 2016) in developing countries, there is a research gap in occupational health for health workers hence a concern for this study. Concern

over occupational health and safety has been in existence for as long as there have been structured work environs. For example, Hippocates (460-377BC wrote about harmful effects of an unhealthy workplace on slaves and Caesar (100-40BC) had an officer in charge of safety of his legions (Namara, Mbera & Mbabazi, 2016).

Nevertheless, the proliferation of Occupational Health and Safety (OHS) emerged in the 1990s. This led to the developing of an assessment instrument at the University of Michigan to measure a wide range of OHSs. Due to the range of systems it was designed to measure, the instrument is referred to as a universal assessment instrument (UAI) (Redinger, Levine, Blotzer, & Majewski, 2002). Redinger et al. (2002) indicate that the UAI was developed to assist OHS professionals and their organizations in making determinations of OHS effectiveness, to measure OHS management systems (OHSMS) effectiveness, and in identifying OHS performance variables and measurements that are unique to the organisation. The instruments suggest important elements in OHS are management commitment and resources; regulatory compliance and system conformance; accountability; responsibility and authority; and employee participation.

The International labour organization (ILO), an organisation that acts in the interests of the worker suggests that workers points of view should be given due attention, giving the workers views equal status with those of other stakeholders in workplaces to ensure sound business development (Namara et al., 2016). ILO recommends that the perspectives of workers should be considered in devising and carrying out health and safety measures at workplace (Bennet, 2002). Namara et al. (2016) indicate that the subject of health and safety in the workplaces covers a wide spectrum of issues. These issues include psychological safety such as stress, fears and attitudes; criminal and

sexual harassment in workplace; work place hazardous chemicals, manufacturing of harmful substance and innovations, safety precautions and personal protective equipment. However, this study considered psychological safety, safety precautions and personal protective equipment which are more eminent in hospitals.

1.2.2 Theoretical Background

This study was guided by two theories, namely; Epidemiology of Accidents Theory and Social Cognitive Theory. The Epidemiology of Accidents Theory introduced by Gordon in 1949. The theory proposes that injuries are caused by particular episodes (Hulme & Finch, 2015). Two injury causing episodes are identified, namely predisposition and situational characteristics. Predisposition characteristics include the susceptibility of the people (host), hazardous environment and injury-producing agent among others (Bonilla-Escobar & Gutiérrez, 2014). Situational characteristics are risk assessment by individual, priorities of the supervisor and prevailing attitude predisposition (Hulme & Finch, 2015). This theory suggested that for certain individuals because of their predisposition and situational characteristics, they are likely to suffer certain injuries during performance of their duties. This theory was the basis for analysing how occupational safety prevents injuries enhancing performance of health workers.

With respect to The Social Cognitive theory, it was propounded by Bandura in 1986. The theory proposes that the environment is implicit in perceived behavioural control. The Social Cognitive Theory postulates that people are considered to be neither completely driven by internal factors, nor controlled entirely by external stimuli (Penn, Holyoak & Povinelli, 2008). Human functioning is explained as an outcome of the interaction that occurs between the person or cognition,

behaviour and the environment. The reciprocal relationships between the personal, the behavioural and environmental determinants are best explained through five basic human capabilities, namely capabilities is to symbolize, forethought, engage in vicarious or observational learning, self-regulate and self-reflection (Chauncey, 2012). Therefore, the individual's internal safety standards are influenced by the environment of the organisation. This theory suggests that health safety is a result of interaction between the individual and the organisation or environment (Clissold, Buttigieg & De Cier, 2012). This theory thus helped in relating health safety and performance of health workers.

1.2.3 Conceptual Background

Occupational safety refers to a set of plans, actions and procedures that guide organisations to systematically manage safety and health risks associated with their business (Dieleman & Harnmeijer, 2006). Operationally, in study basing on Namara et al. (2016) Occupational safety referred to psychological safety, safety precautions and personal protective equipment. Psychological safety refers to psychological safety can be regarded as a psychological climate, a property of individuals denoting their perception of the psychological impact that the work environment has on their personal wellbeing (Schepers, de Jong, Wetzels & de Ruyter, 2008). In this study, psychological safety operationally was defined basing on the conceptualisation by Schepers et al. (2008) as referring to worker participation, positive employee relations and management support. Regarding to safety precautions, these refer to safety communications are accompanied by symbols that showing the severity of the safety condition (Hughes & Ferrett, 2015). In this study, safety precautions were defined basing on Khatib et al. (2015) as referring to immediate disinfection after an accident and accident reporting.

With respect to personal protective equipment (PPE), this refers to both clothing and equipment used to shield or isolate individuals from chemical, physical and biological hazards that may be encountered at a hazardous materials incident (Yeung, Chan, Lee & Chan, 2002). In this study, personal protective equipment were defined guided by Hersi et al. (2015) as referring to access to gloving, skin protection, impermeable gowns, particulate respirators, closed shoes and head gear. With regard to performance, this refers to a successful conclusion of duties by an individual or individuals as prescribed and evaluated by a superior or organisation, to predetermined standards in an efficient and effective way utilising the available finances both physical and human within a changing environment (Tinofirei, 2011). In study, performance of health workers was defined basing on Dubois, D'Amour, Pomey, Girard and Brault (2013) as referring to the acquiring, deploying and maintaining healthcare resources, providing healthcare services and producing changes in patients' conditions.

1.2.4 Contextual Background

The context of the study was Arua Regional Hospital. Arua Hospital like any other hospital in Uganda promoted occupational safety for its health workers. This included minimising workers occupational accidents, diseases and injuries, promoting good health of the worker at the workplace, promote good working conditions, ensuring a safe and healthy workplace and promoting awareness of occupational safety among workers (Mugisa, 2012). However, occupational safety for health workers at the hospital remained poor with health workers experiencing occupational health hazard. These hazards included biological hazards, non-biological hazards are a result of not wearing the necessary personal protective equipment (PPE),

working overtime and job related pressures and working in multiple health facilities (Ndejjo et al., 2015).

At Arua hospital, workers were exposed to dangers of contracting diseases with a stench from the lavatories nauseating and an overwhelming number of patients that exhausts workers (Okello, & Aluma, 2013). With respect to performance of health workers at Arua Hospital, the situation was dire. There was a high level absenteeism of health workers of up to 50.0% per day (Auditor General, 2015), non-disposal of expired medicines (Auditor General, 2016), health workers make verbal abuse to patients, exhibit rudeness such as ignoring or ridiculing patients and neglect. There were cases of physical abuse towards women, corruption, lack of regard for privacy, poor communication, unwillingness to accommodate traditional practices and authoritarian or frightening attitudes (Mannava, Durrant, Fisher, Chersich & Luchters, 2015). The above contextual evidence showed that health safety and performance of health workers at the hospital were poor. Therefore, the unanswered empirical question was whether occupational safety influenced performance of health workers at the hospital.

1.3 Statement of the Problem

Performance of health workers is important as far as delivery of health services is concerned. Health workers meet healthcare needs and demands of the population not only through health-service provision but also by helping to generate demand for unexpressed needs such as by informing people about their health conditions and risks. Health workers deliver the bulk of medical care and medicines (Anand & Bärnighausen, 2012). Health workers help in the acquiring, deploying and maintaining healthcare resources, providing healthcare services and producing

changes in patients conditions (Dubois et al., 2013). Considering the importance of performance of health workers, the government of Uganda has made effort to promote the health safety. For instance, by policy every hospital is required to minimise workers occupational accidents, diseases and injuries, promote their good health, good working conditions, ensure a safe and healthy workplace and promote awareness of occupational safety among workers (Mugisa, 2012).

With respect to performance, health workers in hospitals are required to implement the 5S guidelines, which are a basic, fundamental, systematic approach for productivity, quality, and safety improvement in all types of organisations. The 5S are Sort (removal/ organisation), Set (orderliness), Shine (cleanliness), Standardise, and Sustain (discipline). The targets of 5S principles are zero changeovers leading to product/ service diversification, higher quality, lower costs, on time delivery, safety, better maintenance, customer satisfaction and better organisational image (Ministry of Health, 2013). Despite the above effort, performance of health workers and their safety remained poor. With respect to performance, there was a high level absenteeism of health workers of up to 50.0% per day (Auditor General, 2015), non-disposal of expired medicines (Auditor General, 2016), health workers made verbal abuse to patients, exhibit rudeness such as ignoring or ridiculing patients and neglect. There were cases of physical abuse towards women, corruption, lack of regard for privacy, poor communication, unwillingness to accommodate traditional practices and authoritarian or frightening attitudes (Mannava et al. 2015).

As regards occupational safety for health workers at the hospital, it was also wanting with health workers experiencing occupational health hazard a result of not wearing the necessary personal protective equipment, working overtime and job related pressures and working in multiple health facilities (Ndejjo et al., 2015). Workers were exposed to dangers of contracting diseases with a

stench from the lavatories nauseating and an overwhelming number of patients that exhausted workers (Okello, & Aluma, 2013). If this situation was not addressed, the lives of health workers were at risk which would affect their performance. To address this problem, this study investigated occupational safety for health workers in Uganda and whether it influenced their performance.

1.4 Purpose of the Study

This study investigated whether occupational safety influenced performance of health workers at Arua regional public hospital in Uganda.

1.5 Objectives of the Study

Specifically, this study sought;

i. To establish the influence of psychological safety on performance of health workers at the Arua regional public hospital.
ii. To find out the influence of safety precautions on performance of health workers at the Arua regional public hospital.
iii. To evaluate the influence of personal protective equipment on performance of health workers at the Arua regional public hospital.

1.6 Research Questions

This study was guided by the following research questions;

i. What is the influence of psychological safety on performance of health workers at the Arua regional public hospital?

ii. What is the influence of safety precautions on performance of health workers at the Arua regional public hospital?

iii. What is the influence of personal protective equipment on performance of health workers at the Arua regional public hospital?

1.7 Research hypotheses

The study tested the following research hypotheses;

i. Psychological safety significantly influences performance of health workers.

ii. Safety precautions significantly influence performance of health workers.

iii. Personal protective equipment significantly influences performance of health workers.

1.8 Conceptual Framework

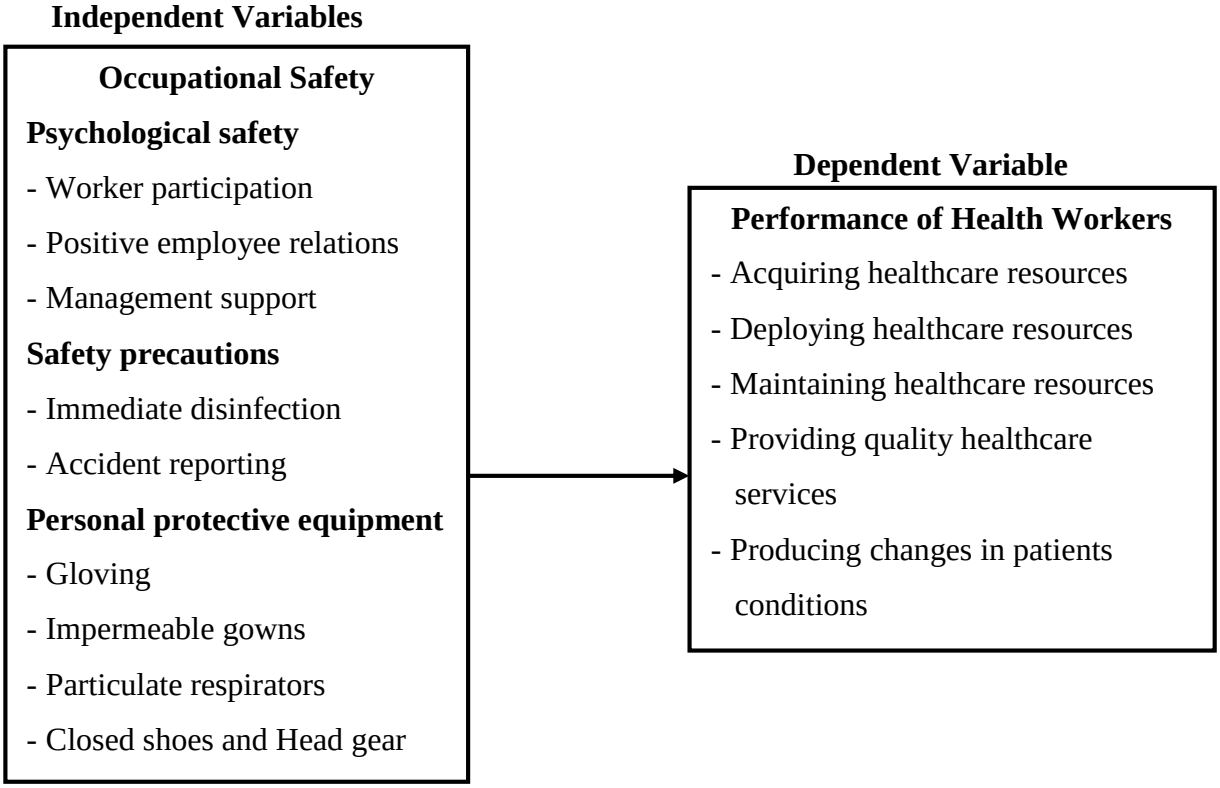

Figure 1.1: Conceptual Framework Relating Occupational safety and Performance of Health Workers

Developed from the ideas adopted from Dieleman and Harnmeijer (2006); Dubois et al. (2013); Hersi et al. (2015); Hughes and Ferrett (2015); Khatib et al. (2015); Namara et al. (2016); Schepers et al. (2008); Tinofirei (2011) and Yeung et al. (2002).

The above framework (Figure 1.1) shows that occupational safety has a relationship with performance of health workers. The framework shows that occupational safety involves psychological safety, safety precautions and personal protective equipment. Psychological safety includes worker participation, positive employee relations and management support. Safety

precautions are immediate disinfection and accident reporting. Personal protective equipment access includes gloves, impermeable gowns, particulate respirators, closed shoes and head gear. The framework also shows that performance of health workers involves acquiring, deploying and maintaining healthcare resources, proving healthcare services and producing changes in patients' conditions.

1.9 Justification of the Study

Access to healthcare is a fundamental human right. However, without effective performance of health workers the right to health by those who use hospitals is negatively affected by reduced access to healthcare services (Azétsop & Ochieng, 2015).Health workers meet healthcare needs and demands of the population not only through health-service provision but also by helping to generate demand for unexpressed needs such as by informing people about their objective health conditions and risks. Health workers deliver the bulk of medical care and medicines (Anand & Bärnighausen, 2012). However, there are a number of factors that affect performance of health workers including occupational safety (Yusuf et al., 2012) and work expectations, skills, resource or equipment, motivation and workplace safety (Dieleman, & Harnmeijer, 2006).

However, in developing countries, there is a research gap in occupational safety for health workers (Ahmad et al., 2016). Still, performance of health workers is has a lot of gaps with a high level absenteeism of health workers (Auditor General, 2015), non-disposal of expired medicines (Auditor General, 2016), health workers make verbal abuse to patients, exhibit rudeness such as ignoring or ridiculing patients and neglect. There are also cases of physical abuse towards women, corruption, and lack of regard for privacy, poor communication, unwillingness to accommodate traditional practices and authoritarian or frightening attitudes (Mannava et al. 2015). Therefore, it

was imperative for this study to investigate whether occupational health and safety challenges influenced the performance of health workers.

1.10 Significance of the Study

It is anticipated that the proposed study might be significant in the following ways;

The results from this study might be used as an input for top managers for evaluation of their existing safety policy, procedures and practice by understanding the impact of occupational safety and health on the organizations' performance.

The study findings might help policy makers in the formation of policies that are geared towards improving patients care and satisfaction through the understanding of the relationship between occupational safety and health program and performance.

To the policy makers the recommendations of the study might be relevant for key decision making and implementation.

The results of this study might help guide future research by providing a basis for the understanding/appreciating impact of occupational safety and health program on the performance of health workers in Uganda.

1.11 Scope of the Study

1.11.1 Geographical Scope

The geographical scope was Arua Regional Referral Hospital, in the town of Arua, in Northern Uganda. It was the only regional referral hospital in West Nile comprising of districts of Adjumani, Arua, Koboko, Maracha, Moyo, Nebbi, Yumbe, and Zombo. The hospital also received referrals from neighbouring parts of South Sudan and the Democratic Republic of the Congo. This hospital was selected because the hospital faced occupational safety and performance challenges.

1.11.2 Content Scope

The content scope of the study was occupational safety (IV) and performance of health workers (DV). Occupational safety was studied in terms of psychological safety, safety precautions and personal protective equipment. Psychological safety was investigated in terms of worker participation, positive employee relations and management support. Safety precautions will be studied in terms of immediate disinfection and accident reporting. Personal protective equipment access looked at access to gloves, impermeable gowns, particulate respirators, closed shoes and head gear. Performance of health workers (DV) was studied in terms of effective delivery, efficient delivery, timeliness in delivery, accessibility of healthcare and responsiveness of care.

1.11.3 Time Scope

The time scope of the study was the years 2010 to 2017. This was because this was a time of multiple restructuring exercises in the occupational safety of health worker (MoH, 2015). This helped the researcher to establish how the occupational restructuring exercise had affected performance of health workers.

1.12 Operational Definitions

Health: Health is the state of being free from illness and injury. In this study, health was defined as referring to occupational and physical wellness of individuals.

Occupational health safety: Occupational safety refers to a set of plans, actions and procedures that guide organisations to systematically manage safety and health risks associated with their business (Dieleman & Harnmeijer, 2006). In study occupational safety referred to psychological safety, safety precautions and personal protective equipment.

Performance: This refers to a successful conclusion of duties by an individual or individuals as prescribed and evaluated by a superior or organisation, to predetermined standards in an efficient and effective way utilising the available finances both physical and human within a changing environment (Tinofirei, 2011). In study, performance of health workers was defined as referring to effective delivery, efficient delivery, and timeliness in delivery, accessibility of healthcare and responsiveness of care.

Personal protective equipment: This refers to both clothing and equipment used to shield or isolate individuals from chemical, physical and biological hazards that may be encountered at a hazardous materials incident (Yeung et al., 2002). In this study, personal protective equipment referred to access to gloving, skin protection, impermeable gowns, particulate respirators, closed shoes and head gear.

Psychological safety: Psychological safety refers to psychological safety can be regarded as a psychological climate, a property of individuals denoting their perception of the psychological impact that the work environment has on their personal wellbeing (Schepers et al., 2008). In this study, psychological referred to worker participation, positive employee relations and management support.

Safety precautions: These refer to safety communications are accompanied by symbols that showing the severity of the safety condition (Hughes & Ferrett, 2015). In this study, safety precautions referred to immediate disinfection after an accident and accident reporting.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents the literature review on the study variables. It discusses the relevant literature relating to occupational safety and performance of health workers. It specifically focuses on theoretical review, past studies on the subject in an effort to highlight the relationship of those researches and this research and a review of some of the literature on the variables of the research. The variables included psychological safety, safety precautions and personal protective equipment. The chapter also provides the research gap and the conceptual review that showed the relationship between the variables of the study.

2.2 Theoretical Review

Two theories that are namely; Epidemiology of Accidents Theory and Social Cognitive Theory guided this study.

2.2.1 Epidemiology of Accidents Theory

The Epidemiology of Accidents Theory was propounded by Gordon in 1949. Gordon propounded that injuries were caused by particular epidemiologic episodes, such as seasonal change, demographic characteristics and an individual's susceptibility (Hulme & Finch, 2015). The theory postulates that two factors, namely; predisposition characteristics and situational characteristics, are instrumental in the accident conditions and accident effects. Accident effects are the injuries and damages inflicted upon the people. These effects are the measurable indices of the accident. Conditions under which accident takes place are unexpected, unavoidable and unintentional acts

resulting from the predisposition and situational characteristics. Predisposition characteristics include the susceptibility of the people (host), hazardous environment and injury-producing agent among others (Bonilla-Escobar & Gutiérrez, 2014).

According to the theory, any given individual has a unique predisposition for injury based on their own intrinsic set of risk factors, and further external risk factors acting 'from outside' render the individual susceptible to injury. Situational characteristics are risk assessment by individual, priorities of the supervisor and prevailing attitude predisposition (Hulme & Finch, 2015). This theory suggests that predisposition and situational characteristics causes accidents. This implies that for certain individuals because of their predisposition and situational characteristics, they are likely to suffer certain injuries as they perform their duties hence the need for occupational health safety. This theory was the basis for relating occupational safety to performance of health workers.

2.2.2 Social Cognitive Theory

The Social Cognitive theory, it was advanced by Bandura in 1986. The theory proposes that the environment is implicit in perceived behavioural control. The Social Cognitive Theory postulates that people are considered to be neither completely driven by internal factors, nor controlled entirely by external stimuli. Human functioning is explained as an outcome of the interaction that occurs between the person or cognition, behaviour and the environment (Borland, 2017). The reciprocal relationships between the personal, the behavioural and environmental determinants are best explained through five basic human capabilities. The first of these capabilities is to symbolise, which is associated with the individual's ability to process and transform symbols and visual experiences into cognitive models that inform behaviour. Therefore, if the safety climate of the

organization provides sufficient information to the individual, significant accidents are prevented. The second capability is forethought, which relates to the notion that individuals plan actions and goals for the near future, while taking into account the possible consequences of such action and goals. Using an occupational safety context and reflecting, if there is little understanding of organizational systems, poor communication about possible consequences of actions, and an ambiguity of performance standards, the individual's capacity to show forethought and comprehend possible consequences will be negatively affected (Clissold, Buttigieg & De Cier, 2012).

The third capability is to engage in vicarious or observational learning, in which the individual learns through observing the actions or behaviours of others, as well as the consequences of such behaviours. With observational learning, the theory indicates that people learn behaviours by imitating others and, in terms of occupational safety, if the behaviour of others does not reflect a proactive approach to occupational safety, then accidents and injuries will result. The fourth capability is to self-regulate, which involves individuals comparing their internally set standards of performance, with their actual standards of performance. The final capability is self-reflection. The ability to be self-reflective is associated with the process through which employees, for example, consider and analyse their experiences. From these they develop perceptions of themselves and their environment. Therefore, the individual's internal safety standards are influenced by the environment of the organisation. This theory suggests that health safety is a result of interaction between the individual and the organisation or environment (Clissold et al., 2012). This theory thus helped in relating health safety to performance of health workers.

2.3 Review of Related Literature

2.3.1 Psychological Safety and Performance of Health Workers

Psychological safety a kind of feeling of confidence, safety and freedom detachment out fear and anxiety, in particular, it contains the feeling a person meet current and future needs. Psychological safety is a perception when employees see working the environment as helping their own well-being. Employees do not worry about self-image, position and negative impact of work, truly express themselves and show the different egos of different contexts. When employees engage in any risky action in a team, the implementation of these actions is safe and can be accepted by colleagues (Chen, Gao, Zheng & Ran, 2015). Apparently, psychological safety is divided into self-psychological safety (self-perception of others is safe) and others psychological security (communicating with others feel that they are safe) (Tynan, 2005). With psychological safety, organizational members are free to speak their mind freely; they are encouraged and allowed to take risks; they trust and respect each other; and have the same beliefs and opinions for things (Chen et al., 2015)**.**

Therefore, organisational psychological safety is a perception which employees develop about the organisational environment characteristics with respect to the support of management, clear job roles and allow for self-expression (Edmondson, Kramer & Cook, 2004).There are different scholars (e.g. Alizadeh & Cheraghalizadeh, 2015; Dar, Akmal, Naseem & din Khan, 2011; Chen et al., 2015; Judeh, 2011; Min & Yong, 2014; Ning & Jin, 2009) that have related psychological safety to employee job performance. For instance, Alizadeh and Cheraghalizadeh (2015) investigated the effect of organizational support on job performance using full-time employees of construction projects in Iran. Organisational support had a positive significant effect on job

performance. Dar et al. (2011) examined the impact of psychological safety in terms of its negative variable of stress on employees' job performance in business sector of Pakistan. The findings showed that low psychological safety in terms of job stress caused subjective effects such as feeling undervalued and workplace victimization/ bullying, unclear role/errands, work home interface; fear of joblessness, exposure the traumatic incidents at work and economic instability led to poor concentration, mental block and poor decision making skills hence poor job performance.

Chen et al. (2015) carried out a review on psychological safety looking at concepts, measurements, antecedents and consequence variable. Their findings indicated that psychological safety was the intermediate link for organization related consequences such as employee performance. Judeh (2011) investigated the level of the effect of employee participation on teamwork effectiveness among employees working in the Jordanian glass and ceramic industries. The findings indicated that employee participation had a positive and significant effect on teamwork effectiveness. Min and Yong (2014) examined the influence of co-workers relationships on individual job performance in China using employees of enterprises with different sizes and natures. The findings showed that positive relationships between colleagues had a positive and significant influence on employee job performance.

Ning and Jin (2009) explored the mechanism by which trust climate influenced individual performance using employees and their supervisors in an organization in China. The findings revealed that psychological safety was conducive to increasing individual ability to focus and improving individual job performance. The literature above suggested that scholars had made

effort to relate psychological safety and performance of workers. However, contextual gaps emerged. For instance, none of the studies was carried out in Ugandan with all the studies carried out in the Asian context. Still, none of the studies was carried out in the context of a hospital but in construction and industrial sectors. These gaps made it imperative for this study to be carried out in the context of a hospital and in Uganda to investigate the influence of psychological safety on performance of health workers.

2.3.2 Safety precautions and Performance of Health Workers

Safety precautions are safety communications that are accompanied by symbols showing the severity of the safety condition (Hughes & Ferrett, 2015). Such communications are about immediate disinfection after an accident and accident reporting (Khatib et al., 2015). Accordingly, standard precautions help to reduce the risk of transmission of diseased from recognised and unrecognised sources. These precautions are the basic level of infection control used in the care of all patients (Tacconelli et al., 2014). Importantly, hand hygiene is one of the major components of standard precautions that are the most effective method in preventing transmission of disease. The basis of hygiene maintenance should be risk assessment with respect to the extent of contact expected with blood and body fluids or pathogens (Liang, Theodoro, Schuur & Marschall, 2014). Therefore, all individuals in a hospital set up that is health workers, patients and visitors are required to comply with infection control practices. The control of spread of pathogens from the source is important in order to prevent transmission of diseases (Collins, 2008). Establishing an institutional safety climate is paramount for enhancing conformity with recommended measures leading to subsequent risk reduction (Chartier, 2014).

Several scholars (e.g. Abuga, 2014; Dwomoh, Owusu & Addo, 2013; El-zain, 2014; Iheanacho & Ebitu, 2016; Kheni, 2008; Kaynak, Toklu, Elci & Toklu, 2016; Oluoch, 2015) have related safety precautions and performance of workers. Abuga (2014) sought to establish the effects of occupational safety and health programs on employee performance at pyrethrum board of Kenya suing employees. The study found that presence of occupational healthy safety Department affected employee performance. The presence of first aid and fire extinguishers as a precautionary measure at precise points in the company affected employee performance. Organising workshops, seminar and lecturers on safety precaution and presence of a hazard had a positive significant influence on performance off employees.

Dwomoh et al. (2013) examined the impact of health and safety policies on employees' performance in the Ghana's timber industry with employees as units of analysis. The findings showed that health and safety precautions put up by the company positively correlated with employee performance. El-zain (2014) investigated the effect of safety precautions on construction performance with workers on Sudanese construction projects as units of analysis. The findings revealed that safety precautions had a positive and significant influence on performance of workers on construction projects. Iheanacho and Ebitu (2016) investigated the effects of industrial safety and health on employees' job performance in selected companies in Calabar, Nigeria using their staff. The findings established a significant relationship existing between industrial safety such as warning information on dangerous chemicals and hazardous materials and employee performance in terms of productivity, employee/ customer, subordinate/management relationship.

Kheni (2008) investigated the influence of the contextual environment on health and safety management within construction SMEs in Ghana. The findings revealed that precautionary measures for preventing injury and explosions influenced job performance of employees.Kaynak et al. (2016) investigated the effects of occupational health and safety practices on organizational commitment, work alienation, and job performance with staff of small and medium scale production and services sector workers operating in Kocaeli in Turkey as units of analysis. The findings of the analysis suggested that such OHS practices as safety procedures and risk management, safety and health rules and first aid support had a positive effect on employee job performance.

Oluoch (2015) sought to establish the effects of occupational health and safety programs on employee performance at Kenya Power and Lighting Company with staff as units of analysis. The findings of the study established that occupational safety and health programs had a positive strong relationship with employee performance. The literature above showed that scholars had made effort to relate safety precautions and performance of health workers. However, contextual and conceptual gaps arose. Contextually, none of the studies was carried out in Uganda with the study by Kaynak et al. (2016) carried out in Turkey, while the other studies were carried out in other African countries other than Uganda. Besides, none of the studies was carried out in a hospital context. These contextual gaps made it imperative for this study to seek to find out whether safety precautions influence performance of health workers in a hospital context.

2.3.3 Personal Protective Equipment and Performance of Health Workers

Personal Protective Equipment (PPE) or Personal Protective Devices (PPDs) are designed to protect workers from workplace injuries or illnesses a result of contact with hazardous substances

likely to infect them. Such protective gears include face shields, hats/ safety helmets, safety glasses/ goggles, ear protection (ear plugs and muffs), safety shoes, coveralls, gloves, vests and respirators among others (Aguwa 2013). Apparently, sometimes, more than one of these PPEs might be worn at same time at workplace depending on the anticipated work exposure. For instance, a health worker might need gloves, facemask and an apron among others at the same time depending on the activity being carried out (Aguwa, Arinze-Onyia, & Ndu, 2016).

For many infectious diseases, standard and transmission-based precautions are commonly employed by health care workers (HCWs). These involve the use of PPE which may include precautions against droplet, contact, or airborne transmission. Appropriate, consistent use of PPE is essential to reducing nosocomial transmission and protecting patients and HCWs (Zellmer, Van Hoof & Safdar, 2015). Therefore, the use of appropriate and good quality personal protective equipment in workplaces cannot be over emphasised. Healthcare associated infections (HAIs) remain as the most frequent adverse event in any healthcare delivery system and affect millions of people each year, leading to significant morbidity and mortality. A large proportion of healthcare providers and clients acquire infections within a healthcare facility (Haile, Engeda & Abdo, 2017).

Abad, Lafuente and Vilajosana (2013) assessed OHSAS 18001 certification process to establish its objective drivers and consequences on safety performance and labor productivity using employees of Spanish firms. The findings revealed that providing workers assigned to serious and likely hazardous tasks with safety glasses, helmets, boots, gloves, masks, jumpsuits and shoes led to significant improvements in safety, performance and workforce productivity. Agbola (2012) studied the impact of health and safety management on employee safety at the Ghana ports and

harbour authority assessing the effectiveness of these measures in reducing accidents and death; and evaluating impact of accidents and work-related illnesses on employee safety at work and performance. The results revealed that organisation fraught with unavailability of essential safety equipments had adverse effects on employees and organisational performance. Dumondor (2017) investigated the effect of Safety and health and office facilities on employee performance at PT Meares Soputan Mining in Indonesia using employees. The results showed that Safety and health facilities had a positive significant effect on employee performance.

Pourmoghani (2004) carried out a study on the effects of gloves and visual acuity on task performance with participants using four levels of gloves, and five levels of visual acuity (masked goggles) performing tasks using the Purdue Pegboard, the grooved pegboard, and the placing task of the Minnesota Dexterity Test. The findings of the study revealed that the effect of gloves and goggles were significant across all platforms. Simon (2010) examined the effect of the Level A suit on fine motor and gross motor dexterity with seven members of the National Guard's Civil Support Team (CST) in the USA as units of analysis. The measures of performance considered were time to complete and accuracy. The results indicated that there was a significant detrimental effect from wearing the suit for both measures of performance.

The literature above showed that scholars expended significant effort to investigate the influence of safety precautions on performance of health workers. However, gaps emerged at contextual and empirical levels. At contextual level, none of the studies was carried out in the Ugandan of hospital context. At empirical level, some studies presented controversial results. For instance, whereas all the other studies indicated that personal protective equipment had a positive and significant

influence on performance of workers, the study by Simon (2010) reported that personal protective equipment had significant detrimental effect on performance. These contextual and empirical gaps made it necessary for this study to investigate the influence of personal protective equipment on performance of health workers in the context of a public referral hospital in Uganda.

2.4 Summary of Literature Review

The literature above revealed that occupational safety had a relationship with performance of workers. However, a number of gaps at contextual and empirical emerged calling for the investigations of this study. For instance the literature revealed that not a single study was carried out in the Ugandan context and most of the studies were carried outside the health sector. Besides, some studies revealed controversial results against the proposed hypotheses suggesting that some occupational safety variables such as personal protective equipment had significant detrimental effect on performance. These gaps made necessary for this study in the context of the health sector in Uganda to investigate whether occupational safety influenced with performance of workers. Overall, the findings of the study indicated that psychological safety and safety precautions had a positive and significant influence on performance of health workers while personal protective equipment had a negative and insignificant influence on performance of health workers.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter presents a description of the methodology that was used by the study. It includes the research design, area of study, sampling technique, sample size and selection, data collection techniques, data collection instruments, data analysis, procedure followed and the anticipated limitations.

3.2 Research Design

This study adopted the cross-sectional research design. The cross-sectional research design is a research design by which the whole population or its subset is studied by seeking information about a study problem on what is going on at only one point in time (Olsen & Marie, 2004). The cross sectional design was used because cross sectional studies are generally quick, easy, and cheap to conduct because limited time is spent in the field. With the cross-sectional design, the researcher collected appropriate data quickly and cheaply (Gravlee, Kennedy, Godoy & Leonard, 2009). The study used both the quantitative and qualitative approaches. The quantitative approach helped in testing hypotheses to draw statistical inferences while the qualitative approach supplemented the quantitative one by providing detailed information (Guetterman, Fetters & Creswell, 2015). Therefore, the researcher was able to draw statistical inferences and carry out an in-depth analysis.

3.3 Study Population

The population of the study was 240 people comprising four senior administrative staff, six doctors (specialists), 10 medical officers, 164 nurses and 56 allied health professionals (Auditor General, 2016). This population was selected because medical personnel directly experienced occupational safety while the administrative staff of the hospital partook in the management of occupational health safety. These therefore provided the appropriate sample for the study.

3.4 Sample Size and Selection

The sample size comprised 148 that were 138 respondents for the questionnaire survey determined the Small Sample Technique by Krejcie and Morgan (1970) (see Appendix A) and 10 respondents for interviews. The sample from each category for the questionnaire survey was determined by proportionate sampling.

Table 3.1: Study Population Distribution and Sample

Category	Population	Sample	Sampling Techniques
Administration	4	4	Purposive sampling
Doctors (Specialists)	6	6	Purposive sampling
Medical Officers	10	6	Simple random sampling
Nurses	164	100	Simple random sampling
Allied Health Professionals	56	32	Simple random sampling
Total	240	148	Simple random sampling

Source: Auditor General (2016)

3.5 Sampling Techniques

The study adopted two sampling methods, namely simple random and purposive sampling. Simple random sampling is a sampling technique by which each individual is chosen randomly and entirely by chance, giving each individual accessible in population an equal chance of being included in the sample (Clark & Creswell, 2008). Simple random sample selection was done by drawing numbers assigned to respondents. This enabled collecting of data from a representative sample for generalisation of the findings. With regard to purposive sampling, this was used to sample particular people to provide in-depth views since the study was both quantitative and qualitative. The method of purposive sampling used was intensity purposive sampling. Intensity sampling allowed the researcher to select a small number of key respondents that provided in depth information and knowledge of a phenomenon of interest (Palinkas et al., 2015). The respondents selected purposively were hospital administrative staff and doctors (specialists).

3.6 Data Collection Methods

The collection of data for this study involved use of two data collection methods, namely a questionnaire survey and interviewing. A questionnaire survey is a data collection method by which the participants are directly questioned about their feelings on the study problem (Zohrabi, 2013). The questionnaire survey was very useful because it was fast to use in data collection. With interviewing, this is a qualitative data collection method by which the researcher collected details of the respondent's answer on the items of the study variables for in-depth information pertaining to participants' viewpoints (Sutton & Austin, 2015). Interviewing helped in providing comprehensive responses since the respondents provided in depth information necessary for deep

exploration and clarity (Schultze & Avital, 2011). Interviews were conducted onadministrative staff and doctors (specialists).

3.7 Data Collection Instruments

The study used two data collection instruments, namely; a self-administered questionnaire and interview guide. A self-administered questionnaire is a quantitative data collection instrument (Siniscalco & Auriat, 2005). The questionnaire had two sections that were sections A and B. The questions in sections A were on background characteristics while the questions in section B were on the main variables. The self-administered questionnaires had close-ended items. Closed questions were selected because they were easy to administer, easily coded and analysed, allowed comparisons and quantification, and they were more likely to produce fully completed questionnaires while avoiding irrelevant responses (Artino Jr, La Rochelle, Dezee & Gehlbach, 2014). For the interview guide, this was a face-to-face data collection instrument. The design of the interview items was standardised open-ended interview that allowed the participants to provide detailed information because of the probing questions it was a means of follow-up (Jamshed, 2014). Interview data was collected from administrative staff and doctors (specialists).

3.8 Research Procedure

The researcher secured an introductory letter from the School of Civil Service, Public Administration and Governance, UMI to access respondents in the field of study. The researcher presented the letter to the hospital administrator who introduced the researcher to the respondents. The researcher personally distributed research questionnaires and conducted interviews. Each

questionnaire was accompanied by a letter explaining the general purpose of the study. In conducting interviews, the researcher tape recorded the respondents.

3.9 Data Quality Control

3.9.1 Validity of the Instrument

The researcher established content validity of the instruments by making sure that the items on the main variables (independent and dependent variables) conformed to the conceptual framework of the study (see Figure 1.1). The opinion of the supervisors on the relevance, wording and clarity of the items in the instruments were sought and there was validation of the question items. Validation of the instrument focused on clarity, completeness and relevance of the questions in relation to the study constructs. Content validity results were established through inter judge with three research consultants. Each judge rated the items on a two point rating scale of Relevant (R) and Irrelevant (IR). The formula used to calculate CVI was;

CVI = n/N

Where: n = number of items rated as relevant

N= Total number of items in the instrument

The CVI for the questionnaire was valid at above 0.70 because the least CVI recommended in a survey study should be 0.70 (Bolarinwa, 2015).CIV results are presented in Table 3.2.

Table 3.2: Content Validity Index

Items	Number of Items	Content Validity Index
Performance of Health Workers	12	0.775
Psychological Safety	10	0.800
Safety Precautions	10	0.770
Personal Protective Equipment	7	0.714
Total Items	**39**	**Average CVI = 0.765**

3.9.2 Reliability of the Instruments

To attain the reliability of the instruments, the researcher made consultations with the supervisor. The researcher also avoided personal biases, ensure meticulous record keeping, demonstrate a clear decision trail and ensure that interpretations of data are consistent and transparent during data collection. Clarity in terms of thought processes during data analysis and subsequent interpretations were demonstrated (Simmons, 2016). The reliabilities of items in the various constructs were tested using Cronbach Alpha (α) method provided by SPSS. Reliability for the items in the different constructs were attained at the benchmark of $\alpha = 0.70$ and above (Bolarinwa, 2015). The items thus enabled collection of dependable data. The results were as presented in Table 3.3.

Table 3.3: Reliability Indices

Items	Number of Items	Cronbach Alphas
Performance of Health Workers	12	0.875
Psychological Safety	10	0.775
Safety Precautions	10	0.851
Personal Protective Equipment	7	0.873
Total Items	**39**	**Average CVI = 0.844**

3.10 Data Management and Analysis

Data management involved processing of both quantitative data and qualitative 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 identity errors and editing them to remove errors (Greasley, 2007). Quantitative data analysis involved calculation of descriptive statistics and frequencies for descriptive analysis. For inferential statistics, correlation and regression analysis was used in the testing of hypothesis (Simpson, 2015). Processing of qualitative data involved familiarisation with the data through review, reading, identification of themes, re-coding and exploration of relationships between categories after data has been collected (Gale, Heath, Cameron, Rashid & Redwood, 2013). Analysis of qualitative data will be done through thematic and content analysis. Thematic analysis ensured that clusters of text with similar meaning were presented together (O'Neil & Koekemoer, 2016). Content analysis involved interpretation of the underlying context. Using both quantitative and qualitative analyses enabled making of statistical inferences for generalisation and carrying out of in-depth analysis.

3.11 Measurement of Variables

The variables measured using questions developed basing on the nominal and ordinal scales. The nominal scale was used to measure questions on background characteristics. This was because the nominal scale helped to label or tag in order to identify study items. For the ordinal scale, this is a ranking scale that possesses the characteristic of order that were used to measure the items of the independent and dependent variables. The scale helped to distinguish between objects according to a single attribute and direction (Marateb, Mansourian, Adibi & Farina, 2014). The ranking was a five-point Likert Scale (Where 1 = strongly disagree 2 = disagree 3 = undecided 4 = agree 5 = strongly agree).

3.12 Ethical Considerations

All the way through this research, an attempt was made to respect the rights of others. For example, material borrowed from other sources such as journal articles was acknowledged at the respective spots in the in the study. Before data collection, the respondents were appropriately informed by the researcher of the purpose of the study, why and how they were chosen. They were further assured of confidentiality of their responses as their responses were anonymous. During data management findings were associated with the respondents through coding. Honesty was maintained by ensuring that data presentation, analysis and interpretation were strictly based on the data collected.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND INTERPRETATION OF THE FINDINGS

4.1 Introduction

This chapter covers the presentation, analysis and interpretation of the findings of this study on occupational safety and performance of health workers in public hospitals in Uganda. Analysis of the study was based on the objectives of the study seeking to establish the influence of psychological safety on performance of health workers; to find out the influence of safety precautions on performance of health workers; and to evaluate the influence of personal protective equipment on performance of health workers at the Arua regional public hospital. Specifically, this chapter presents the response rate, background findings and the empirical findings.

4.2 Response Rate

The researcher anticipated to collect data from 154 respondents including 144 for the questionnaire survey and 10 for interviews. However complete data for the questionnaire was collected from 116 and interviews from 6 respondents hence finally data was collected from 122 respondents. The response rate was as presented in Table 4.1

Table 4.1: Response Rate for the Study

Instruments	**Targeted**	**Actual**	**Response Rate**
Interview	10	6	60.0%
Questionnaires	138	116	84.1%
Total	**148**	**122**	82.4%

The data in Table 4.1 shows that interview data were collected from 6(60%) of the selected respondents and questionnaire survey data from 116(84.1%) respondents out of the originally selected 154. The overall response rate for both interview and survey data respondents was 122(82.4%). This response rate was considered sufficient because Nulty (2008) proposes that a response rate of 50% and is acceptable in social research surveys.

4.3 Background Characteristics

This section presents facts about the respondents, namely; sex, age groups, highest level of education attained and working experience. The data on background characteristics of the respondents was as given in Table 4.2.

Table 4.2: Respondents Background Characteristics

Item	**Categories**	**Frequency**	**Percent**
Sex of the Respondents	Male	72	62.1
	Female	44	37.9
	Total	116	100.0
Age Groups	Below 30 Years	35	30.2
	30-40 Years	38	32.8
	40-50 Years	33	28.4
	Above 50 Years	10	8.6
	Total	116	100.0
Highest levels of education attained	Certificate	25	21.9
	Diploma	45	39.5
	Bachelor's Degree	44	38.6
	Total	114	100.0
Number of years working at the hospital	Less than 5 years	44	38.3
	5-10 years	33	28.7
	10 years and above	38	33.0
	Total	115	100.0

The results on sex category showed that the larger percentage (62.1%) was of males with females being 37.9%. This suggested that the larger percentage of the respondents were males. However, despite the males being the larger percentage, the data collected was representative of both gender groups because the number of females was equally high and they effectively participated in the study. With regard to age groups of the respondents in years, the results showed that the larger percentage (32.8%) was of the respondents who were between 30-40 years followed by 30.2% who were below 30 years, 28.4% were between 40-50 years and the smaller percentage (8.6%) were those above 50 years. This means that most of the respondents were above 30 years. It was thus believed that the respondents could give reliable data basing on their ages that gave them enough experience about the operations of the hospital.

The results on levels of education, the larger percentage (39.5%) of the respondents had diplomas, 38.6% had bachelor's degrees and 17.9% had certificates. These results suggested all the respondents had high qualifications that could enable them to provide reliable responses because of their proficiency in the language used in the questionnaire, namely English. With respect to the number of years the respondents worked at the hospital, the larger percentage (38.3%) had worked at the hospital for less than five years, 33.0% had worked at the hospital for 10 years and 28.7% had worked at the hospital for 5-10 years. The results suggest that most of the respondents had a working experience of more than five years. Therefore, they competently provided appropriate data on the study problem.

4.4 Descriptive of the Dependent Variable: Performance of Health Workers

The questionnaire (Appendix II) shows that the dependent variable (DV) that is performance of health workers was measured using 12 items. The items measuring performance of health workers were scaled using the five-point Likert scale where, 1 = Strongly Disagree 2 = Disagree, 3 = Not Sure, 4 = Agree and 5 = Strongly Agree. The results were as presented in Table 4.3.

Table 4.3: Frequencies, Percentages and Means for Performance of Health Workers

Performance of Health Workers	F/%	SD	D	U	A	SA	Mean
I always complete the tasks prescribed in my job description	F	7	22	4	50	32	3.68
	%	6.1	19.1	3.5	43.5	27.8	
I fulfil my responsibilities as required by my job	F	3	25	4	52	32	3.73
	%	2.6	21.6	3.4	44.8	27.6	
I personally accomplish tasks required by my job	F	3.4	15.5	8.6	39.7	31.0	3.81
	%	3.5	15.8	8.8	40.4	31.6	
I fulfil the formal tasks as required by my job	F	1.7	15.5	6.0	46.6	27.6	3.85
	%	1.8	15.9	6.2	47.8	28.3	
I organise healthcare resources needed by patients	F	1	25	8	59	20	3.64
	%	0.9	22.1	7.1	52.2	17.7	
I deploying healthcare resources appropriately	F	13	12	13	60	16	3.47
	%	11.4	10.5	11.4	52.6	14.0	
Maintaining healthcare resources	F	3	23	11	60	19	3.59
	%	2.6	19.8	9.5	51.7	16.4	
I ensure that patients receive healthcare services	F	3	26	2	46	39	3.79
	%	2.6	22.4	1.7	39.7	33.6	
I strive to produce changes in patients' conditions	F		17	5	44	50	4.09
	%		14.7	4.3	37.9	43.1	
I use my skills and knowledge to accomplish my duties to the patient	F	2	3	-	33	78	4.57
	%	1.7	2.6	-	28.4	67.2	
I adhere to moral principles, moral uprightness, honesty, decency, trustworthiness	F	7	5	-	46	58	4.34
	%	6.0	4.3	-	39.7	50.0	
I usually put extra effort to complete an assignment on time	F	9	2	-	42	63	4.37
	%	7.8	1.7	-	36.2	54.3	

The results in Table 4.3 regarding whether the respondents always completed the tasks prescribed in their jobs description showed that, cumulatively the majority percentage (70.8%) of the respondents agreed while 35.2% disagreed and 3.5 were undecided. The mean = 3.68 was close to code four which on the five-point Likert scale used to measure the items corresponded to agreed. This suggested that the respondents agreed. Therefore, the results meant that the respondents indicated that the respondents always completed the tasks prescribed in their jobs description. With respect to whether the respondents fulfilled their responsibilities as required by their jobs, cumulatively the majority percentage (72.4%) of the respondents agreed while 24.2% disagreed and 3.4% were undecided. The mean = 3.73 was close to four, which corresponded with agreed. This implied that the respondents agreed, thus, the respondents fulfilled their responsibilities as required by their jobs.

Regarding whether the respondents personally accomplished tasks required by their jobs, cumulatively the majority percentage (72.0%) of the respondents agreed while 19.1% disagreed and 8.8% were undecided. The mean = 3.81 was close to four, which corresponded with agreed. This suggested that the respondents indicated that they personally accomplished tasks required by their jobs. With respect to whether the respondents fulfilled formal tasks as required by their jobs, cumulatively the majority percentage (76.1%) of the respondents agreed while 17.7% disagreed and 6.2% were undecided. The mean = 3.68 close to four which corresponded with agreed indicated the respondents agreed. This suggested that the respondents fulfilled formal tasks as required by their jobs.

As to whether the respondents organised healthcare resources needed by patients, cumulatively the majority percentage (69.9%) of the respondents agreed while 23.0% disagreed and 7.1% were undecided. The mean = 3.64 close to four which corresponded with agreed indicated the respondents agreed. This suggested that the respondents organised healthcare resources needed by patients. With respect to whether the respondents deployed healthcare resources appropriately, cumulatively the larger percentage (66.6%) of the respondents agreed while 21.9% agreed and 11.4% were undecided. The mean = 3.46 was close to three which corresponded to undecided. This suggested that the respondents indicated that they deployed healthcare resources appropriately.

Relating to whether the respondents maintained healthcare resources, the results showed that cumulatively the majority percentage (68.1%) of the respondents agreed while 22.4% disagreed and 9.5% were undecided. The mean = 3.59 close to four which corresponded with agreed indicated the respondents agreed. This implied that the respondents indicated that they maintained healthcare resources. As to whether the respondents ensured that patients received healthcare services, cumulatively the majority percentage (73.3%) of the respondents agreed while 25.0% disagreed and 1.7% was undecided. The mean = 3.79 close to four which corresponded with agreed indicated the respondents agreed. This meant that the respondents indicated that they ensured that patients received healthcare services.

In relation to whether respondents strove to produce changes in patients' conditions, cumulatively the majority percentage (81.0%) of the respondents agreed while 14.7% disagreed and 4.3% were undecided. The mean = 4.09 close to four which corresponded with agreed indicated the

respondents agreed. This meant that the respondents indicated that they strove to produce changes in patients' conditions. With regard to whether the respondents used their skills and knowledge to accomplish their duties to the patient, cumulatively the majority percentage (95.6%) of the respondents agreed with 4.3% disagreeing. The mean = 4.57 close to four suggested that the respondents agreed. This meant that the respondents indicated that they used their skills and knowledge to accomplish their duties to the patient.

As to whether the respondents adhered to moral principles, moral uprightness, honesty, decency, trustworthiness, cumulatively the larger percentage (89.7%) of the respondents agreed with 10.3% disagreeing. The mean = 4.34 close to four indicated that the respondents agreed. This meant that the respondents indicated that they adhered to moral principles, moral uprightness, honesty, decency, trustworthiness. With respect to whether the respondents usually put extra effort to complete assignments on time, cumulatively the larger percentage (90.5%) of the respondents agreed with 9.5% disagreeing. The mean = 4.37 close to four indicated that the respondents agreed. This meant that the respondents usually put extra effort to complete assignments on time. To find out the overall view of how the respondents rated their performance of health workers, an average index of performance of health workers was computed for the 12 items measuring performance of health workers. The summary of the statistics on performance of health workers are presented in Table 4.4.

Table 4.4: Summary Statistics for Performance of Health Workers

Descriptive			Statistic	Std. Error
Performance of Health Workers	Mean		3.89	0.07
	95% Confidence Interval for Mean	Lower Bound	3.75	
		Upper Bound	4.02	
	5% Trimmed Mean		3.92	
	Median		4.00	
	Variance		0.48	
	Std. Deviation		0.70	
	Minimum		1.67	
	Maximum		5.00	
	Range		3.33	
	Interquartile Range		0.83	
	Skewness		-0.96	0.233
	Kurtosis		1.30	0.461

The results in Table 4.4 show that the mean = 3.89 was close to the median = 4.00. Therefore, despite the negative skew (skew -0.96), the results were normally distributed. The mean and median close to four suggested that performance of health workers was good because basing on the scale used four represented agreed (good). The low standard deviation = 0.70 suggested low dispersion in the responses. The curve in Figure 4.1 indicated normality of the responses.

Figure 4.1: Performance of Health Workers

Figure 4.1 indicate normal distribution of the responses obtained about performance of health workers. This suggests that the data obtained on performance of health workers could be subjected to linear correlation and regression and appropriate results obtained.

To obtain the views of the respondents about their own performance, the health workers in open responses of the questionnaire were asked to give summary of their assessment of their personal performance as health workers. Several related responses were given to suggesting that the respondents performed their work. For instance, one respondent stated, “I am a devoted, hardworking and flexible person and I ensure that the citizens of Uganda and other people from various countries get the best healthcare services.” Another respondent remarked, “I try as much

as possible to do my responsibilities in time and as accurate as possible when under minimal supervision as much as possible and strive to provide maximum health services to clients." Similarly, another respondent indicated, "my performance is great despite the small challenges that I encounter, am able to make a positive impact on the lives of patients." The views above from the patients suggested that the respondents indicated that their performance was good. This finding is consistent with the descriptive statistics which indicated that performance of health workers was good.

In the interviews, the respondents were asked to comment on the performance of health workers in the hospital. The respondents gave related responses but all pointed to the effect that health workers performed their jobs effectively. For instance one respondent said, "Most staff carry out their duties as expected, they produce 75% of their key outputs." Another respondent revealed, "Most of the health workers perform appropriately as possible and handle each case individually, that is case by case." Similarly another respondent stated, "Most of the health workers attached at this hospital have the experience and expertise to effectively deliver services to our clients despite challenges because of the inadequacies resulting from lack of resources to offer them the protection and motivation they need." The views presented above suggested that health workers effectively performed their roles. This finding is consistent with the results of descriptive statistics and open responses from the health workers which indicated that performance of health workers was good.

4.5 Description of the Independent Variables: Occupational safety (IV)

The questionnaire (Appendix II) shows that the independent variable (IV) that is occupational safety was measured using three constructs namely; psychological safety, safety precautions and personal protective equipment. The results on the same are presented in the subsections that follow.

4.5.1 Psychological Safety

This item was derived from the first objective of the study that sought to establish the influence of psychological safety on performance of health workers at the Arua regional public hospital. The questionnaire (Appendix II) shows that psychological safety was measured using 10 items. The items measuring psychological safety were scaled using the five-point Likert scale where, 1 = Strongly Disagree 2 = Disagree, 3 = Not Sure, 4 = Agree and 5 = Strongly Agree. The results were as presented in Table 4.5.

Table 4.5: Frequencies, Percentages and Means for Psychological Safety

Psychological Safety	F/%	SD	D	U	A	SA	Mean
I freely speak up if they see something that may negatively affect my health and safety at work	F	9	28	6	33	40	3.58
	%	7.8	24.1	5.2	28.4	34.5	
I have the freedom to question the decisions or actions about health and safety of those with more authority	F	6	34	7	50	17	3.33
	%	5.3	29.8	6.1	43.9	14.9	
I feel safe to take a risk	F	29	42	20	12	9	2.38
	%	25.0	36.2	17.2	10.3	7.8	
I easily ask colleagues for help	F	6	14	4	49	39	3.90
	%	5.4	12.5	3.6	43.8	34.8	
Most colleagues and I are in-depth exchange of partnership	F	2	20	16	49	27	3.69
	%	1.8	17.5	14.0	43.0	23.7	
I feel very confident about my supervisor's skills to deal with health and safety issues	F	8	16	16	51	25	3.59
	%	6.9	13.8	13.8	44.0	21.6	
My supervisor knows about the work that needs to be done	F	2	12	19	47	35	3.88
	%	1.7	10.4	16.5	40.9	30.4	
My supervisor seriously considers staff suggestions for improving health and safety for workers	F	4	17	9	52	32	3.80
	%	3.4	14.7	7.8	44.8	27.6	
I trust my supervisor to act on health and safety concerns	F	5	12	15	46	38	3.86
	%	4.3	10.3	12.9	39.7	32.8	
My supervisor seriously considers staff suggestions for improving health and safety for workers	F	3.4	14.7	7.8	45.7	27.6	4.12
	%	3.5	14.8	7.8	46.1	27.8	

The results in Table 4.5 regarding whether the respondents freely spoke up if they saw something that might negatively affect their health and safety at work showed that, cumulatively the majority percentage (62.9%) of the respondents agreed while 31.9% disagreed and 5.2 were undecided. The mean = 3.58 was close to code four which on the five-point Likert scale used to measure the items corresponded to agreed. Therefore, the results meant that the respondents freely spoke up if they

saw something that might negatively affect their health and safety at work. With respect to whether the respondents had the freedom to question the decisions or actions about health and safety of those with more authority, cumulatively the larger percentage (58.8%) of the respondents agreed while 35.1% disagreed and 6.1% were undecided. The mean = 3.33 was close to three, which corresponded to undecided. Three being the average, the results implied that the respondents indicated that on the moderate, they had freedom to question the decisions or actions about health and safety of those with more authority.

Regarding whether the respondents felt safe to take risks, cumulatively the majority percentage (61.2%) of the respondents agreed while 18.1% disagreed and 17.2% were undecided. The mean = 2.38 was close to two, which corresponded to disagreed. This suggested that the respondents indicated that they did not feel safe to take a risk. With respect to whether the respondents easily asked colleagues for help, cumulatively the majority percentage (78.6%) of the respondents agreed while 17.9% disagreed and 3.6% were undecided. The mean = 3.90 close to four which corresponded with agreed indicated the respondents agreed. This suggested that the respondents easily asked colleagues for help.

As to whether there was in-depth exchange of partnership between the health workers, cumulatively the majority percentage (66.7%) of the respondents agreed while 19.3% disagreed and 14.0% were undecided. The mean = 3.69 close to four which corresponded with agreed indicated the respondents agreed. This suggested that there was in-depth exchange of partnership between the health workers. With respect to whether the respondents felt very confident about their supervisor's skills to deal with health and safety issues, cumulatively the majority percentage

(65.6%) of the respondents agreed while 20.7% disagreed and 13.8% were undecided. The mean = 3.59 was close to four which corresponded with agreed. This suggested that the respondents indicated that they felt very confident about their supervisor's skills to deal with health and safety issues.

Relating to whether the supervisors knew the work that needed to be done, the results showed that cumulatively the majority percentage (71.2%) of the respondents agreed while 11.1% disagreed and 16.5% were undecided. The mean = 3.88 close to four which corresponded with agreed indicated the respondents agreed. This implied that the respondents indicated that supervisors knew the work that needed to be done. As to whether the supervisors seriously considered staff suggestions for improving health and safety for workers, cumulatively the majority percentage (72.4%) of the respondents agreed while 18.1% disagreed and 7.8% were undecided. The mean = 3.80 close to four which corresponded with agreed indicated the respondents agreed. This meant that the respondents indicated that supervisors seriously considered staff suggestions for improving health and safety for workers.

In relation to whether respondents trusted their supervisors to act on health and safety concerns, cumulatively the majority percentage (72.5%) of the respondents agreed while 14.6% disagreed and 12.9% were undecided. The mean = 3.86 close to four which corresponded with agreed indicated the respondents agreed. This meant that the respondents indicated that they trusted their supervisors to act on health and safety concerns. With regard to whether the actions of supervisors showed that health and safety was a top priority, cumulatively the majority percentage (80.0%) of the respondents agreed while 10.4% disagreeing and 9.6% were undecided. The mean = 4.12 close

to four suggested that the respondents agreed. This meant that the respondents indicated that the actions of supervisors showed that health and safety was a top priority. To find out the overall view of how the respondents rated their performance of health workers, an average index of psychological safety of health workers was computed for the 10 items measuring psychological safety. The summary of the statistics on psychological safety are presented in Table 4.6.

Table 4.6: Summary Statistics for Psychological Safety

	Descriptive		Statistic	Std. Error
Psychological safety	Mean		3.62	0.07
	95% Confidence Interval for Mean	Lower Bound	3.49	
		Upper Bound	3.75	
	5% Trimmed Mean		3.63	
	Median		3.80	
	Variance		0.45	
	Std. Deviation		0.67	
	Minimum		1.50	
	Maximum		5.00	
	Range		3.50	
	Interquartile Range		0.90	
	Skewness		-0.78	0.24
	Kurtosis		0.40	0.47

The results in Table 4.6 show that the mean = 3.62 was almost close to the median = 3.80. Therefore, despite the negative skew (skew -0.78), the results were normally distributed. The mean and median close to four suggested that psychological safety of health workers was good because basing on the scale used four represented agreed (good). The low standard deviation = 0.70

suggested low dispersion in the responses. The curve in Figure 4.2 indicated normality of the responses.

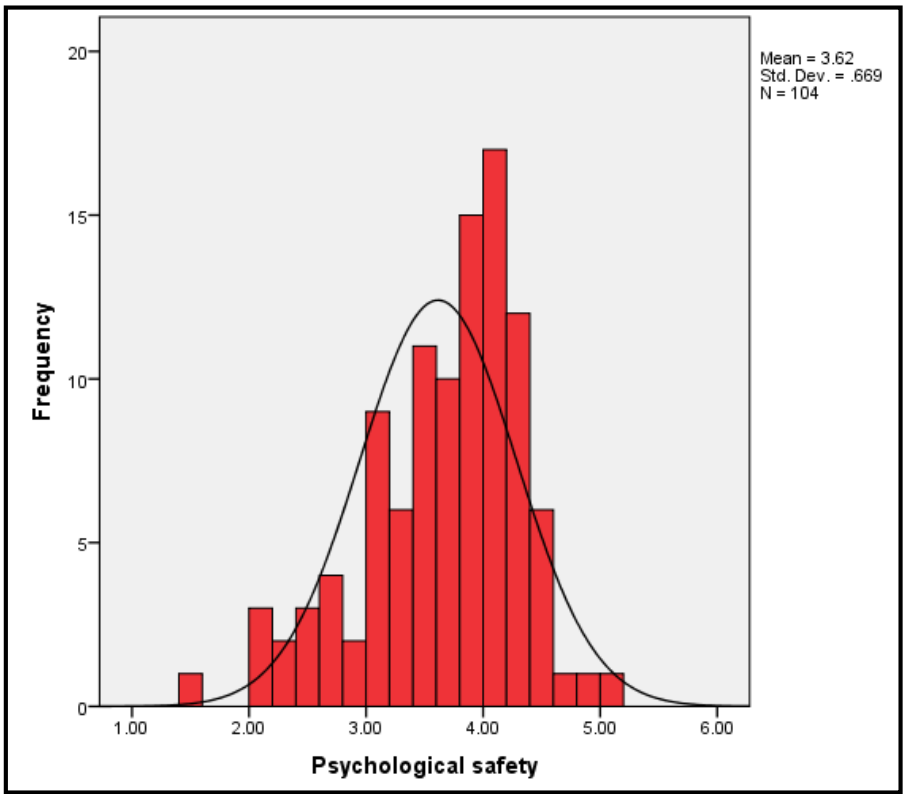

Figure 4.2: Psychological Safety

Figure 4.2 indicate normal distribution of the responses obtained about psychological safety of health workers. This suggests that the data obtained on psychological safety of health workers could be subjected to linear correlation and regression and appropriate results obtained.

To obtain the views of the respondents about psychological safety at the hospital, the health workers in open responses of the questionnaire were asked to give their precise feelings about psychological safety for them at the hospital. Several varying responses were given which pointed

to the effect that psychological safety at the hospital was average. For instance, one respondent stated, “It is average since in my position I am always part of decision making. I largely involved the making of decisions with respect to my work.” Another respondent indicated, “Psychological safety is a top priority for health workers at this hospital. Management ensures that all categories of workers in this hospital psychologically secure.” Similarly, another respondent revealed, “There is teamwork, this improves our psychological safety as we feel as part of a family,”

However, on the contrary there were those who were dissatisfied with psychological safety at the hospital. For instance, one respondent stated, “The Ministry of Health should employ more staff so that work load is reduced. I feel am psychologically tortured because of heavy workload.” Another respondent stated, “Issues to do with psychological safety have never surfaced in any meeting. They have been ignored by the Ministry of Health Completely.” Likewise, another respondent stated, “I am not entirely confident about my psychological safety in this hospital as a result of rumour mongering.” The views presented above suggest that the respondents considered psychological safety at the hospital as moderate because whereas as a number of staff were satisfied, there were equally those who were dissatisfied with psychological safety at the hospital.

In the interviews, the respondents gave views which suggested that management of the hospital made effort to promote psychological safety at the hospital. For instance, one respondent said, “To a large extent because my staff have been put on standing committees that is close to 15 committees with each committee comprising 6-8 staff, staff are involved in matters pertaining to decision making at the hospital.” Another respondent stated, “There is a high level of collegial relations with most staff working as a team. Each staff performs different tasks to help the hospital achieve

its goal of effective services delivery. Another interviewee said, “We are a team, staff are involved in every activity of the hospital both formally and informally. This helped better health services delivery amidst lack of resources to deliver quality health services.” The results from the interviews suggest that staff psychological safety at the hospital was good. These results concur with the descriptive statistics results which revealed that psychological safety was good. Overall, it can therefore be summed up that to larger extent; psychological safety at the hospital was good.

4.5.2 Safety Precautions

This item was derived from the second objective of the study that sought to find out the influence of safety precautions on performance of health workers at the Arua regional public hospital. The questionnaire (Appendix II) shows that safety precautions were measured using 10 items. The items measuring psychological safety were scaled using the five-point Likert scale where, 1 = Strongly Disagree 2 = Disagree, 3 = Not Sure, 4 = Agree and 5 = Strongly Agree. The results were as presented in Table 4.7.

Table 4.7: Frequencies, Percentages and Means for Safety Precautions

Safety precautions	F/%	SD	D	U	A	SA	Mean
Wash hands after body fluid exposure	F	6	20	2	24	64	4.03
	%	5.2	17.2	1.7	20.7	55.2	
Wash hands after touching a patient	F	2	25	6	36	47	3.87
	%	1.7	21.6	5.2	31.0	40.5	
Wash hands immediately after removal of gloves	F	4	22	11	35	41	3.77
	%	3.5	19.5	9.7	31.0	36.3	
I clean and disinfect equipment and environmental surfaces	F	2	18	12	47	36	3.84
	%	1.7	15.7	10.4	40.9	31.3	
I segregate non-infectious wastes in coded dust bins	F	2	34	3	42	34	3.63
	%	1.7	29.3	2.6	36.2	29.3	
I segregate infectious medical wastes in coded dust bin	F	6	19	10	46	34	3.72
	%	5.2	16.5	8.7	40.0	29.6	
I avoid recapping of used needles from disposable syringes	F	2.6	19.8	5.2	30.2	39.7	3.87
	%	2.7	20.4	5.3	31.0	40.7	
I protect myself against body fluids of all patients regardless of their diagnosis	F	5	29	3	35	43	3.71
	%	4.3	25.2	2.6	30.4	37.4	
Probable risks have been defined for staff	F	6	26	13	37	34	3.58
	%	5.2	22.4	11.2	31.9	29.3	
I have access to post-exposure medicines	F	6	6	18	30	56	4.07
	%	5.2	5.2	15.5	25.9	48.3	

The results in Table 4.7 regarding whether the respondents washed hands after body fluid exposure showed that, cumulatively the majority percentage (75.9%) of the respondents agreed while 21.4% disagreed and 1.7 were undecided. The mean = 4.03 was close to code four which on the five-point Likert scale used to measure the items corresponded to agreed. This suggested that the respondents agreed. Therefore, the results meant that the respondents washed hands after body fluid exposure. With respect to whether the respondents washed hands after touching a patient, cumulatively the majority percentage (71.5%) of the respondents agreed while 23.3% disagreed and 5.2% were

undecided. The mean = 3.87 was close to four, which corresponded with agreed. The results implied that the respondents indicated that they washed hands after touching a patient.

Regarding whether the respondents washed hands immediately after removal of gloves, cumulatively the majority percentage (67.3%) of the respondents agreed while 23.0% disagreed and 9.7% were undecided. The mean = 3.77 was close to four, which corresponded with agreed. This suggested that the respondents washed hands immediately after removal of gloves.With respect to whether the respondents cleaned and disinfected equipment and environmental surfaces, cumulatively the majority percentage (72.2%) of the respondents agreed while 17.4% disagreed and 10.4% were undecided. The mean = 3.84 close to four which corresponded with agreed indicated the respondents agreed. This suggested that the respondents cleaned and disinfected equipment and environmental surfaces.

As to whether the respondents segregated non-infectious wastes in coded dust bins, cumulatively the majority percentage (65.5%) of the respondents agreed while 31.0% disagreed and 2.6% were undecided. The mean = 3.63 close to four which corresponded with agreed indicated the respondents agreed. This suggested that the segregated non-infectious wastes in coded dust bins.
With respect to whether the respondents segregated infectious medical wastes in coded dust bin, cumulatively the majority percentage (69.6%) of the respondents agreed while 21.7% disagreed and 8.7% were undecided. The mean = 3.72 was close to four which corresponded with agreed. This suggested that the respondents indicated that they segregated infectious medical wastes in coded dust bin.

Relating to whether the respondents avoided removing used needles from disposable syringes, the results showed that cumulatively the majority percentage (71.7%) of the respondents agreed while 23.1% disagreed and 5.3% were undecided. The mean = 3.87 close to four which corresponded with agreed indicated the respondents agreed. This implied that the respondents indicated that avoided removing used needles from disposable syringes. As to whether the respondents protected themselves against body fluids of all patients regardless of their diagnosis, cumulatively the majority percentage (67.8%) of the respondents agreed while 29.5% disagreed and 2.6% were undecided. The mean = 3.71 close to four which corresponded with agreed indicated the respondents agreed. This meant that the respondents indicated that they protected themselves against body fluids of all patients regardless of their diagnosis.

In relation to whether probable risks had been defined for staff, cumulatively the majority percentage (61.3%) of the respondents agreed while 27.6% disagreed and 11.2% were undecided. The mean = 3.58 close to four which corresponded with agreed indicated the respondents agreed. This meant that the respondents indicated that probable risks had been defined for staff. With regard to whether the respondents had access to post-exposure medicines, cumulatively the majority percentage (74.2%) of the respondents agreed while 10.4% disagreeing and 15.5% were undecided. The mean = 4.07 close to four suggested that the respondents agreed. This meant that the respondents indicated that they had access to post-exposure medicines. To find out the overall view of how the respondents rated safety precautions at the hospital, an average index of safety precautions at the hospital was computed for the 10 items measuring psychological safety. The summary of the statistics on safety precautions are presented in Table 4.8.

Table 4.8: Summary Statistics for Safety Precautions

	Descriptive		Statistic	Std. Error
Safety precautions	Mean		3.84	0.09
	95% Confidence	Lower Bound	3.66	
	Interval for Mean	Upper Bound	4.02	
	5% Trimmed Mean		3.84	
	Median		3.90	
	Variance		0.91	
	Std. Deviation		0.95	
	Minimum		1.30	
	Maximum		9.10	
	Range		7.80	
	Interquartile Range		1.20	
	Skewness		1.10	0.23
	Kurtosis		7.68	0.46

The results in Table 4.6 show that the mean = 3.62 was almost close to the median = 3.80 with a positive skew (skew = 1.10) which suggested that the results were normally distributed. The mean and median close to four suggested that safety precautions at the hospital were good because basing on the scale used four represented agreed (good). The low standard deviation = 0.70 suggested low dispersion in the responses. The curve in Figure 4.3 indicated normality of the responses.

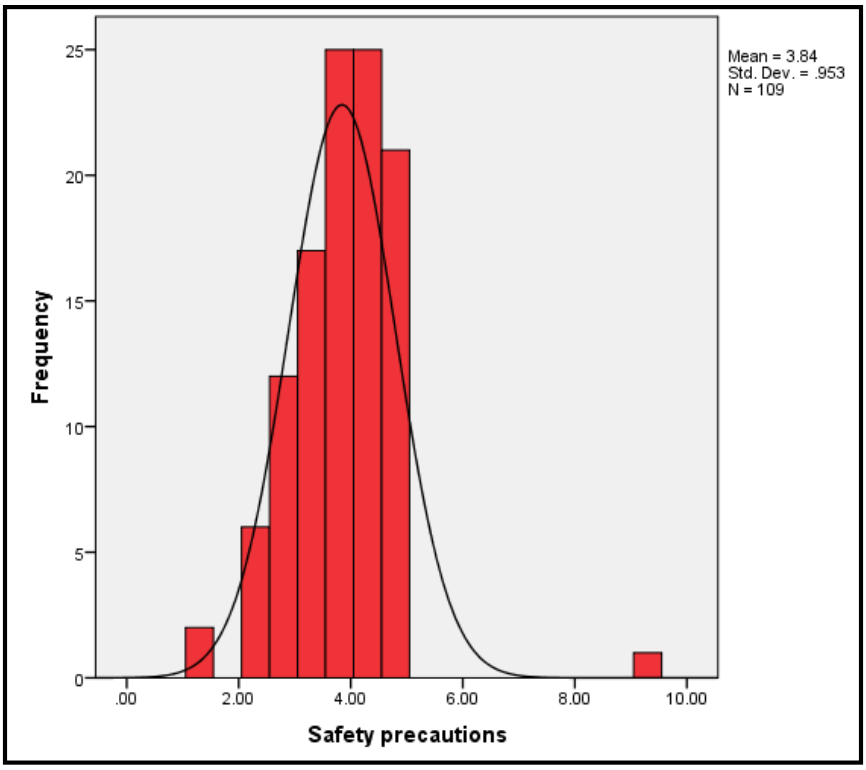

Figure 4.3: Safety Precautions

Figure 4.3 indicate normal distribution of the responses obtained about psychological safety of health workers. This suggests that the data obtained on safety precautions could be subjected to linear correlation and regression and appropriate results obtained.

To obtain the views of the respondents about safety precautions at the hospital, the health workers in open responses of the questionnaire were asked to give their opinions about safety precautions at the hospital. Several varying responses were given which pointed to the effect that safety precautions at the hospital were good but needed improvement. For instance, one respondent sated, "A lot of improvement had to be done to ensure maximum safety precaution for staff. Still, more facilities should be provided to ensure safety." Another respondent indicated, "In my opinion safety precautions at this hospital are very good for both the staf and patients and reduce dangers

against them." In addition, another respondent remarked, "My opinion about safety precautions in this hospital is that they have been improving over time." However, one respondent stated, "Safety precautions in this hospital are below standard that is not fully covered as most appliances are not provided in the unit." The views above shows that safety precautions at the hospital existed but there was room for improvement. These views are consistent with descriptive results which showed that safety precautions at the hospital were good.

During the interaction with the interviewees, they were asked to indicate safety precautions that existed at the hospital. Several responses were given but all pointed to the existence of safety precautions. For instance, one respondent said, "safety precautions are highly promoted. For instance, currently there washing facilities have been put in place almost in all units. A team of 28 hospital staff have even been trained to make hospital alcohol hand rub." Another respondent said, "In the hospital a standing committee which handled infection prevention has been established. Every unit has a hand rub dispenser and various detergents are provided." Similarly, another respondent stated, "Every staff in the hospital has been sensitised about taking care when handling patients and cleaning the environment. Hospital staff know the no go zones of the hospital and even there precautionary signs for those not ware especially patients and their caregivers." The views above suggest that safety precaution was given paramount significance. This finding is consistent with the descriptive statistics results which revealed that safety precaution at the hospital was good.

4.5.3 Personal Protective Equipment

This item was derived from the third objective of the study that sought to evaluate the influence of personal protective equipment on performance of health workers at the Arua regional public hospital. The questionnaire (Appendix II) shows that personal protective equipment was measured using seven items. The items measuring personal protective equipment were scaled using the five-point Likert scale where, 1 = Strongly Disagree 2 = Disagree, 3 = Not Sure, 4 = Agree and 5 = Strongly Agree. The results were as presented in Table 4.9.

Table 4.9: Frequencies, Percentages and Means for Personal Protective Equipment

Personal protective equipment	F/%	SD	D	U	A	SA	Mean
I wear clean gloves whenever there is a possibility of exposure to any body fluids	F	4	7	1	42	62	4.30
	%	3.4	6.0	0.9	36.2	53.4	
I change gloves between contacts with different patients	F	8	17	8	38	45	3.82
	%	6.9	14.7	6.9	32.8	38.8	
I wear a waterproof apron whenever there is a possibility of body fluid splashing on my body	F	13	30	13	28	30	3.28
	%	11.4	26.3	11.4	24.6	26.3	
I wear eye goggles whenever there is a possibility of body fluid splashing in my face	F	25	38	16	24	13	2.67
	%	21.6	32.8	13.8	20.7	11.2	
I have access to all necessary personal protective equipment	F	34	39	13	15	12	2.40
	%	30.1	34.5	11.5	13.3	10.6	
There are health and safety devices in my workplace	F	13	24	20	41	18	3.23
	%	11.2	20.7	17.2	35.3	15.5	
Safety tools, equipment and machinery are available	F	18	32	26	23	15	2.87
	%	15.8	28.1	22.8	20.2	13.2	

The results in Table 4.9 regarding whether the health workers wore clean gloves whenever there was a possibility of exposure to any body fluids showed that, cumulatively the majority percentage

(89.6%) of the respondents agreed while 9.4% disagreed and 0.9 was undecided. The mean = 4.30 was close to code four which on the five-point Likert scale used to measure the items corresponded to agreed. This suggested that the respondents agreed. Therefore, the results meant that health workers wore clean gloves whenever there was a possibility of exposure to any body fluids. With respect to whether the health workers changed gloves between contacts with different patients, cumulatively the majority percentage (71.6%) of the respondents agreed while 21.6% disagreed and 6.9% were undecided. The mean = 3.82 was close to four, which corresponded with agreed. The results implied that health workers changed gloves between contacts with different patients.

Regarding whether the health workers wore waterproof aprons whenever there were possibilities of body fluid splashing on their bodies, cumulatively the larger percentage (50.9%) of the respondents agreed while 37.7% disagreed and 11.4% were undecided. The mean = 3.28was close to three, which corresponded with undecided. This suggested that the health workers wore waterproof aprons whenever there were possibilities of body fluid splashing on their bodies. With respect to whether the health workers wear eye goggles whenever there was a possibility of body fluid splashing in their faces, cumulatively the larger percentage (54.4%) of the respondents disagreed while 31.9% disagreed and 13.8% were undecided. The mean = 2.67 close to threewhich corresponded with undecided indicated the respondents were. This suggested that the wearing of eye goggles whenever there was a possibility of body fluid splashing in the faces of health workers was moderate.

As to whether the respondents had access to all necessary personal protective equipment, cumulatively the majority percentage (64.6%) of the respondents agreed while 23.9% disagreed

and 11.5% were undecided. The mean = 2.40 close to two which corresponded with disagreed indicated the respondents disagreed. This suggested that access to all necessary personal protective equipment was poor. With respect to whether there were health and safety devices at the workplace, cumulatively the larger percentage (50.8%) of the respondents agreed while 31.9% disagreed and 17.2% were undecided. The mean = 3.23 was close to three which corresponded with undecided. This suggested that the respondents indicated that existence of health and safety devices at the workplace was moderate.

About whether the safety tools, equipment and machinery were available, the results showed that cumulatively the larger percentage (48.3%) of the respondents agreed while 43.9% disagreed and 22.8% were undecided. The mean = 2.87 close to three corresponded with undecided. This implied that the respondents indicated availability of safety tools, equipment and machinery was moderate. To find out the overall view of how the respondents rated personal protective equipment at the hospital, an average index of personal protective equipment at the hospital was computed for the seven items measuring personal protective equipment. The summary of the statistics on personal protective equipment are presented in Table 4.10.

Table 4.10: Summary Statistics for Personal Protective Equipment

Descriptive

			Statistic	Std. Error
Personal protective equipment	Mean		3.21	0.09
	95% Confidence Interval for Mean	Lower Bound	3.02	
		Upper Bound	3.39	
	5% Trimmed Mean		3.21	
	Median		3.14	
	Variance		0.93	
	Std. Deviation		0.97	
	Minimum		1.14	
	Maximum		5.00	
	Range		3.86	
	Interquartile Range		1.57	
	Skewness		-0.01	0.23
	Kurtosis		-0.66	0.46

The results in Table 4.10 show that the mean = 3.21 was almost close to the median = 3.14. Therefore, despite the negative skew (skew -0.01), the results were normally distributed. The mean and median close to three suggested that personal protective equipment at the hospital were moderate because basing on the scale used three represented undecided (average/ moderate). The low standard deviation = 0.97 suggested low dispersion in the responses. The curve in Figure 4.4 indicated normality of the responses.

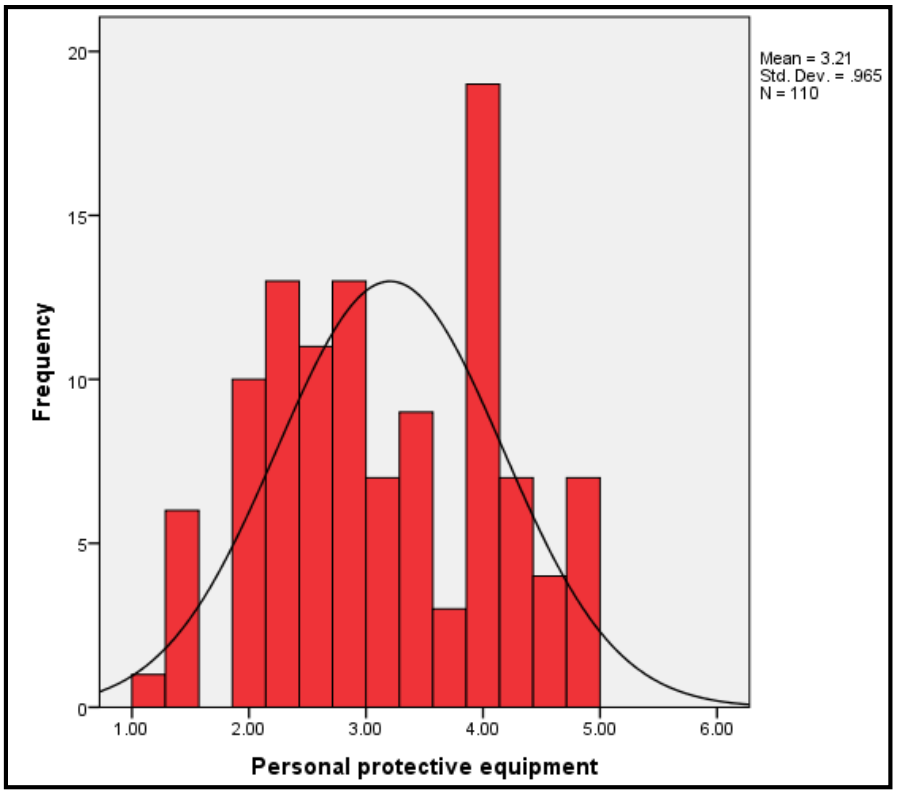

Figure 4.4: Personal Protective Equipment

Figure 4.4 indicate normal distribution of the responses obtained about personal protective equipment at the hospital. This suggests that the data obtained on personal protective equipment could be subjected to linear correlation and regression and appropriate results obtained.

To obtain the views of the respondents about personal protective equipment at the hospital, the health workers in open responses of the questionnaire were asked to give their opinions about personal protective equipment at the hospital. Several varying responses were given which pointed to the effect that availability of personal protective equipment at hospital was low. For example, one respondent stated, “Personal protective equipments are not always available, more stock is needed at the hospital.” Another respondent stated, “Supplies are insufficient and most of personal

protective equipments are not enough. The hospital needs to make more orders for our safety." Another respondent remarked, "Not all the recommended personal equipments to be used in different units are available." The views above suggest availability of personal protective equipments at the hospital was low. This finding is consistent the results of descriptive statistics which revealed that availability of personal protective equipments at the hospital was moderate.

In the interviews, the respondents gave views related to those provided above by the health workers. For instance, one respondent stated that, "Protective gear – PPE re accessed when there are emergencies, however, the common ones are provided every time they needed." Another respondent said, "The hospital is stocked to a fair level with personal protective gear, although there are some staff that have an attitude of I don't care when it comes to using them. Still some gears such as gumboots, gurgles and plastic aprons are lacking." Similarly, another respondent revealed, "In most cases protective equipments are not there and even those that are there are not enough to cover every staff." The views above allude to the fact that existence of protective equipments at the hospital was low. These results concur with the descriptive statistics results and interviews from the health workers which revealed that existence of personal protective equipments was low.

4.6 Inferential Analyses

To establish whether there was a relationship between occupational safety and performance of health workers, inferential analyses namely; correlation and regression were carried out respectively and results follow here under.

4.6.1 Correlation of Occupational safety and Performance of Health Workers

To establish whether the existing occupational safety namely; psychological safety, safety precautions and personal protective equipment related to psychological safety, safety precautions and personal protective equipment, the researcher carried out correlation analysis. The results were as given in Table 4.11.

Table 4.11: Correlation Matrix of Occupational safety and Performance of Health Workers

	Performance of Health Workers	Psychological safety	Safety precautions	Personal protective equipment
Performance of Health Workers	1	0.611** 0.000	0.589** 0.000	0.340** 0.000
Psychological safety		1	0.485** 0.000	0.490** 0.000
Safety precautions			1	0.415** 0.000
Personal protective equipment				1

**. Correlation is significant at the 0.05 level (2-tailed).

The results in Table 4.11 suggest that all the aspects of occupational safety namely; psychological safety($r = 0.611$, $p = 0.000 < 0.05$); safety precautions($r = 0.589$, $p = 0.000 < 0.05$) and personal protective equipment ($r = 0.340$, $p = 0.000 < 0.05$) had a positive and significant relationship with performance of health workers. This means that hypotheses (H1-H3) were supported. However,

hypothesis one (H1) was more significant followed by hypothesis two (H2) and hypothesis three (H3) respectively.

4.6.2 Regression Model for Occupational safety and Performance of Health Workers

At the confirmatory level, to establish whether occupational safety aspects namely; psychological safety, safety precautions and personal protective equipment influenced performance of health workers, a regression analysis was carried out. The results were as in Table 4.12.

Table 4.12: Occupational safety and Performance of Health Workers

Occupational safety	Standardised Coefficients Beta (β)	Significance (p)
Psychological safety	0.568	0.000
Safety precautions	0.271	0.004
Personal protective equipment	-0.090	0.312
Adjusted $R^2 = 0.479$		
F = 28.264, p = 0.000		

a. Dependent Variable: Performance of Health Workers

The results in Table 4.12 show that occupational safety namely; psychological safety, safety precautions and personal protective equipment 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 safety, namely; psychological safety ($\beta = 0.568$, $p = 0.000 < 0.05$) and safety precautions ($\beta = 0.271$, $p = 0.004 < 0.05$) had a positive and significant influence on performance of health workers

while personal protective equipment ($\beta = -0.090$, $p = 0.312 < 0.05$) had a negative and insignificant influence on performance of health workers. This means that only hypotheses (H1 – H2) were supported and hypothesis (H3) was not. The magnitudes of the respective betas suggested that psychological safety had the most significant influence on performance of health workers followed by safety precautions.

CHAPTER FIVE

SUMMARY, DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter of the study presents the summary, discussion, conclusions and recommendations basing on the findings of the study. The chapter also presents limitations of the study and suggests areas for further research.

5.2 Summary of the Findings

5.2.1 Performance of Health Workers

Summary descriptive results on the dependent variable which is performance of health workers were a mean = 3.89. This mean suggested that performance of health workers at Arua Referral Hospital was good.

5.2.2 Research Question One: What is the influence of psychological safety on performance of health workers at the Arua regional public hospital?

The summary descriptive results on psychological safety were a mean = 3.62. This mean suggested that psychological safety for health workers was good. Regression results showed that psychological safety ($\beta = 0.568$, $p = 0.000 < 0.05$) had a positive and significant relationship with performance of health workers. Therefore, the hypothesis to the effect that psychological safety influences performance of health workers was supported.

5.2.3 Research Question Two: What is the influence of safety precautions on performance of health workers at the Arua regional public hospital?

The summary descriptive results on safety precautions were a mean = 3.84. This mean suggested that safety precautions were good. Regression results showed that safety precautions ($\beta = 0.271$, $p = 0.004 < 0.05$) had a positive and significant relationship with performance of health workers. Therefore, the hypothesis to the effect that safety precautions influence performance of health workers was supported.

5.3.4 Research Question Three: What is the influence of personal protective equipment on performance of health workers at the Arua regional public hospital?

The summary descriptive results on personal protective equipment were a mean = 3.21. This mean suggested that personal protective equipment were moderate. Regression results showed that personal protective equipment ($\beta = -0.090$, $p = 0.312 < 0.05$) had a negative and significant relationship with performance of health workers. Therefore, the hypothesis to the effect that personal protective equipment influences performance of health workers was not supported.

5.3 Discussion of the Findings

5.3.1 Research Hypothesis One: Psychological safety significantly influences performance of health workers.

The findings revealed that the first hypothesis (H1) to the effect that psychological safety influences performance of health workers was supported. This finding concurred with the findings of previous scholars. For instance, Alizadeh and Cheraghalizadeh (2015) found out that psychological safety in terms of organisational support of employees had a positive significant

effect on job performance. Likewise, Dar et al. (2011) showed that high psychological safety led to higher employee job performance. Similarly, Chen et al. (2015) indicated that psychological safety was the intermediate link for organization related consequences such as employee performance. Equally, Judeh (2011) indicated that psychological safety in terms employee participation had a positive and significant effect on teamwork effectiveness. On their part, Min and Yong (2014) showed that psychological safety in terms of collegial relationship had a positive and significant influence on employee job performance. Similarly, Ning and Jin (2009) revealed that psychological safety was conducive to increasing individual ability to focus and improving individual job performance. With the finding of the study concurring with the findings of previous scholars, this means that psychological safety influences performance of health workers.

5.3.2 Research Hypothesis Two: Safety precautions significantly influence performance of health workers.

The findings showed that the second hypothesis (H2) to the effect that safety precautions influenced performance of health workers was supported. This finding is consistent with previous scholars. For example, Abuga (2014) found out that that occupational healthy safety affected employee performance. The presence of first aid and fire extinguishers as a precautionary measure at precise points in the company affected employee performance. Organising workshops, seminar and lecturers on safety precaution and presence of a hazard had a positive significant influence on performance off employees. On their part, Dwomoh et al. (2013) showed that health and safety precautions put up by the company positively correlated with employee performance. Similarly, El-zain (2014) revealed that safety precautions had a positive and significant influence on performance of workers on construction projects.

Also, Iheanacho and Ebitu (2016) established a significant relationship existing between industrial safety such as warning information on dangerous chemicals and hazardous materials and employee performance in terms of productivity, employee/ customer, subordinate/management relationship. Likewise, Kheni (2008) revealed that precautionary measures for preventing injury and explosions influenced job performance of employees. On their part, Kaynak et al. (2016) reported that safety procedures and risk management, safety and health rules and first aid support had a positive effect on employee job performance. Similarly, Oluoch (2015)established that occupational safety and health programs had a positive strong relationship with employee performance. With the finding of this study being consistent with the findings of previous scholars, this means safety precautions influenced performance of health workers.

5.3.3 Research Hypothesis Two: Personal protective equipment significantly influences performance of health workers.

The results revealed that the third hypothesis (H3) to the effect that personal protective equipments influenced performance of health workers was not supported. This finding agrees with the finding of Simon (2010) that there was a significant detrimental effect from wearing the suit for both measures of performance. However, the finding is contrary to the findings of most previous scholars. For instance, Abad et al. (2013) revealed that providing workers assigned to serious and likely hazardous tasks with safety glasses, helmets, boots, gloves, masks, jumpsuits and shoes led to significant improvements in safety, performance and workforce productivity. Similarly, Agbola (2012) revealed that organisation fraught with unavailability of essential safety equipments had adverse effects on employees and organisational performance. Likewise, Dumondor (2017)

showed that Safety and health facilities had a positive significant affect on employee performance. Also, Pourmoghani (2004) revealed that the effect of gloves and goggles were significant across all platforms towards performance. With the finding of the study contrary with the findings of most previous scholars, this means that in the context of Ugandan hospitals, personal protective equipment did not relate to performance of health workers. To larger extent, this was because personal protective equipments in the hospitals were not adequate.

5.4 Conclusions

Basing on the discussion above, the following conclusion on occupational safety and performance of health workers were made;

1. Psychological safety is an essential component occupational safety necessary for the performance of health workers. This is especially so when health workers speak freely when they see something that may negatively affect their health and safety at work, easily ask colleagues for help, are in-depth exchange of partnership with colleagues, confident about their supervisor's skills to deal with health and safety issues and their supervisor to know about the work that needs to be done. Similarly, this is so when the supervisors seriously consider staff suggestions for improving health and safety for workers, trust supervisor to act on health and safety concerns and supervisors seriously consider staff suggestions for improving health and safety for workers.
2. Safety precautions are an imperative probable pre-requisite for the performance of health workers. This is so when health workers wash hands after body fluid exposure, after touching patients, immediately after removal of gloves, clean and disinfect equipment and environmental surfaces, segregate non-infectious and infectious wastes in coded dust bins

and avoid recapping of used needles from disposable syringes. In addition, this is also when health workers protect themselves against body fluids of all patients regardless, probable risks have been defined for staff and they have access to post-exposure medicines.

3. Lack of personal protective equipment hinders performance of health workers. This is especially so when they lack sufficient waterproof aprons, eye goggles, access to all necessary personal protective equipment, health and safety devices at the workplace and safety tools, equipment and machinery.

5.4 Recommendations

Informed by the conclusions above, the following recommendations were made in relation to occupational safety and performance of health workers;

1. Management of health institutions should promote psychological safety for health workers. This is should be through enabling health workers to freely speak up if they see something that may negatively affecting their health and safety at work, putting an environment that enables them to easily ask colleagues for help, be in an in-depth exchange of partnership with colleagues, confident about their supervisor's skills to deal with health and safety issues and the supervisors should show that they know the work that needs to be done. Similarly, supervisors should seriously consider staff suggestions for improving health and safety for workers, be trustable to act on health and safety concerns and seriously consider staff suggestions for improving health and safety for workers.
2. Management of health institutions should put in place clear safety precautions for health workers. Such should include washing precautions, coded dustbins for segregation of non-infectious and infectious wastes and disposable syringes. In addition, health workers should

be able to protect themselves against body fluids, probable risks be defined for staff and have access to post-exposure medicines.

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

5.5 Limitations

This study makes significant contributions as far suggesting occupational safety mechanisms is concerned. However, limitations emerged from this study;

1. The study was carried out on one regional referral hospital. This limits generalisation of the findings on all hospitals in the country.
2. This study used the quantitative approach as the dominant one limiting in-depth analysis of the problem.

5.6 Suggestions for Further Research

Future research should explore the following areas;

1. Should investigate further personal protective equipment in relation to performance of health workers in Ugandan hospitals.
2. Researchers should make effort to adopt the qualitative approach as the dominant one for in-depth analysis of the study problem.

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APPENDICES

APPENDIX I: TABLE FOR DETERMINING SAMPLE SIZE FOR A POPULATION OF A GIVEN SIZE

N	*S*	*N*	*s*	*N*	*s*
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	102	1800	317
45	40	290	105	1900	320
50	44	300	109	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	198	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	100000	384

Note: *N* = population size
S = sample size

APPENDIX II: QUESTIONNAIRE FOR STAFF AND VOLUNTEERS

Dear Respondent

I am currently undertaking research on the topic "Occupational safety and performance of health workers in public hospitals in Uganda: The case of Arua Regional Hospital." Your participation in this study is voluntary but necessary for the success of this work. I request you to accept to participate in this study for the success of the research. Confidentiality will be ensured for information provided by ensuring anonymity.

Thank you very much

Sincerely

…….
Moses Chesro

SECTION A: Background Information

Please Tick (✓) in the appropriate space provided.

A1. Gender

Male	Female

A2. Age

Below 30 Years	30-40 Years	41-50 Years	Above 50 Years

A3. Level of education attained

Certificate	Diploma	Bachelor's Degree	Postgraduate Qualification

A4. Number of years working at the Hospital

Less than 5 years	5-10 years	10 years and above

Section B: Performance of Health Workers (DV)

This section presents items on performance of health workers the dependent variable (DV). Kindly requested indicate your feeling about performance of health workers using the scale where, 1 = Strongly Disagree, 2 = Disagree, 3 = Not Sure, 4 = Agree and 5 = Strongly Agree**.**

B	**Performance of Health Workers**	**SD** **1**	**D** **2**	**U** **3**	**A** **4**	**SA** **5**
B1.1	I always complete the tasks prescribed in my job description					
B1.2	I fulfil my responsibilities as required by my job					
B1.3	I personally accomplish tasks required by my job					
B1.4	I fulfil the formal tasks as required by my job					
B1.5	I organise healthcare resources needed by patients					
B1.6	I deploying healthcare resources appropriately					
B1.7	Maintaining healthcare resources,					
B1.8	I ensure that patients receive healthcare services					
B1.9	I strive to produce changes in patients' conditions					
B1.10	I use my skills and knowledge to accomplish my duties to the patient					
B1.11	I adhere to moral principles, moral uprightness, honesty, decency, trustworthiness					
B1.12	I usually put extra effort to complete an assignment on time.					

B1.15 In summary, what is your assessment of yours personal performance as a health worker?

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Section C: Occupational safety (IV)

This section presents items on occupational health safety. The section divided into three parts, namely; psychological safety, safety precautions and personal protective equipment. Kindly requested indicate your feeling about occupational safety using the scale where, 1 = Strongly Disagree, 2 = Disagree, 3 = Not Sure, 4 = Agree and 5 = Strongly Agree.

		SD	D	U	A	SA
C1	**Psychological safety**	**1**	**2**	**3**	**4**	**5**
C1.1	I freely speak up if they see something that may negatively affect my health and safety at work					
C1.2	I have the freedom to question the decisions or actions about health and safety of those with more authority					
C1.3	I feel safe to take a risk					
C1.4	I easily ask colleagues for help					
C1.5	Most colleagues and I are in-depth exchange of partnership					
C1.6	I feel very confident about my supervisor's skills to deal with health and safety issues					
C1.7	My supervisor knows about the work that needs to be done					
C1.8	My supervisor seriously considers staff suggestions for improving health and safety for workers					
C1.9	I trust my supervisor to act on health and safety concerns					
C1.10	The actions of my supervisor show that health and safety is a top priority					

C1.11 precisely, what is your feeling about the Psychological safety for you in this hospital?

.....

.....

.....

C2	Safety precautions	SD 1	D 2	U 3	A 4	SA 5
C2.1	Wash hands after body fluid exposure					
C2.2	Wash hands after touching a patient					
C2.3	Wash hands immediately after removal of gloves					
C2.4	I clean and disinfect equipment and environmental surfaces					
C2.5	I segregate non-infectious wastes in coded dust bin					
C2.6	I segregate infectious medical wastes in coded dust bin					
C2.7	I avoid recapping of used needles from disposable syringes					
C2.8	I protect myself against body fluids of all patients regardless of their diagnosis					
C2.9	Probable risks have been defined for staff					
C2.10	I have access to post-exposure medicines					

B3.7 In summary, what is your opinion about safety precautions in this hospital?

.....

.....

.....

C3	Personal protective equipment	SD	D	U	A	SA
		1	2	3	4	5
C3.1	I wear clean gloves whenever there is a possibility of exposure to any body fluids					
C3.2	I change gloves between contacts with different patients					
C3.3	I wear a waterproof apron whenever there is a possibility of body fluid splashing on my body					
C3.4	I wear eye goggles whenever there is a possibility of body fluid splashing in my face					
C3.5	I have access to all necessary Personal protective equipment					
C3.6	There are health and safety devices in my workplace.					
C3.7	Safety tools, equipment and machinery are available					

C3.10 In brief, what is your opinion about the availability of personal protective equipment in this hospital?

.....

.....

.....

APPENDIX V: INTERVIEW GUIDE FOR SENIOR MEDICAL AND ADMINISTRATIVE OFFICERS

1. What is your comment on the performance of health workers in this hospital?
2. To what extent is worker participation promoted in this hospital?
3. What is the nature of employee relations in this hospital?
4. How does management provide support to health workers?
5. How is disinfection promoted in this hospital?
6. What is your opinion about access to personal protective gear by health workers in this hospital?

End

Thank you for participating in this study?

APPENDIX IV: VALIDITY TEST RESULTS

Validity Results for Performance of Health Workers

Judges	Relevant	Irrelevant	
Judge 1	8	4	
Judge 2	10	2	
Judge 3	10	2	
			12

CVI = 8 + 10 + 10 = 28÷3 = 9.3

9.3 ÷ 12 = 0.775

Validity Results for Psychological Safety

Judges	Relevant	Irrelevant	
Judge 1	7	3	
Judge 2	9	1	
	8	2	
			10

CVI = 7 + 9 + 8 = 24 ÷3 = 8

8 ÷ 10 = 0.800

Validity Results for Safety Precautions

Judges	Relevant	Irrelevant	
Judge 1	9	1	
Judge 2	7	3	
Judge 3	7	3	
			10

CVI = 9 + 7 + 7 = 23 ÷ 3 = 7.7

7.7 ÷ 10 = 0.770

Validity Results for Personal Protective Equipment

Judges	Relevant	Irrelevant	
Judge 1	5	1	
Judge 2	4	2	
Judge 3	6	7	
			7

CVI = 5 + 4 + 6 = 15÷3 = 5

5 ÷ 7 = 0.714

APPENDIX V: RELIABILITY TEST RESULTS

Reliability Statistics for Performance of Health Workers		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.875	0.876	12

Summary Item Statistics for Performance of Health Workers			
	Mean	Variance	N of Items
Item Means	3.886	0.122	12
Item Variances	1.152	0.099	12
Inter-Item Covariances	0.423	0.040	12
Inter-Item Correlations	0.370	0.020	12

Reliability Statistics for Psychological Safety		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.775	0.781	10

Summary Item Statistics for Psychological Safety			
	Mean	Variance	N of Items
Item Means	3.615	0.219	10
Item Variances	1.353	0.047	10
Inter-Item Covariances	0.347	0.050	10
Inter-Item Correlations	0.263	0.031	10

Reliability Statistics for Safety Precautions		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.851	0.850	10

Summary Item Statistics for Safety Precautions			
	Mean	Variance	N of Items
Item Means	3.789	0.027	10
Item Variances	1.529	0.030	10
Inter-Item Covariances	0.556	0.090	10
Inter-Item Correlations	0.362	0.037	10

Reliability Statistics for Personal Protective Equipment		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.873	0.870	7

Summary Item Statistics for Personal Protective Equipment			
	Mean	Variance	N of Items
Item Means	3.205	0.440	7
Item Variances	1.640	0.082	7
Inter-Item Covariances	0.813	0.084	7
Inter-Item Correlations	0.489	0.021	7