

KAMPALA INTERNATIONAL UNIVERSITY  
SCHOOL OF POST GRADUATE STUDIES

THE IMPACT OF OCCUPATIONAL HEALTH AND SAFETY HAZARDS ON  
EMPLOYEE PERFORMANCE AT UGANDA MEAT INDUSTRIES LTD.

BY

MWESIGYE JIMMY

REG: NO- MBA-PT-2004-016

SCHOOL OF POST GRADUATE STUDIES

A RESEARCH PAPER PRESENTED TO THE SCHOOL OF  
POSTGRADUATE STUDIES KAMPALA INTERNATIONAL UNIVERSITY IN  
PARTIAL FULFILMENT OF THE REQUIREMENTS FOR MASTERS OF  
BUSINESS ADMINISTRATION (HUMAN RESOURCE MANAGEMENT):

OCTOBER-2006

RC969.H43

M9949

2006



106867

Mwesigye Jimmy

MBA/HRM (KIU-2006)



## **1.2 Dedication**

To Moira, a very focused and inspiring daughter

### 1.3 Acknowledgement

The successful completion of this research is as a result of the overt and covert cooperation, encouragement and support of diverse spectrum of the family, supervisors, colleagues, friends and the organization to whom I greatly indebted.

Primarily, I would like to thank my supervisor, Mr. Magulu Bernard Robinson for his understanding, unreserved commitment, time and assistance towards the completion of this research with in this limited time. Thank you very much once more for exposing me to the field of research.

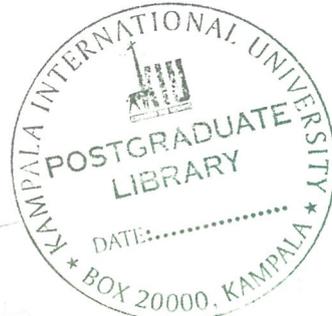
I recognize the support of the management of Kampala International University for their willingness to participate in this research; exceptional thanks go the former Director of the School of Postgraduate Studies, Prof Opio Peter and the administrators of the school for their guidance and advice throughout this course. Similarly, to the Dean and staff of Faculty of Business and Management, thank you for giving endless support in this struggle of the research completion.

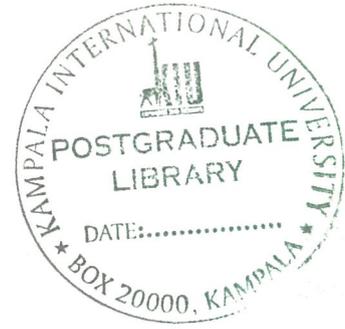
I am grateful to the respondents all in your capacities that contributed to this work. And to all those who made an in put to this piece of work, I say though your names are not here, they are deep in my heart written in bold and golden letters!

Special gratitude goes to my sponsor, Kampala International University and my mother M/s Timbirimu Mariam, who so closely monitored my progress. For mother, sisters, brothers and my family that empathized for me throughout my studies, your contribution is so dearly acknowledged.

I acknowledge the priceless contribution made by my wife Joslet and daughter Moira. I thank them for so being enduring during those days of countless sacrifices that they made.

So many people' inputs have has made this dissertation a dream come true and it seems like its mine only in the conventional sense. Yet at the end of it all its me who bears the responsibility for any out come.



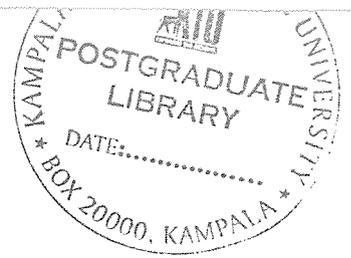


#### 1.4 Table of contents:

Declaration .....	i
Dedication .....	ii
Acknowledgement.....	iii
Table of contents: .....	iv
List of Tables.....	ix
Acronyms .....	x
Definitions of Terms .....	xi
Abstract .....	xii
1.0 CHAPTER ONE: INTRODUCTION .....	1
1.1 Background of the Study.....	4
1.2.0 Profile of Uganda Meat Industries Ltd.....	4
1.3 Problem Statement .....	6
1.4 Purpose of the Study .....	6
1.5 Objectives of the Study .....	7
1.6 Research Questions .....	7
1.7 Significance and Rationale of the Study .....	7
2.0 CHAPTER TWO: LITERATURE REVIEW .....	9
2.1 Introduction.....	9
2.2 Importance of Safety and Health.....	9
2.3 The Occupational Health and Safety (OSH) Act.....	10
2.4 Management Health and Safety Policy (MHSP).....	14
2.5 Causes and Effects of Occupational Hazards on Employee's Health.....	16
(Research question (a) revisited).....	16
2.4.1 Ergonomic Hazards .....	16
2.4.2 Physical Hazards .....	19
2.4.3 Chemical Hazards .....	21
2.4.4 Biological Hazards .....	22
2.4.5 Social Hazards.....	22
2.4.6 Stress Hazards .....	26
2.5.1 Safety Engineering.....	35
2.5.3 Top management commitment.....	38
2.5.5 Occupational Health Services .....	42
2.5.6 The Supervisors' Role.....	43
2.6.0 Research question (c) revisited. (Effects of occupational hazards on employee performance) .....	43
2.7 Conclusion.....	46
3.0 CHAPTER THREE: RESEARCH METHODOLOGY .....	47
3.1 Introduction.....	47

3.2 Research Problem (Restated) .....	47
3.3 Research Design.....	47
3.4 Selection of Respondents .....	48
3.5 Population Scope.....	49
3.6 Sampling scope .....	49
3.7 Procedures Applied in Data Collection.....	50
3.8 Sources of Data .....	51
3.8.1 Primary Sources of Data .....	51
3.8.2 Person Administered Questionnaires .....	51
3.8.3 Self Administered Questionnaires.....	51
3.8.4 Senior Managers.....	52
3.8.5 Supervisors of employees .....	52
3.8.6 Staff Occupying Offices in UMI.....	52
3.7.6 Secondary Data Sources.....	52
3.8.7 Internal and External Sources of Secondary Data.....	52
3.9 Research instruments.....	53
3.9.1 Questionnaire .....	53
3.10 Measurement of variables .....	53
3.11 Data Analysis .....	53
3.12 Limitations of the Research.....	54
3.13 Conclusion.....	54
4.0 CHAPTER FOUR: PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS .....	56
4.1 Introduction .....	56
4.2.1 Physical Hazards .....	56
4.2.2 Ergonomic Hazards .....	57
4.2.3 Chemical Hazards .....	58
4.2.4 Stress Hazards .....	59
4.2.5 Social Hazards.....	60
4.2.6 Effects of Physical, Ergonomic Hazards.....	62
4.2.7 Effects of Social and Stress hazards.....	63
4.3 Existence of Effective Health and Safety Measures/Programs in UMI.....	64
4.3.1 Health Services.....	65
4.4 The Extent to which Occupational Hazards Affect Employees' Performance .....	66
4.5 Conclusion.....	67
5.0 CHAPTER 5: SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS .....	68
5.1 Introduction .....	68
5.2 Summary of Findings .....	68
5.3 Conclusion.....	69
5.4 Recommendations .....	70
5.5 Areas of Further Research.....	71
6.0 REFERENCES:.....	73
7.0 APPENDICES.....	80





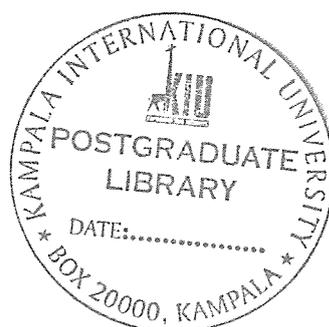
Mwesigye Jimmy

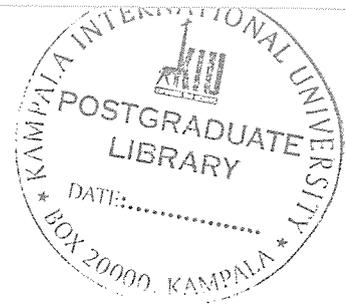
MBA/HRM (KIU-2006)

Appendix I.....	80
AppendixII .....	85
APPENDIX III .....	88
Appendix IV .....	90
Appendix V .....	92
Appendix VI .....	94
Appendix VII .....	97
Appendix VIII .....	98
Appendix IX.....	99
Appendix X.....	100
Appendix X1 .....	101

**1.6 List of Figures**

Figure 1: The Job Demand-Control Model..... 28  
Figure 2: Effort Imbalance Reward Model..... 29



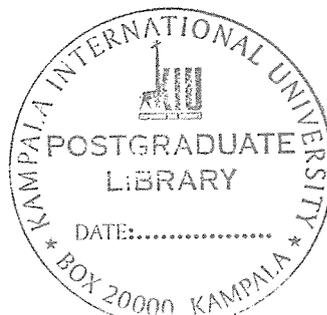


**1.7 List of Tables**

Table 1(Sampling scope).....	49
Table 2: Causes of Physical Hazards .....	57
Table 3: Ergonomic Hazards.....	58
Table 4: Chemical Hazards .....	59
Table 5: Stress Hazards .....	60
Table 6 Social Hazards.....	62
Table 7: Effects of Social and Stress hazards .....	63
Table 8: Existence and effectiveness of health and safety measures in UMI .....	65
Table 9: Health Service .....	66
Table 10: The Extent to which Occupational Hazards Affect Employees' Performance.	67

### 1.7 Acronyms

ERI	Effort Imbalance Reward Model
FUE	Federation of Ugandan Employers
HACCP	Hazard Analysis Critical Control Point Program
HSE	Health and Safety Executives
ILO	International Labour Organisations
KIU	Kampala International University
LTD	Limited
MHSP	Management Health and Safety Policy
NIOSH	National Institute of Safety and Health
NOTU	National Organization of Trade Union
OSH	Occupational Health and Safety
OSHA	Occupational Health and Safety Administration
PERD	Public Enterprise and Reform Divestiture
PPE	Personal Protective Equipment
SOP	Standard Operating Procedures
SPSS	Statistical Package for Social Sciences
UMI	Uganda Meat Industries Ltd
UNIDO	United Nations Industrial Development Organization
WHO	World Health Organisations



### 1.9 Abstract

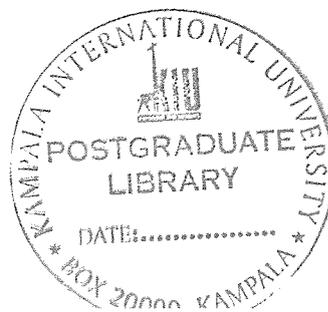
*The study was initiated to investigate the impact of occupational health and safety hazards on employee performance in the production sector in Uganda. This inspired the researcher to select Uganda Meat Industries (UMI) as an illustrative example. The researcher is driven by the quest to find out the main objective of the study, the impact of occupational health and safety standards on employee performance.*

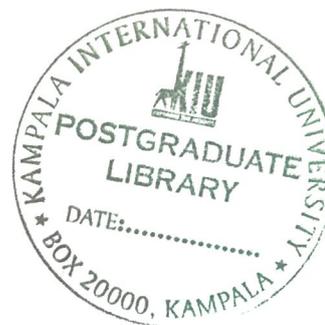
*The study employed cross-sectional research design that used both qualitative and quantitative methods in data collection. The study involved systematic collection of information, identifying occupational hazards, analyzing their impact on employees' health and performance, making conclusions and citing areas for further research. Additionally, purposive sampling was used to select the respondents from different staff categories in UMI. This method enabled the researcher to select the right cases to answer the research questions and meet the objectives of the study (Hair et. al, 2003). Primary data was collected using structured questionnaires that were both open and closed ended. Questionnaires were both personally and self-administered and this helped the researcher to collect primary data quickly. In addition, Statistical Package for Social Scientists (SPSS) was used as a tool in data analysis.*

*Analysis and interpretation of the findings revealed that employees in UMI are exposed to physical, ergonomic, social and stress hazards. Social hazards emerged as the predominant since they affected almost all sections in the plant followed by the rest. In addition, management has some measures against occupational hazards that are not enough to prevent and control their impact. However, the study failed to get information on biological and chemical hazards. Conclusively, the findings revealed that there is high correlation between independent and dependent variables with significance (F) change of 0.0000.*

*Additionally, the researcher came out with the following recommendations; the plant should train employees in ergonomic issues, employ a company doctor on fulltime basis, recognize overtime of employees with reasonable payment, allow employees to sign job contracts, solve employees problems quickly, put in place hearing conservation programs and should put in place a safety and health policy.*

*In conclusion therefore, from the major findings, occupational hazards affect performance greatly by 56.5% and management should address this problem by using the fore mentioned recommendations. This study cited potential areas for further research like on chemical and biological hazards where the researcher had no enough skills to diagonalise their impact on performance. On other factors that affect performance other than occupational hazards, the researcher recommends similar research be conducted in up country areas in the same field.*





## 1.0 CHAPTER ONE: INTRODUCTION

This chapter covers the following topics, background to the study, statement of the problem, and purpose of the study, objectives of the study, scope of the study, profile of Uganda Meat Industries Ltd and justification of the study and spells out the overview of occupational health and hazards in related working environment.

It is important to differentiate between occupational health and safety hazards. Safety hazards are the aspects of work environment that have potential of causing immediate illness and sometimes death. Examples of safety hazards include poorly maintained equipments, unsafe machinery, and exposure to hazardous chemicals. Potential injuries include loss of hearing, eyesight or body parts, cuts, sprains, burns, bruises and broken bones, and electric shock. Whereas health hazards are aspects of work environment, they slowly and cumulatively lead to deterioration of health. The person may develop chronic or life threatening illness or become permanently disabled. Typical causes are physical and biological hazards, toxic and carcinogenic dusts and chemicals, and stressful working environment that may cause cancer, peptic ulcers, heavy metal, respiratory diseases and psychological disorders like depression, (Ivancevich, 2001).

According to Koh and Jeyaratnam (2002), hazards in the workplace may be physical, chemical, biological, ergonomic or psychosocial. Risk is the extent to which hazards have an impact on a given population, and the degree of risk and its management determine exposure to hazardous agents. Many workplaces are intrinsically hazardous, but they do not necessarily need to be risky. The degree of risk and its management are social phenomena that vary on different occasions, locations and industries.

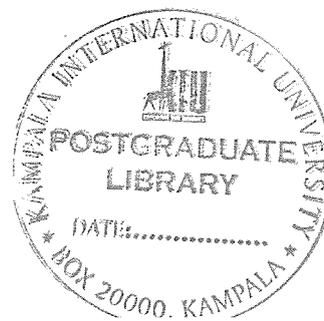
Further, the relationship between work and health traditionally been understood with reference to occupational diseases (Koh and Jeyaratnam, 2002). More recently, there has been widespread recognition that the connection between work and health and disease goes well beyond specific occupational illnesses and accidents (Marmot et al., 2003). A number of factors were considered in the briefing like mortality and morbidity that is directly attributable to specific hazards and risks in the workplace; positive and negative

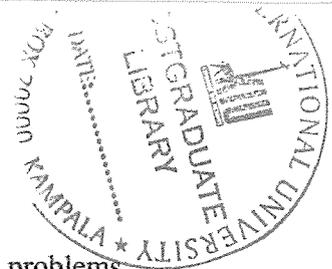
effects on health of the levels and types of self-direction and control in the workplace, that are not necessarily disease-specific or attributable to hazards but which nonetheless, affect health. This puts managers to identify the source of problems at work place in terms of effect hazards.

The current global labour force stands at about 2600 million and is growing continuously. Approximately 75% of these working people are in developing countries. The officially registered working population constitutes 60–70% of the world's adult male and 30–60% of the world's adult female population. Each year, another 40million people join the labor force, most of them in developing countries (WHO, 1997). Workplace environmental hazards are therefore a threat to a large proportion of the world population (WHO, 1997).

Additionally, in some of the least developed countries up to 80% of the workforce is employed in agriculture, mining and other types of primary production. Heavy physical work often combined with heat stress, occupational accidents, pesticide poisonings, organic dusts and biological hazards are thus the main causes of occupational morbidity and mortality in these countries. Numerous non-occupational factors such as parasitic and infectious diseases, poor hygiene and sanitation, poor nutrition, general poverty and illiteracy aggravate these occupational health effects. Thus, the life of an industrial worker is full of risks and hazards (Mamoria et al, 2001).

In a related development, about 500 people get killed at work every year and several hundred thousands get injured or suffer ill health as estimated by Health and Safety Executives (HSE). Estimates show that apart from the pain and misery caused to those directly or indirectly concerned, a total cost of British employers of work-related injury and illness exceed £4 billion a year (Armstrong 2001). This argument was supported by (Aswathappa, 1999) that “every twenty seconds of working minute of every hour, throughout world, thousands of employees die as the result of industrial accidents”. This is an indicator that the occupational hazards affect both developing and developed countries world wide though Aswathappa (1999) does not specify the number of causalities in each country worldwide.





In the beginning of the present century, due to high employee safety and health problems at workstations, human resource managers have directed their attention to psychologists, sociologists and industrial engineers. Psychologists are concerned with the theoretical consideration of accidents causation and the research into accident control, through proper selection, training and education, and the social and psychological individual's behaviour in general. Engineers and safety officers usually render practical advice on certain aspects of safety in the industry. They look upon the prevention of accidents as an engineering problem that can be tackled through proper designing of mechanical safety devices. In fact, accident prevention and safety are inter-related and therefore require a multi-dimensional approach. Its importance because of large-scale industrialization in which human beings are subjected to mechanical, chemical, electrical, biological, stress and radiation hazards. Besides, modern industry is characterized by complicated important consequences all of which is increased dangers to human life and reduced employee has increased performance through accidents (Mamoria et al, 2001).

More still, the ILO's Constitution recognized that "the failure of any nation to adopt human conditions of labour is an obstacle in the way of other nations which desire to improve the conditions in their own countries" cited as early as 1919. Workplaces that are unsafe and unhealthy damage the lives of workers and their families. They can threaten the environment and undermine social and economic development. Thus, unsafe and unhealthy working conditions have an impact on the marketing of products. Safety and health is becoming a part of the quality of a product. Evidences at international level have suggested that the poor occupational safety and health record could also diminish attraction for foreign investments. Thus, countries, which wish to provide sustainable benefits of globalization for their people, have to subscribe to the basic principles for labor rights and improve their safety and health record. Studies have shown that countries, which follow the ILO's safety and health standards, are at the same time most competitive in the world market. Therefore, occupational hazards affect the working environment ranging from employees' health, performance to profits of the organization.

### 1.1 Background of the Study

In Uganda, the department of safety and health in the Ministry of Gender, Labour and Social Development is mandated to offer occupation health services in all parts of the country (Obua and Okimait, 2000). The department of health and safety is supposed to evaluate and control physical, chemical, physiological, social and technical factors that affect a person at work environment. The evaluation is supposed to be realized through factory inspections, publicity and enforcement of law.

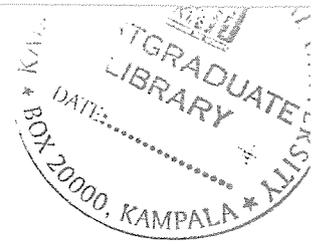
In another development, the major problem the country faces is the under diagnosis, inadequate inspection of work place and general lack of facilitation. According to the Monitor News Paper, (May 01, 2000), the department of safety and health has only two vehicles, that are not in good working conditions and were shared among the 36 professional staff for inspection visits. The paper further reports that out of 15000 employees' inspections the department is supposed to execute annually, they are able to inspect and follow up only 1000 causes. Obua and Okimait, (2000) puts the department's operation capacity at 20% and they observed that its roles and functions are known at work places, (<http://www.monitor.co.ug>). Though the factories Act (1964), Chapter 198, and the constitution of the republic of Uganda (1995) Chapter 4, provides for health and safety of the workers in factories and others places, enforcement of those laws which lie in the hands of state rather than the courts of laws have been affected by logistical problems and others like corruption, Barya (1991).

The problems at national levels have no doubt affected negatively on health and safety in most organizations rendering it almost obsolete. Many employers as a result do not attach any importance to Labour laws and consequently the health and safety of their employees in the country, thus employees work under hazardous health and safety conditions.

#### 1.2.0 Profile of Uganda Meat Industries Ltd

Uganda Meat Industries (UMI) is located along Old Port Bell Road Plot 94 with a population of 75 employees. It is one of the largest abattoirs in Kampala, Uganda that was acquired from the former Uganda Meat Packers, a government owned company through the Public Enterprise and Reform Divestiture (PERD). Over the last three years,





Uganda Meat Industries has undergone through extensive revolution by replacing old equipments, upgrading the premises and introducing international accepted hygiene standards. The management team of the company comprises of highly skilled and knowledgeable personnel whose contribution is based on their skills in production, meat processing, marketing and plant management.

The UMI's business activities consist of third party slaughtering, selling of fresh meat and processed meat products under the brand name "Top Cuts". The range of the products include Sausages, Hot dogs, Cold cuts, Beef bacon, Primal cuts of beef, Goat and Lamb among others.

Uganda Meat Industries has a 5300meter-squared abattoir that can slaughter up to 250 heads of cattle per day under the Halaal system. This slaughtering system is the least cruel among the different means of slaughtering and due to its technique; it enhances the quality and duration of meat. Uganda Meat Industries is run by over 90 skilled personnel and is the biggest registered abattoir in Uganda.

The abattoir offers third party slaughtering for firms, butcheries and the public needing their livestock correctly slaughtered in a hygienic way. The major work of Uganda Meat Industries trade is in the supply of fresh meat products under the brand name 'Top-Cuts' and for the last three years has set new quality standards never seen before in Uganda. Six full time veterinary doctors currently monitor the meat and health of officials. It is their job to constantly ensure that only the best quality meat is utilized for public consumptions.

UMI has become a pioneer in the production of Halaal cold processed meat products in Uganda; it has a full range of meat, lamb and chicken processed meats. For the first time, these products are being produced locally and making them to be affordable to the public. Aged meat and a wide range of vacuum-packed products is produced with the major advantage of vacuum-packed meat being hygiene as it is sealed in packs for whatever time it spends in the vacuum.

UMI recently won an ISO 9002 certificate rating that recognized the establishing and implementing of a quality management system in a period of one year, ISO 9002 quality system is a model for quality assurance in production, installation and servicing. UMI is among the first companies in Uganda to win this certification.

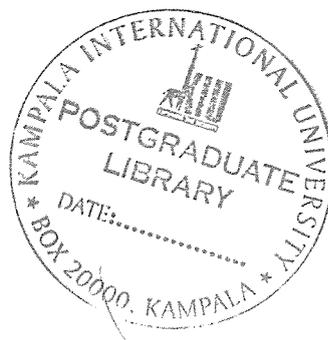
Uganda Meat Industries is focusing on capacity building to enhance better product quality and services through increased investment in training. The company is currently involved in a training program aimed at introducing good manufacturing practices and Hazard Analysis Critical Control Points programs (HACCP) in the food industry; this aims at introducing Standard Operating Procedures (SOPs) and emphasizing on the aspect of hygiene food processing and this programme is supported by United Nations Industrial Development Organization (UNIDO) supports the program.

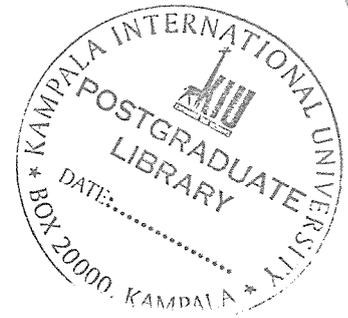
### **1.3 Problem Statement**

Employees at UMI are exposed to occupational hazards, which cause accidents and diseases. According to UMI's Quarterly Medical Report (2003) and Quality management report, (2004), the actual causes and effects of these hazards have neither been quantified nor analyzed and the health and safety measures in place do not seem to be sufficient to address the existing problems. Occupational hazards cause accidents and illnesses, which may affect the productivity of the worker and impact negatively on performance. There was a need therefore to investigate the actual causes and possible effects on the performance of employees.

### **1.4 Purpose of the Study**

The study seeks to analyze the causes of occupational hazards, their effects on the health of workers, establish the extent to which the hazards affect the performance of employees and asses the existence and effectiveness of any health and safety measures in the industry.





### **1.5 Objectives of the Study**

The study is designed to achieve the following objectives:

- a. To identify the causes of occupational hazards and possible effects on the health of employees.
- b. To assess the existence of effectiveness of any health measures/programs at UMI.
- c. To determine the extent to which occupational hazards affects employees' performance.

### **1.6 Research Questions**

- a. What are the causes of occupational hazards and what possible effects do they have on the health of employees.
- b. What is the effectiveness of existing health and safety hazard measures at UMI?
- c. To what extent do occupational hazards affect employees' performance?

### **1.7 Significance and Rationale of the Study**

The study is expected to enable management at UMI achieve a reasonable picture of the health and safety situation in the industry in general and the hazards affecting the workers in particular. This is useful in focusing attention and setting up priorities on hazards affecting the workers in particular.

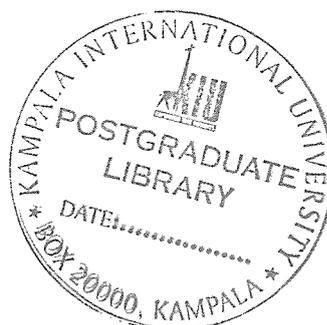
The study also will help stake holders like Federation of Uganda Employers (FUE), the National Organization of Trade Union (NOTU) and the department of occupational health and safety, in the Ministry of Gender, Labour and social development appreciate the health and safety situation at UMI and similarity production organization. It may also enable them to re-direct these efforts on health and safety issues particularly in the production sector.

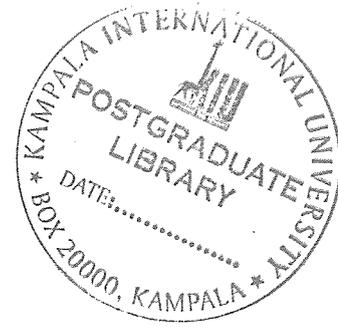
More still, the study will stimulate further research by other scholars and academicians into the area of Occupational Health and Safety Hazards. This is based on the premise

that research is built on the existing knowledge. Therefore, the findings will act as a stimulus for future researchers.

Additionally, by investigating and establishing the causal and effect relationship of occupational hazards on employees at UMI, it is hoped that recommendations made from the study may guide UMI to adopt occupational safety and health practices that aim at developing employees that can perform their duties effectively as well as facing the challenges that will arise during their work. This will help UMI to maintain good health and quality performance of its employees.

In connection with the above, the availed information on various existing Health and Safety Hazards at UMI showed the gaps in existing policies currently in force that need to be abridged. Further still, it provided information on procedural steps that will guide the government on occupational health and safety policy adjustment of existing policies and formulation of new policies and the elements that constitute effective policy to meet the Occupational Health and Safety standards set by Occupational Health and Safety Association Act (OSHA), 1970, (WHO, 1997).





## 2.0 CHAPTER TWO: LITERATURE REVIEW

### 2.1 Introduction

The rationale of this chapter is to review the existing body of knowledge theoretically and empirical literature relevant to the study of the occupational health and safety hazards in meat processing plants with examples from manufacturing sector and other sectors with related literature to the study. The literature gives an insight into the field of occupational health and safety in the manufacturing sector. Further, this chapter aims at finding out the effects of occupational health and safety hazards on employees' health, performance and existing measures to control and eliminate the hazards in the production sector.

### 2.2 Importance of Safety and Health

In favorable circumstances, work contributes to good health and economic achievements. However, the work environment exposes many workers to health hazards that contribute to injuries, respiratory diseases, cancer, musculoskeletal disorders, reproductive disorders, cardiovascular diseases, mental and neurological illnesses, eye damage and hearing loss, as well as communicable diseases (WHO, 1997).

The current global labor force stands at about 2.6 billion and is growing continuously. Approximately 75% of these working people are in developing countries. The officially registered working population constitutes 60–70% of the world's adult male and 30–60% of the world's adult female population. Each year, another 40 million people join the labor force, most of them in developing countries. Workplace environmental hazards are therefore a threat to a large proportion of the world population (WHO, 1997). Prevention was the most suitable strategy in controlling adverse effects of occupational hazard. This calls for the inclusion of safety in total quality management systems, introduction of risk assessment, developing health policies, health and safety audits, training in good health and safety, preventing stress, and organizing safety and health practices (Armstrong, 2001) and other innovative comprehensive programs.

Safety and Health promotes an integrated multidisciplinary approach, which takes into account the physical, mental and social well-being of employees. Conceiving the working

conditions and working environment as a whole, the prevention and control of work-related factors and their multiple and cumulative effects are taken into account including psychosocial and organizational aspects of work. Companies should give special attention to hazardous sectors, occupations and specific categories of workers who may be prone in situations of gender, age or those who lack fundamental social and health protection (ILO, 2003).

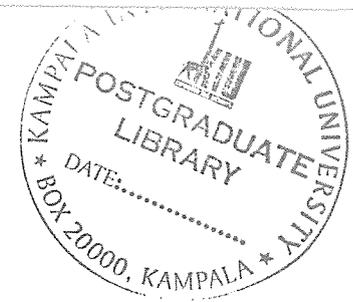
### 2.3 The Occupational Health and Safety (OSH) Act

Occupational safety and health (OSH) Act 1970 was passed by congress to assure as far as possible every working person and woman in the nation, safe and healthful working conditions and to preserve our human resources. The only employers not covered by the Act are self employed persons, firms in which only immediate members of the employer's family are employed and certain work places that are already protected by other federal agencies or under other statutes (Ivancevich, 2001; Gary Dessler, 2000; Armstrong, 1988).

Under these provisions, Occupational Safety and Health Administration (OSHA) was created with the Department of Labour. OSHA's basic purpose is to administer the Act, and to set and enforce safety and health standards that apply to almost all workers in USA. The Department of labour enforces the standards and OSHA has inspectors working out of braches throughout the country to ensure compliance.

OSHA operates under the general standards that each employer "shall furnish to each of his/her employees' employment and place of employment which are free from occupational hazards that are causing death or serious physical harm to his/her employees". The standards when complete seem to cover just about every conceivable hazard in detail. For example, OSHA's hazard communication standard requires employers to establish hazard communication program to inform employees about potential chemical, physical, social, stress, and biological hazards. Hazards may be communicated through training programs, container labels and particularly material data sheets, which list the nature of treatment for exposure to hazardous substances (Ivancevich, 2001 and David et al, 1999).





Under OSHA, an employer with 11 or more employees must maintain records of occupational accidents, illness and injuries. As a requirement, both occupational injuries and illness must be reported. An occupational illness is any abnormal condition or disorder caused by exposure to environmental factors associated with the employment. Included here are acute and chronic illness that may be caused by inhalation, absorption, ingestion, or direct contact with toxic substances or agents. In addition, the injuries recorded may result from medical treatment, loss of consciousness, restriction of work and motion or transfer to another job.

In addition, OSHA standards are enforced through inspection and citations. OSHA has a list of inspection priorities. Imminent danger situations get top priority. These conditions can immediately cause death or serious physical harm. Second priority goes to catastrophes, fatalities, and accidents that have already occurred. Such situations be reported within 48 hours. The third priority goes to valid employee complaints of alleged violation of standards; the next priority tackles periodic special- emphasis inspections aimed at high hazard industries, occupations and substances.

Finally, random inspections and reinsertions generally have the last priority. Most inspections result from employee complaints. After the inspection report is submitted to the OSHA office, the area director determines citation, if any, will be issued. These citations inform the employer and employees of the regulations and standards that have been violated and the time set for rectifying the problem. The citation is posted at or near the area where the violation occurred (Ivancevich, 2001). The penalties given for violation of standards are;

1a) Any employer who willfully or repeatedly violates the requirements of section 5 of this Act, any standard, rule, or order promulgated pursuant to section 6 of this Act, or regulations prescribed pursuant to this Act, may be assessed a civil penalty of not more than \$70,000 for each violation, but not less than \$5,000 for each willful violation.

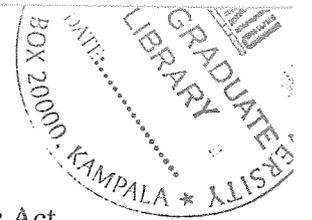
b) Any employer who has received a citation for a serious violation of the requirements of section 5 of this Act, of any standard, rule, or order promulgated pursuant to section 6 of this Act, or of any regulations prescribed pursuant to this Act, shall be assessed a civil penalty of up to \$7,000 for each such violation.

c) Any employer who has received a citation for a violation of the requirements of section 5 of this Act, of any standard, rule, or order promulgated pursuant to section 6 of this Act, or of regulations prescribed pursuant to this Act, and such violation is specifically determined not to be of a serious nature, may be assessed a civil penalty of up to \$7,000 for each violation.

d) Any employer who fails to correct a violation for which a citation has been issued under section 9(a) within the period permitted for its correction (which period shall not begin to run until the date of the final order of the Commission in the case of any review proceeding under section 10 initiated by the employer in good faith and not solely for delay or avoidance of penalties), may be assessed a civil penalty of not more than \$7,000 for each day during which such failure or violation continues.

e) Any employer who willfully violates any standard, rule, or order promulgated pursuant to section 6 of this Act, or of any regulations prescribed pursuant to this Act, and that violation caused death to any employee, shall, upon conviction, be punished by a fine of not more than \$10,000 or by imprisonment for not more than six months, or by both; except that if the conviction is for a violation committed after a first conviction of such person, punishment shall be by a fine of not more than \$20,000 or by imprisonment for whoever knowingly makes any false statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained pursuant to this Act shall, upon conviction, be punished by a fine of not more than \$10,000 or by imprisonment for not more than six months, or by both.





f) Any person who gives advance notice of any inspection to be conducted under this Act, without authority from the Secretary or his designees, shall, upon conviction, be punished by a fine of not more than \$1,000 or by imprisonment for not more than six months or by both.

h) Section 1114 of title 18, United States Code, is hereby amended by striking out "designated by the Secretary of Health and Human Services to conduct investigations, or inspections under the Federal Food, Drug, and Cosmetic Act" and inserting in lieu thereof "or of the Department of Labour assigned to perform investigative, inspection, or law enforcement function

k) For purposes of this section, a serious violation shall be deemed to exist in a place of employment if there is a substantial probability that death or serious physical harm could result from a condition which exists, or from one or more practices, means, methods, operations, or processes which have been adopted or are in use, in such place of employment unless the employer did not, and could not with the exercise of reasonable diligence, know of the presence of the violation.

2) Notwithstanding the provisions of sections 1111 and 1114 of title 18, United States Code, whoever, in violation of the provisions of section 1114 of such title, kills a person while engaged in or on account of the performance of investigative, inspection, or law enforcement functions added to such section 1114 by paragraph (1) of this subsection, and who would otherwise be subject to the penalty provisions of such section 1111, shall be punished by imprisonment for any term of years or for life.

i) Any employer who violates any of the posting requirements, as prescribed under the provisions of this Act, shall be assessed a civil penalty of up to \$7,000 for each violation.

j) The Commission shall have authority to assess all civil penalties provided in this section, giving due consideration to the appropriateness of the penalty with respect to the

size of the business of the employer being charged, the gravity of the violation, the good faith of the employer, and the history of previous violations.

(k) Civil penalties owed under this Act shall be paid to the Secretary for deposit into the Treasury of the United States and shall accrue to the United States and may be recovered in a civil action in the name of the United States brought in the United States district court for the district where the violation is alleged to have occurred or where the employer has its principal office.

#### **2.4 Management Health and Safety Policy (MHSP)**

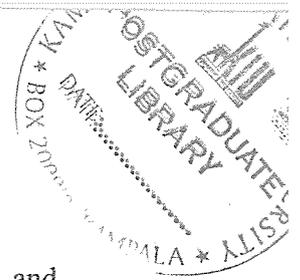
In order to comply with standards set by OSHA, companies must come out with Management Health and Safety Policy (MHSP). In addition, the gage dictionary defines "policy" as "a plan of action; a course or method of action that has been deliberately chosen and that guides or influences future decision." By stating principles and rules, an occupational health and safety policy guides actions. A policy statement indicates the degree of an employer's commitment to health and safety. The statement of the employers' obligation should be more than an outline of legal duties (<http://www.osha.gov/pls/oshaweb/owadisp.show>).

More still, the company policy regards the promotion of industrial safety and hygiene with its business as an essential part of its responsibilities. It further regards the promotion of safety and health matters as mutual objective of all management and employees, (Armstrong, 1977).

It is therefore the company's policy to all, that it is reasonably practical to prevent personal injury and damage to property and protect every one from foreseeable hazards, including public insofar as they meet the company or its products. The companies will (Armstrong1977).

1. Provide and maintain health and safety working conditions at each of its locations, in accordance with statutory requirements.





2. Provide integrated safety, job training, and instruction for all employees, and additional safety training where necessary.
3. Provide all safety devices and protective equipment required by statute and supervises their use.
4. Ensure that the particles and sustenance purchase for use at work have been so designed and constructed as to be safe and without risks to health; full information be made available by suppliers and additional safety precautions are required.
5. Maintain a constant and continuing attention to all aspects of safety in particular by:
  - a. Making regular location safety inspections
  - b. Seeking and stimulating consultations and contributions from employees on safety matters.
  - c. Ensuring that all means of access or egress are known to persons either on or using the premises.
  - d. Ensuring that each location is given adequate health and safety cover by a person well versed in safety requirements relating to company's activities.
  - e. To meet regularly with safety committee
  - f. To provide and maintain a place of work that is, so far as is reasonably practical, safe, without risk to health, and has adequate facilities for welfare of all employees.
6. In particular, every employee has responsibility:
  - a. Take a reasonable care for the health and safety of him and of all other persons he comes into contact with at work.
  - b. Cooperate with the management to enable them to carry out their statutory duties with the objective of raising and maintaining high standard of safety and health at work.
  - c. To report all accidents that have led, or may lead to injury.

- d. To cooperate in the investigation of accidents with the objective of introducing measures to prevent recurrence.

UMI leaves a lot to be desired because it has no single well-designed MHSP statement in place. This is because the researcher failed to see a MHSP in UMI's quarterly reports and manuals. The researcher was strongly touched after failing to see MHSP statement of the industry. According to the researcher's view, the blame is put on the whole country due to its weak labour laws as cited by, (NOTU, 1996). More so, penalties for death of an employee are very low, for example, death of a worker due to carelessness of an employer is fined 2,000 Ugandan shillings only or sentenced three months in jail (Vastina et al, 2000) compared to \$ 70,000 in USA (Ivancevich, 2001). Therefore, most manufacturing industries find it not necessary to design MHSP since there is no reaction from the government. Nevertheless, UMI should design a MHSP for its own good in order to maintain good health and steady performance of its employees.

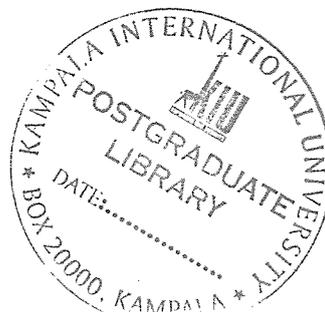
## **2.5 Causes and Effects of Occupational Hazards on Employee's Health**

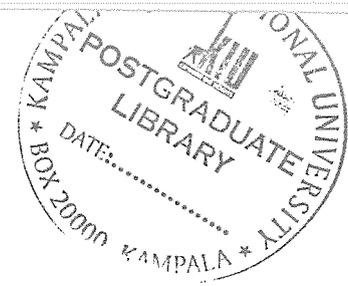
### **(Research question (a) revisited).**

Hazards in the workplace can be found in a variety of forms, including chemical, physical, social, biological, psychological stress and ergonomic. Because of the multitude of hazards in most workplaces and the overall lack of attention given to health and safety by many employers, work-related accidents and diseases continue to be serious problems in all parts of the world. Therefore, employees must insist that employers control hazards at the source and not force workers to adapt to unsafe conditions as they affect their health, performance and income (ILO, 2003).

### **2.4.1 Ergonomic Hazards**

This is concerned with mental adjustment between people and their work. It regards work as part of human/machine production unit, which should behave in proper sequence. The process should be fitted to a person (Bhambra, 1999). Body size, working conditions and cultural habits are critical factors in ergonomics that must be taken into consideration to ensure smooth production process (ILO, 2002).





The demand force, exertion, repetition, monotony, excessive bending, boredom or assuming postures for prolonged periods places stress on human physical systems which is inherently un natural thus leading to musculoskeletal injuries like, wrists, fingers and upper and lower back neck, shoulders upper and lower arm, injuries (Andrew et al, 2004). Burdorf A and Sorock, 1997 established that lifting whole body vibration and frequent bending or twisting were found to be consistently associated with work related disorders; they also noted that decision latitude was important but not consistent across similar studies. They argued that confounding factors like age, smoking, gender, weight among others were consistently not associated with back disorders as supported by (Alcouffe, 1998). However, the added incidences and severity of lower back pain was higher in female than male employees were.

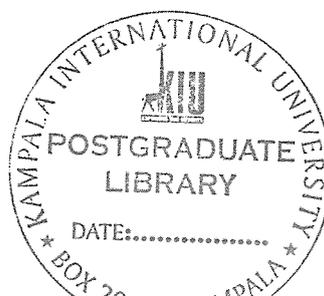
Another study carried out by (Voss Floderous and Didesrhen, 2001) to determine the causes of sickness and absence among Swedish Post workers established that complaints about lifting heavy loads and monotonous movements were associated with increased risk of sickness among employees. Courtney et al (2001) carried out similar studies of the lower injury and monotonous fixed position revealed musculoskeletal problems of back, neck and shoulder region. More still, (Bjorksten et al 2001) also discovered that 11% of individual factors and 25% of work related were responsible for lower back injuries.

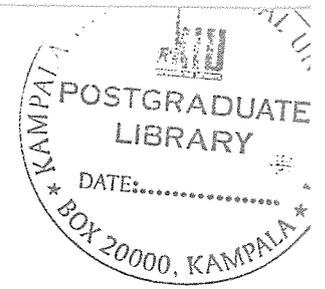
In another development, Meyer-Hamer et al (2002) examined effort-reward imbalance, over commitment, physical job demands and musculoskeletal pain in a sample of 316 employees aged 35-60. After adjusting for age, gender, socioeconomic status, shift work and negative affectivity, elevated odds ratios (indicated increasing likelihood of reporting musculoskeletal problems) were observed amongst individuals who were classified as overcommitted or who experienced high physical job demands, and to a lesser degree amongst those reporting high effort and low reward. In a related study of 105 male dental technicians, Tsutsumi et al (2001) found a significant association between high levels of intrinsic effort and musculoskeletal problems such as pain or stiffness in the neck, shoulders, upper and lower arm, wrists, fingers and upper and lower back.

Studies regarding biomechanical factors like repetitiveness of movement effort, un comfortable seats and angular postures considered to be the main risk factors for musculoskeletal diseases were carried out by (Silvini 2000). They discovered that wrist of meat industry operators involved in deboning and preparing meat suffers much high strain than normal hand movements.

The findings from the above studies reveal that forcefulness; monotonous movement, repetitive work, building and twisting are main causes of musculoskeletal problems of the back and other parts of the body. These studies however still leave some gaps and therefore inconclusive for example (Sorock et al, 1997) carried out various studies and established that lifting, frequent bending and twisting were consistently associated with back upper limbs, wrists and neck disorders but they do not mention the population they sampled and their nature of work. Confounding factors like gender, height, weight were ruled out by (Burdof and Sorock 1997) and yet (Alcouette et al 1999) observes that incidences and severity of lower back pain were higher in women than in men. This is (Bjorksten et al, 2001) who adds that 11%of individual factors are responsible for lower back injury and (Bhambrara, 1999) notes that body size and cultural habits are critical factors in ergonomics.

Findings on studies involved post workers involved in lifting heavy loads and monotonous movements were made by (Voss and Didesrschen, 2001) the weights of the loads are not mentioned neither are specific tasks, which cause the monotonous movement specified. Similar findings are reported by (Bjorksten et al 2001and Courtney et al 2001) The research carried out by (Silvin 2001) on workers involved in deboning meat dwells on a technology which most likely differs from one worker handling in a factor of third world country. The above studies therefore leave gaps to be filled by further research. There is no written document at UMI indicating causes of musculoskeletal problems due to lack of accident and injury records and reports. Though there is existence of such incidences since work involved require long standing period, twisting, bending when deboning meat, and meat packing as cited by (Silivin 2000) in his research similar to the illustrative example of this research (UMI)





#### 2.4.2 Physical Hazards

Physical hazard at work place include dust, vibration, poor lighting, noise, micro-climatic conditions, heat, poor ventilation, cold, uneven or slippery floors, dangerous tools and unsafe structures (Lebeer et al, 2003, Bhambra, 1999, WHO 1997) established for the first time that very young workers are highly susceptible to occupational hazards.

A study carried out by (Carasco, 1993) to establish the effect of heat, noise, poor lighting, poor ventilation and dusty conditions on workers in four industries in Uganda established that workers exposed to the above conditions reported eye problems, headache, body pains, backache and respiratory problems. Workers exposed to very hot conditions suffered excess heart pulsation, which could be detrimental to health (Martinet et al, 1999) and this is supported by (Granville et al, 1999) who adds that exposure to a lot of heat exhaustion and cramps which may cause other health problems.

Several studies established that many manufacturing processes are accompanied by noise that is capable of impairing the hearing of a worker, making him irritable and inefficient, making it difficult if not impossible for him to hear any warning cries of impending danger. Excessive noise accelerated the normal loss of hearing which occurs as we grow older, and that every one is affected if exposed to noise long enough and at sufficient intensity (if the noise level is above 80 decibels, that is 1200 cycles per second (Mamoria et al, 2001; Bhambra 1999 and Granville 1999).

More still, vibration and shock may cause nerve injury and inflammation of tissues of joint of operator's hands. A very low vibration less than one cycle per second is often encountered in ships, lifts, vehicles and this often causes motion sickness (Mamoria et al, 2001).

Other studies established that poor lighting was hazardous to health, (Armstrong, 2001; ILO, 1996; ILO, 1999) because it made seeing difficult and induced stressful postures that could cause safety problems. The hazardous effects of dust were noted by (NOTU, 1996, ILO, 1999) who established that dust entering the respiratory system can damage lungs and that some dust can be absorbed through skin. The effect of dust on workers in a

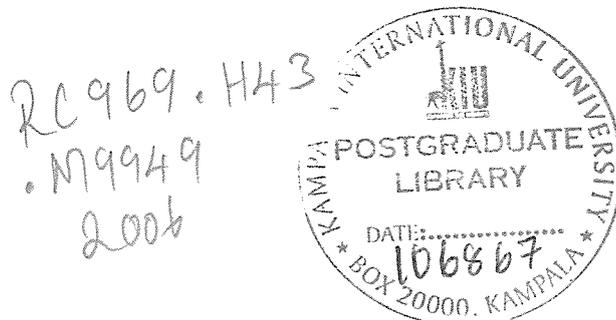
blanket factory was studied by (Mugisha1977, Carsco, 1993); he established that a prevalence rate of 54% of obstructive airborne disease was common among workers.

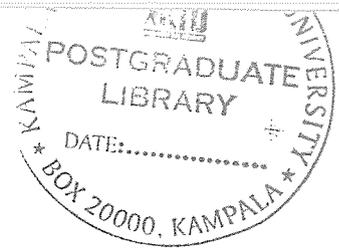
Slips, trips and falls as well as cuts are other hazards that are very common in catering and beef industry because of the nature of the work in such places (ILO, 1999 and Lebeer et al, 2003). They add that trips falls are also common in work places, which are not orderly and were wastes, scrap and slippery floors (as a result of cleaning products, climatic conditions), naturally slippery surfaces (tiled or marble floors), irregular or uneven surfaces (step, pavement, inclined surface), damaged surfaces (hole, loose flagstones, among others). Thus, the injuries caused by falls, slips and trips may vary from fractures, pains, trauma, sprains to contusions.

Exposure to heat and micro climatic conditions can also be hazardous to health. Employees who work in open and subjected to different weather conditions may suffer headaches, dizziness, dehydration, heat stroke, cold flu and even insect bites that may cause other health problems, (Granville, 1999, ILO, 1996).

The study by (Carsco, 1993) based on industries where working conditions are quiet similar from those of the researcher's area of interest. Noise, heat, dust and working conditions may be similar to noise other than hazardous physical conditions in manufacturing industries.

In another related development, the findings of (Martinet and Meyer, 1993) apply to employees in the researcher's area of study because the intensity of heat in running machines is too much in the industry. Problems of light may be paramount in the situation where there is load shading and generator break down, night shifts or go-down and other areas that are poorly lit and therefore require sufficient light for smooth running of the operations. This maybe the case with the organization in question and the problems faced are more less the same because the production rooms are confined in the middle of the building, cold rooms have no windows and ventilators. In case of electricity load





shedding, nobody is able to see one another in both production and cold rooms until a generator is switched on.

Slips, trips, falls and cuts are the problems at UMI that were researched on because it has smooth floors in all offices, production, display and cold rooms. Therefore, all the hazardous conditions common in production industry can be found in UMI and it is therefore necessary to establish seriousness of this hazard.

Exposure to dust as found by (Mugisha, 1997; Carasco, 1993), to the exposure to blanket particles that is almost the same in store of raw materials and lailage in the area being researched. Therefore, (ILO1999; ILO1996 and NOTU 1996) talk about dust in general terms. The level of exposure and type of dust is not discussed at all. The workers in the researcher's area of interest are involved in cleaning and related activities that may generate a lot of dust as they sweep stores of raw materials, kraals/ lailage, slaughtering floor, parking yard and selling area room. Motors also reverse dust to operate and therefore affect the operator. It has therefore to be established whether this type of dust affect this category of employees.

### 2.4.3 Chemical Hazards

Chemical substances include carbon monoxide, carbon dioxide, nitrogen dioxide, sulphur dioxide, hydrocarbons, ozone; sulphuric acid, acetic acid, fumeric acid and tannic acid, limes and alkalis that cause injury when they are absorbed by the skin or when they are inhaled. The results are often disastrous. The diseases or sickness maybe chronic or cute and it may appear after long dominant period, when it may be impossible to treat it effectively (Mamoria et al, 2001). Acidic chemicals may cause irritation, skin burns, respiratory irritation and others, ILO (1996). He adds that such chemicals may have chronic effects if exposures are high and chemical strong. Chemicals are used virtually all types of work-including non-industrial activities such as hospital, office work and cleaning (WHO, 1995). The harmful effects of chemicals may endanger life, affect health adversary or cause severe discomfort or may produce long-term respiratory diseases, skin diseases, allergy, heart disease, cancer and neurological disorders (ILO 1996).

High levels of physical or emotional stress or exposure to chemicals such as carbon disulfide may disrupt the balance between the brain, pituitary, and ovaries. This disruption can result in an imbalance of estrogen and progesterone, and lead to changes in menstrual cycle length and regularity and ovulation. Because these sex hormones have effects throughout a woman's body, severe or long-lasting hormone imbalances may affect a woman's overall health.

Solvents are widely used in many types of work and most affected occupations are painting, mechanics and dry cleaning (ILO 1999). The bulk of research in this area dwells on agriculture and health care. Literature directly related to the effects of chemicals on production occupations like work done by employees in UMI, cleaning and disinfecting was not seen. It is therefore, necessary to establish whether chemicals used pose any hazards to them.

#### **2.4.4 Biological Hazards**

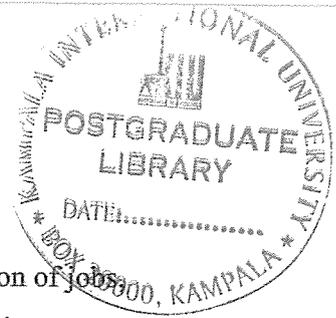
Occupational infection is human diseases caused by work associated with exposure to microbial agents like bacteria, virus, fungi, parasites and other factors like emotional stress, excessive drinking among others (Mamoria et al, 2001). An infection may be distinguished as occupational by some aspects of work that involves contacts biological active organisms (Granville et al, 1999) and health care workers and those involved in contact with animals or animal products and ground breaking are at high risk. Poor hygiene, sanitation and nutritional problems may also aggravate occupational infections.

Among the target population of the researcher are employees who may at times work without gloves and yet clean areas like toilets, drainage channel and lailage. It was necessary to establish the extent to which this work is hazardous and what effects it has on health of employees in UMI because the literature is directly related to biological hazards in the researcher's area of study was relatively limited.

#### **2.4.5 Social Hazards**

Several social aspects of work raise health concerns (Armstrong, 1999; Jeyaratnam et al 2002), for example, social relation, segregation of job, unemployment, and sexual





harassment at workplace, social support from co-workers, gender and distribution of jobs, type of work say vocational and professional status may also have a profound impact on social status and social wellbeing of employees. (Bruce, 1998) noted that problems linked with job security and unemployment may have serious effects on the health of workers because they fear to raise work-related discomforts and even ill health.

A study carried out by Swedish Post Office Employees, revealed that overtime of more than 50 hours a year, bullying at work place were linked with incidences of sickness among employees (Voss Floderous et al, 2000; Jeffrey et al, 2002).

Sheraton Kampala Hotel, (FUE, 2002) tried to motivate its employees in many ways in order to promote an accommodative an open-minded attitude and pleasant personality. Among other things, they encourage their workers to join trade unions, recognize excellence of the industry, share 5% service fee charged on operations to all staff months' salary and transparency on financial stand of the organization, company's profit and loss statements are shown to the staff. Rubenstein, (1988), who adds that healthy companies are open, trusting, predictable, flexible and supportive and these characteristics to manager-employer and co-worker relationships, supports this. Healthy work relationships can buffer the negative effects of stress that lead to illness and reduce productivity.

More so, employers ought to know one of the effects of social hazard, which is demoralization that in turn affects employee loyalty and productivity (Armstrong, 1999). The provision of social conducive working environment is a moral responsibility of every employer because employees are entitled to more than they pay. They are entitled to consideration as human beings because many of their personal problems arise in the context of work, (Lloyds et al, 2000; Jeffery et al, 1999).

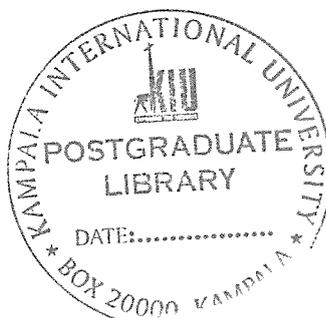
Additionally, one of emerging risk factor is sexual harassment in most organisations. And generally accepted view (shared by the European Commission, among others) is that sexual harassment means unwanted conduct of a sexual nature, or other conduct based on sex affecting the dignity and well-being of women (and men) at work. The essential

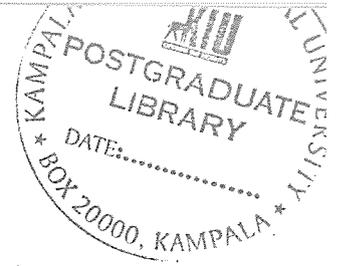
character of sexual harassment is that it is unwanted and unwelcome by the recipient. The distinction between sexual harassment and friendly sexual behaviour or flirtation is that sexual harassment is not mutual or welcome, and it offends, and threatens individuals. Sexually unwelcome behaviour makes the affected person feel uncomfortable and uneasy at work (Rubenstein, 1988).

Sexual harassment happens to men as well as women, but rarely (Gruber et al., 1996). Most surveys have found that men against women predominantly perpetrate harassment. Gutek, (1985) estimates that perhaps one to two per cent of men experience sexual harassment in their working lives, which observation accords with the results found in the Nordic studies. Most vulnerable males are young men working in female-dominated work groups, for example as nurses or daycare workers (Kauppinen, 1993).

More so, sexual harassment can take many forms in different organisations. It may involve physical contact as when you hold someone pat, stroke against his or her will. Being pinched, squeezed, grabbed, groped, and more serious sexual assaults all constitute physical sexual harassment. It may be verbal or psychological: staring, leering, standing too close for comfort, being followed, threatening body postures, sexual remarks or taunting, obscene gestures or jokes, explicit conversations about sex that cause offence, as well as subtle or explicit pressure for sexual activity. Non-verbal harassment refers to the display of sexually suggestive pictures, sexist calendars, objects or written materials, whistling, looking 'elevator look' or making suggestive gestures (Wilson, 1995).

According to the same surveys conducted by European countries, the victims of sexual harassment tend to have certain demographic, social and occupational characteristics. Young people (between the ages of 20 and 40), female, single or divorced with a low educational attainment are more likely to report acts of sexual harassment. As for the social and occupational factors, workers with seniority of less than five years, employed in organizations with a staff of more than 50 and with a contract for a limited period of time are more likely to be subjected to sexual harassment (Lebeer et al, 2003).





The consequences of unchallenged sexual harassment on employee's health is that psychologically, sexual harassment results in stress, anxiety, irritability, depression, a state of nervousness, feelings of despair, impotence, anger and physical effects of sexual harassment involve sleeping and eating disorders, headaches, nausea, hypertension, inability to concentrate, in fact, the symptoms commonly associated with stress, (Wilson, 1995). There is also growing evidence to suggest that women experience guilt and self-blame over harassment (Nicolson 1996). Well-documented research has shown that sexual harassment results in damaging emotional, physical and work-performance stress; it leads to absenteeism, sick leave, being less efficient at work, or leaving the job to seek work elsewhere (Commission of the European Communities, 1993).

In addition, economic and health impacts of unemployment are considerable on the health of employees (Bartley et al., 1999) Unemployment affects psychological wellbeing, social participation and physical health (Bartley et al, 1994). The impact varies with career stage, later in a career there is increased mental and physical health problems associated with unemployment; but there are also considerable negative health outcomes of unemployment in the early years of potential employment that can have a considerable impact over the remainder of the life course (Bartley et al., 1999).

Unsafe and unhealthy working conditions have an impact on the marketing of products and health of employees too. Because poor working conditions cause stress, fatigue, anxiety among others. Safety and health is becoming a part of the quality of a product. Evidences at international level have suggested that the poor occupational safety and health record could also diminish attraction for foreign investments. Thus, countries, which wish to provide sustainable benefits of globalization for their people, have to subscribe to the basic principles for labor rights and to improve their safety and health record. Studies have shown that countries, which follow the ILO's safety and health standards, are at the same time most competitive in the world market although the research focuses more on how occupational hazards affect health of employees, there is a gap for further research.

The employees in UMI like any other employees in other organization have their worries or dissatisfaction arising from work, working conditions and environment. Where efforts have been made, individuals behave differently and each individual has personal problems that maybe accelerated by working conditions. It was therefore important that social hazards affecting the employees in UMI be identified.

#### 2.4.6 Stress Hazards

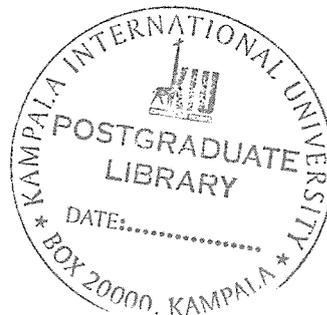
Stress is a work-related disease of multicausal origin and is a physical or physiological stimulus that produces strain or disruption of the individual's normal physiological equilibrium. The most frequent disorders range from chronic fatigue to depression by way of insomnia, anxiety, migraine, emotional upsets, stomach ulcers, allergies, skin disorders, lumbago and rheumatic attacks, tobacco and alcohol abuse, heart attacks and even suicide (Karasek et al, 1990).

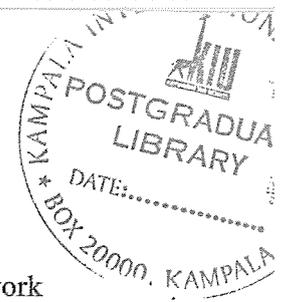
One of the major causes of stress is fear of unknown situations and lack of control over the duties to that lay ahead and over the organization of work. Occupational stress affects those workers whose duties are to be changed or phased out by the introduction of new technologies; those deprived of personal initiative and doomed to monotonous and repetitive tasks. Stress can be aggravated by excessive bending, frequent rests, fear of losing a job, relationship problems, sexual harassment, discrimination, or other non-occupational factors, such as family problems, multiple roles, health anxieties, commuting and financial worries (Karasek et al, 1990). Below are job conditions that may give rise to stress as summarized in Appendix IX.

Since stress is the outcome from most occupational hazards, its causes and effects on employee health can be explained using Job Demand-Control-Support Model (JDCS) and Effort Imbalance Reward Model (ERI)

##### 2.4.6.1 The Job Demand-Control-Support Model (JDCS)

The Job Demand-Control model (Karasek et al, 1990) is perhaps the most influential model of the relationship between the psychosocial work environment and health. This

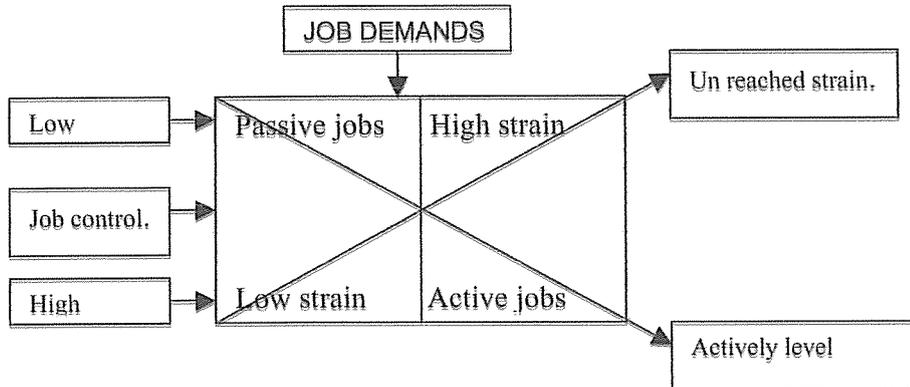




model proposes that psychological strain is a product of the combination of the work situation an individual is exposed to and the amount of freedom available to make decisions at work. This strain, if present, can then propagate poor health. The Job Demand-Control model (Karasek et al, 1990) is perhaps the most influential model of the relationship between the psychosocial work environment and health. This model proposes that psychological strain is a product of the combination of the work situation an individual may be exposed to and the amount of freedom available to make decisions at work. This strain, if present, can then propagate poor health.

In the model, 'Job Demands' refers to aspects of the work environment (fore example, how fast does the individual have to work?) that influence how demanding that work is perceived to be. 'Job Control' refers to the individual's authority to make decisions and the discretionary use of their skills (fore example, how much control does one have over how they do their work each day?). 'Job Strain' refers to the state that occurs when both demands are high and when control is low. This is premised as the most negative and potentially damaging scenario. When job demands and job control are both high the model premises that the job is 'active' and this can have beneficial, protective effects on the individual's health. When demands are low and control is high a job is described as 'passive', the job activity levels decrease as do general problem solving activities. Thus, demand and control are premised as interacting. Researchers in the 1980s added a third dimension to the model, 'Work Social Support', which led to an adaptation of Karasek's model called the Job Demand-Control-Support model (Johnson and Hall, 1988). This adapted model introduced the concept of 'Iso-Strain', where demands are high, control is low and social support is low. This Job-Demand-Control-Support model partly helped the researcher to identify causes and effects of stress on health of employees in UMI. Thus, association between the model and occupational health is described in Figure 1 below.

**Figure 1: The Job Demand-Control Model**

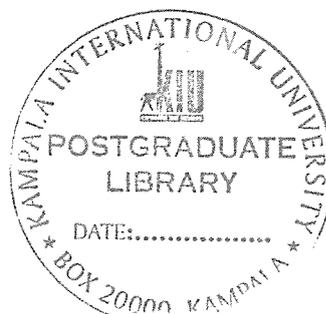


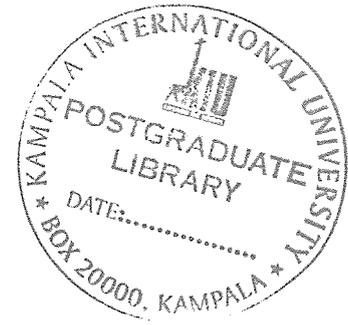
Source: Combined Effects of Occupational Health hazards report (Andrew Smith et al (2004) page 18.

**2.4.6.2 Effort Imbalance Reward Model (ERI):**

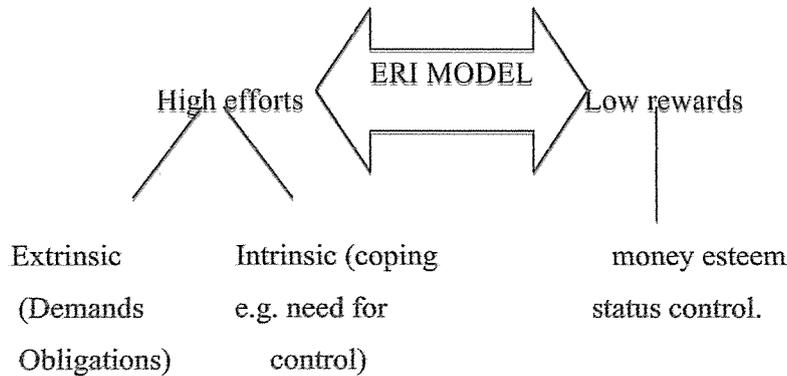
The Effort-Reward Imbalance (ERI) model was proposed as an alternative to the Job Demand- Control-Support model (Karasek et al, 1990) and the Person-Environment-Fit model (French et al, 1982) to assess the negative impact of work demands on health. The theoretical concept behind the model states that the degree of reciprocity between the individual and their work environment is the crucial factor in determining potential negative health outcomes; an imbalance between the amount of perceived effort and rewards received is premised to result into reduced well-being.

The ERI model distinguishes between two types of effort: intrinsic and extrinsic. Intrinsic effort is defined as the level of motivation experienced by an individual in a demanding situation and their need for control, whereas extrinsic effort refers to the actual demands of the job. Three types of reward are defined by the model; financial gains, 'esteem' (as measured by recognition of achievements and support from colleagues and superiors) and 'status control' (that is threats to self-regulatory functions such as job insecurity or lack of promotion prospects). With regards the definition of control, the ERI model differs from the Job Demand-Control-Support model (Karasek et al, 1990; Johnson and Hall, 1998) in that the former incorporates the issue of job insecurity which, given current labour market forces, may in some instances be of more significance than level of control over the task. Figure 2 below outlines the model.





**Figure 2: Effort Imbalance Reward Model**



Source: Combined Effects of Occupational Health hazards report (Andrew Smith et al (2004) page 33.

According to Ferguson et al (1990), the Strain premises suggests that employees working in high strain jobs experience the lowest well-being; this is demonstrated where demand, control and support have strong independent effects. This is relatively undisputed; job demands, job control and social support all have strong independent effects on a range of health related outcomes. The Buffer premise states that job control (and social support) can moderate the negative effects of high demand and is demonstrated when there is an interaction between the job strain dimensions, where high demand is moderated by control and/or social support. For example, high control was found to moderate the effects of high demands leading to decreased blood pressure. Evidence for this premise is therefore more equivocal.

Other researchers conducted number of studies have examined the relationship between ERI and cardiovascular disease and associated risk factors. Siegrist (1996) conducted two studies looking at associations between ERI and cardiovascular risk factors such as hypertension, fibrinogen levels, atherogenic lipids and smoking. The first study was a prospective 6.5-year cohort of 416 male blue-collar workers who had no symptoms of coronary heart disease at baseline measurement. (Follow up data was collected at three separate periods). The second study was a cross sectional survey of the relationship between effort-reward imbalance and coronary heart disease risk factors in a sample of 179 middle managers. Results from the prospective study indicate that low status control (a sub-component of low reward) and high effort (either intrinsic or extrinsic)

independently predicted acute myocardial infarction and/or sudden cardiac death. In addition, cross-sectional data indicates an association between high effort and low reward, and cardiovascular risk factors like hypertension. Peter et al, (1997) conducted a similar study of 189 middle-aged, male middle managers and found those experiencing high effort and low reward (termed active coping) were more likely to be hypertensive leading to health problems as explained below.

### 2.3.6.3 Physical Health

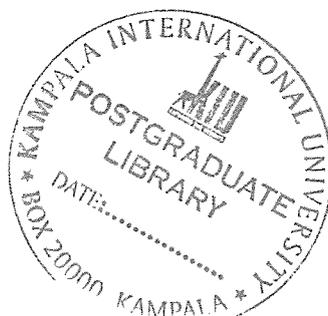
Low job control has been reported to have a significant association with ill health (Foppa and Noack, 1996) and when combined with high job demands, ill health could become more severe (Braun and Hollander, 1987). Research findings for some specific and important physical health outcomes are described below.

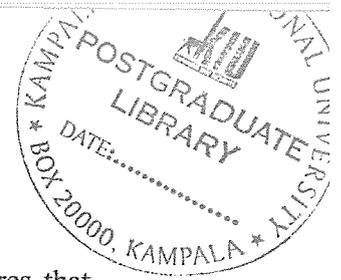
### 2.4.6.4 Cardiovascular Health

Cardiovascular health researched on shows jobs characterized by high job strain have been found to be associated with cardiovascular risk factors (Karasek et al, 1990) and more specifically with the following outcomes; increased risk of myocardial infarction (Karasek et al 1988); increased blood pressure and increased risk of cardiovascular disease.

Kawakami and Haratani (1999) conducted a review of the research findings over the previous fifteen years with reference to the assessment and relation of job stress to physical health, mental health and the effects of stress reduction activities in the working environment in Japan. The literature provided evidence that job strain was associated with increased levels of blood pressure and serum lipids in the Japanese working population. These stressors were reported to affect fibrinolytic activity, blood glucose levels, immune functions and medical consultation rates.

Vahtera et al, (2000) found a significant relationship between high job strain and cardiovascular mortality risk in a prospective cohort study of 812 industrial employees in Finland. Bartley et al (2001) found no association between job strain and doctor diagnosed heart disease in the data from 4350 British working men; but there were





independent associations between job strain and coronary heart disease measures that, taken together, suggested job strain may 'have etiological significance for heart disease'. Aside from the demand, control and support characteristics of a job, wider categories of work, such as occupational class, may influence coronary heart disease risk. Wamala et al (2000) observed an 'inversely graded association' between occupational class and coronary heart disease risk in a population-based case-control study of 292 case and 292 control female workers in Sweden. The study could not be explained in the context of differences in levels of job demand or control between occupational classes.

#### **2.4.6.5 Musculoskeletal Health**

A smaller number of research papers that looked at the demand-control-support characteristics of work and musculoskeletal health. Job strain was found to characterise the psychosocial work environment of certain professions (for example, musicians, video terminal display operators, forestry workers) where musculoskeletal problems were common; job-strain was also found to have influenced musculoskeletal discomfort (Vahtera et al, (2000).

High demands were found to relate to neck and shoulder symptoms; low social support to back pain and low control to neck symptoms (Skov et al 1996). The authors concluded that both psychosocial and physical factors were associated with musculoskeletal symptoms in their sample of 1306 sales people. High demands, over commitment and self-reported psychosocial work stress proved to be associated with musculoskeletal pain (Joksimovic et al, 2002) in 316 public transport employees. They found strong relationships between high demands, low control, high psychological distress and musculoskeletal pain in the lower back, shoulders, wrist/forearm and knees.

Vegchel et al (2002) examined the potential link between ERI and self-reported musculoskeletal problems experienced within the previous 6 months in a population of 167 employees, namely pains in the neck/shoulders, middle back, lower back and limbs (arms or legs). Increased risk of reporting these symptoms can be observed amongst the high effort/high salary group of those reporting high effort and low esteem and high effort and

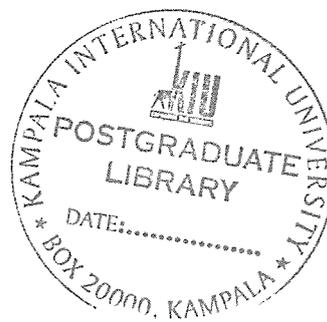
low job security (Peter et al. 1997) also reported a link between ERI and musculoskeletal problems in a large cross-sectional sample 1337 of bus and subway drivers.

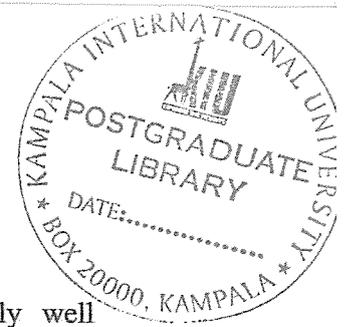
#### 2.3.6.6 Sickness Absence

An alternative method used to assess the effects of job demand-control-support on health, is to infer poor physical health from the levels of sickness absence at work. Low job control reported in the literature to be a risk factor associated with sickness absence (Bodeker, 2000). However a longitudinal investigation into the effects of 'stable and changing demand-control histories' on worker health found no relationship between the exposure to demands and/or control and the duration or frequency of recorded sickness absence, though they were associated with both job satisfaction and depression (Taris et al, 2002).

However, other authors did demonstrate an association found that lowered job control caused an increase in sickness absence, as did decreased social support and increased job demands in a longitudinal study of 530 municipal workers in Finland. In a 3-year follow-up study of 856 municipal workers, the job strain premises were supported (Vahtera et al, 1996): passive jobs predicted high levels of sickness absence and active jobs predicted low levels of sickness absence. Sickness absence of more than three days over the past 12 months was associated with higher job strain in a study of 233 nurses and 134 accountants (Evans and Steptoe, 2002).

In a different scenario, Peter et al, (1997) examined the impact of ERI on sickness absence rates in a population of 189 and found that low effort and low reward (indicative of a passive coping style) were significantly associated with high rates of sickness absence. Specifically, three measures of low rewards demonstrated significant associations with short-term sickness absence, with the largest of the odds ratios observed for 'forced job change'. However, just one measure of low reward predicted longer-term sickness absence (status incongruence) and two measures of low reward were significantly associated with number of absence episodes. High effort was not found to predict any measure of sickness absence.





#### **2.4.6.7 Mental Health**

The link between effort-reward imbalance and mental distress is relatively well established. Vegchel et al. (2002) studied mental exhaustion as a possible outcome of ERI in population of 167 workers and found the risk of exhaustion to be more than 7 times higher for those reporting high effort and low salary than for those reporting low effort and high salary. Exhaustion was also significantly more likely under conditions of high effort and low esteem than where effort was low and esteem high. Where effort were reported to be high and job security low, mental exhaustion was nearly 11 times as likely to be reported as when effort was low and job security high. Peter et al. (1997) studied ERI and fatigue and sleep disturbance as possible indicators of poor mental health in a population of 1337 employees, and found a significant association between high effort/low reward occupations and frequency of sleep disturbance and self-reported fatigue.

Burnout often considered to result from stress at work is a symptom of severe psychological distress. Siegrist et al (2002) studied ERI and its' possible association with burnout amongst a sample of 204 nurses. Analysis of variance revealed a significant main effect of ERI on burnout: in other words, nurses who felt their level of reward did not reflect their efforts at work reported a greater degree of emotional exhaustion than those who did not. A significant effect of intrinsic effort on emotional exhaustion was reported.

#### **2.4.6.8.0 Health-Related Behaviours**

There is a substantial literature on the associations between job demands-control support and health related behaviours, although the types of behaviours tend to be limited to alcohol consumption and smoking habits (Watanabe et al, 1996). Much of the research on cardiovascular risk factors controlled for the influence of potential confounders such as smoking and alcohol use.

##### **2.4.6.6.1 Alcohol Abuse**

Low job control was found to be associated with alcohol dependence in women, there is evidence in the Japanese literature that low control, and high demands are associated with drinking problems in Japanese workers (Kawakami and Haratini, 1999). Low control,

low demands and low support have been associated with later alcoholism in blue-collar men, there was also evidence that psychiatric alcoholism diagnoses are more common in 'passive' jobs, where control is high and demands are low. Anthony et al, (1999) have also found the specific combination of high job demands and low job control to be important in predicting the occurrence of alcohol problems. High strain occupations were associated with alcohol abuse dependence.

#### **2.4.6.6.2 Smoking**

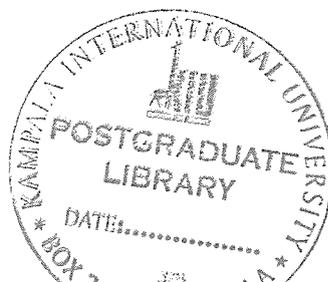
Jeffery et al, (1999) found high job demands were positively associated with smoking, smoking intensity and high fat intake in men. High demands showed a positive correlation with Body Mass Index (BMI) and smoking intensity in women. It was again found that high strain male smokers smoked more than other smokers and high strain women had a higher BMI than other women. However not all evidence supported an association between job strain and smoking behaviour (Bosma et al, 1999). The combination of high job demands and low job control was not related to smoking behaviour in both sexes, but job control was found to be associated with smoking in men only.

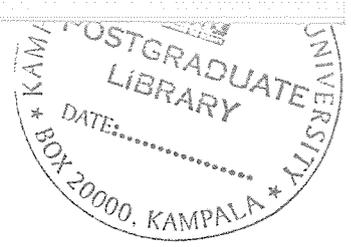
#### **2.4.6.6.3 Drug Abuse**

High job stress linked to increased non-medical drug use in a study of 2375 full-time nurses in the USA (Storr et al, 1999). Substance abusing employees are not safe employees. Depending on the type of work employees do, substance abuse problems can begin manifesting themselves in employee safety records. Substance abusing employees are involved in more accidents than other workers are, even though they are often not the ones who are injured. They also tend to display carelessness in the operation and maintenance of potentially hazardous materials or dangerous equipment in an organization (Armstrong, 2001).

### **2.5 Occupational health measures in an organization. (Research question b revisited)**

Measures to magnitude of the effects of occupational hazards can be put in place if, health and safety of workers is to be realized. According to Lloyds et al, (2000),





employer of more than 11 or more people must maintain records of occupational injuries and illness regardless of severity. Occupational injuries and illness resulting in death, one or more lost workdays, restriction of work, loss of commission, transfer to another job or medical treatment other than first aid should be recorded. This enables the management to identify the problem areas and unsatisfactory trends (Armstrong, 1999, WHO, 1995, ILO, 1996, Dessler, 2000, Andrew et al, 2004)

In addition, protecting workplace health and safety is a fundamental duty for all organizations and their employees. This shared goal could best be achieved if organizations implement a structured approach to the identification of hazards and evaluation and control of work related risks. The most effective approach is where organizations attach the same importance to achieving high standards of occupational health and safety (OHS) management as they do to other key aspects of their business activities. Many features of effective OHS management are indistinguishable from those practices and measures used to achieve quality and business excellence. The safety measures include safety engineering, education and training, safety committees, supervisors' roles among others (<http://www.icsca.org.au>; Armstrong, 1999 and Beach 1985).

### **2.5.1 Safety Engineering**

According to Mamoria et al, 2001, adoption of proper engineering procedures to minimize and if possible, eliminate work hazards is the fundamental to any organized safety programme. New processes and machines are designed and full attention is paid to safety engineering in design, layout and installation. The most important of safety engineering is to eliminate the risks posed by operation of machines, by process of the manufacture of the products and by the structure and layout of plants and equipment. This was supported by Beach (1985) who said that the most foolproof of engineering for safety and health is simply to eliminate the hazard from machines or the structures at work place.

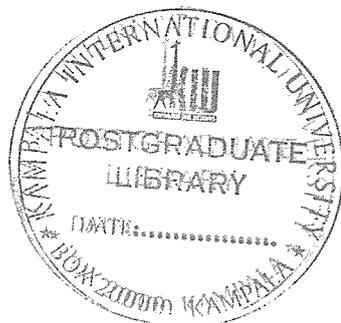
Safety equipment is made available to an employee at subsidized price or free of charge. The machinery that poses danger to the employee working on it is generally covered or

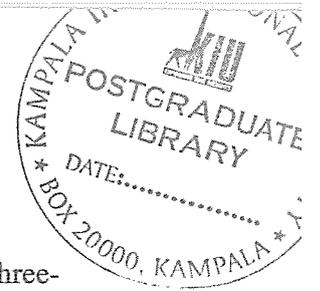
fenced carefully when it is in operation. Safety measures include glasses or plastic eye-shields to protect the eyes from the hazard of fire, glare, dust and fumes, hard protective caps to prevent head injuries, gas masks to prevent the inhalation of poisonous fumes, gloves to protect hands against acids and explosive materials, safety shoes, overalls, skin guards and safety apparel for protection of the body and all these provided for use of workers (Dales. Beach 1985, Mamoria et al, 2001)

Further, material handling is the most prolific source of accidents. The flow of materials at all stages of manufacture has to be properly planned to eliminate the hazards. The flow of work between machines and departments should be facilitated by provision of proper equipment, and there should be well designed and well marked storage spaces, aisles and roadways to ensure risk free performance of work, (Mamoria et al, 2001). In addition, there should be a well-designed system of detection, prevention and control of fire. For this purpose, adequate fire fighting equipments including foam, vapour, carbon dioxide, dry chemical fire extinguishers, high-pressure water lines, sprinklers, fire pads, sand and axes be maintained (Beach 1985; Armstrong, 1999 and Dessler, 2000).

Inflammable liquids and materials expose workers to a variety of risks during their handling and storage of them. It is necessary, therefore, to exercise at most care in handling and storage of such materials, preferably in underground tanks or in places which are at some distance from the place of work, or in safety containers with automatically closing lids. More still, fire fighting equipment and devices can be installed to prevent the outbreak of fire. The science of ergonomics should be used the outbreak to develop safer working conditions for employees. This science deals with the physiological and anatomical aspect of man and his interaction with the environment that he works in (Beach, 1985).

As an aid safety, colours are used to identify and mark out the dangerous parts of machine. According to Jucius, yellow or orange colours are used to indicate dangerous materials or parts of the equipments,, green, white, gray or black for safe materials or part of materials or part of machine,, blue for protective materials and red for fire fighting





and fire protection materials. The British Standards Institute has recommended a three-colour code: Red to indicate that a person should stop, Orange, giving a warning of danger and green to identify safety equipment, escape routes and first aid boxes. The Institute has also recommended should be square chequered with white except on fire fighting equipments and stop buttons,, the orange colour should be contrasted with white save on fire equipments and stop buttons and orange colour should be contrasted with black colour in alternate diagonal stripes. As an aid to those who are, colour blind, red may indicated with a circle round it, the orange with in equilateral triangle and green with in a rectangle.

### **2.5.2 Safety Education and Training**

Safety and health training usually is a part of orientation program. It also takes place at different points during the employees' career. Safety training can also reduce accidents at the place of work. Such training is especially appropriate for new employees. Employees should be trained in safe practices and procedures, warn them of potential hazards and work on their predisposition toward safety and health (Dessler, 2000; Ivancevich, 2001). Training is more concerned with immediate job knowledge, skills and work methods. Further more, safety education for all levels of management personnel and employees is a vital ingredient for any successful safety and health program. Education in this context concerns the development of proper perspective and attitude towards safety and health (Beach 1985; Mamoria et al, 2001).

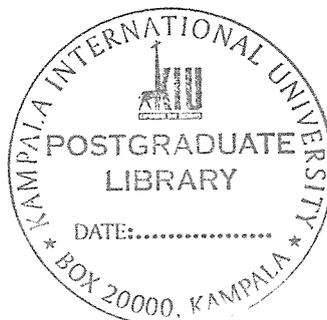
Top and middle management require education in the fundamentals of safety and health, and a need for effective accident preventive measure. The costs of accidents both human and cash costs must be brought to the attention of line management. Top management in large and medium-sized companies does not need to concern it self with detailed mechanics of accident prevention, but must acquire a sufficient awareness of safety fundamentals so that it will actively support the work of the safety and health department, and of middle and lower management in executing health and safety measures at work station.

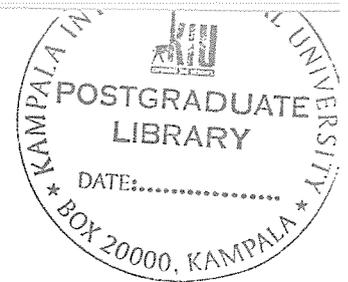
Safety director and his staff must undertake to provide extensive education and training for the first line supervisors. Supervisors must understand their key role in safety and health effort, namely, that they are primary responsible for preventing accidents (assuming they have adequate support from the above). Each supervisor must conduct his own safety and health training for his employees. This takes the form of both individual and on-the-job training and periodic safety and health meetings held in the department.

At employee level, there are two principal objectives to put in minds when training and educating the employees, that is, to develop safety and health consciousness and favorable attitudes and achieve safe work performance from each employee on the job. To achieve these goals, a number of things be done. At the time a person is hired, orientation by both personnel manager and the person's supervisor should cover such areas as the need for safe work performance, the hazards in his own department and job, the necessity for prompt reporting of any personal injuries, desirability of reporting unsafe conditions to the supervisor, and the general causes of the accidents. Each new worker be taught how to perform his job safely. This frequently takes a form of on-the-job training. The instruction in the working procedures must be integrated with instruction designed to achieve acceptable output and quality performance as summarized in Appendix X (Mamoria et al, 2001; Beach, 1985 and Herbert et al, 2000).

### **2.5.3 Top management commitment**

Top management in the organization is the one responsible for success or failure of any company-wide program, whether it is safety, health, training, research, or maintenance, the emphasis is given to program by Top Management (Beach, 1985). Therefore, active, visible, direct and consistent top-level management commitment and leadership is crucial to successful management of occupational health and safety. Top management's role includes establishing policy, approving objectives, providing resources, and regularly reviewing performance. Management review to regularly evaluate health and safety performance, the adequacy and effectiveness of the arrangements for the management of OHS and identify opportunities for improvement is particularly important. Top management is directly responsible for providing a safe workplace and promoting a safety culture (Mamoria et al, 2001)





Top management should establish a policy that includes commitments to prevent and reduce workplace related injuries and ill health, comply with legal requirements, recognize OHS as an integral part of its business performance and continually improve performance. This policy should be communicated to all employees and be implemented through appropriate arrangements.

More so, responsibilities, authorities, and accountabilities for implementing arrangements for the management of health and safety should be clearly identified, documented and communicated throughout the organization. Though health and safety functions can (and should) be delegated, top management is ultimately accountable for OHS. Employees responsibility for their own safety and that of others with whom they work should be established, in the context of arrangements that provide them with the resources, tools, training, ability and opportunities to work safely (WHO, 1995).

The organization should make effective arrangements for communicating between all levels and functions on health and safety at work issues as well as for employee involvement and consultation where appropriate. Employees should have an appropriate role in the design and implementation of health and safety programs.

The organization should implement a risk assessment procedure for identifying workplace and process hazards that pose potential or actual risks of injury or ill health. Hazards and risks should be prioritised so that they can be managed and controlled in a planned manner. The assessment should include risks to visitors or the public, emergencies and the impact of work by contractors, though contractors remain ultimately responsible for the safety of their own employees. Arrangements be made to provide specialist advice and services relevant to the nature of the organizations activities

The first goal in controlling hazards/risks identified by the assessments should be elimination of the hazards/risks by design. Application of the hierarchy of controls during design will lead to reduced risk in the workplace. The goal is to avoid bringing hazards

into the workplace by defining requirements and working with suppliers. Training, warnings and personal protective equipment are the last option used to control residual risk (Aswathappa, 1999).

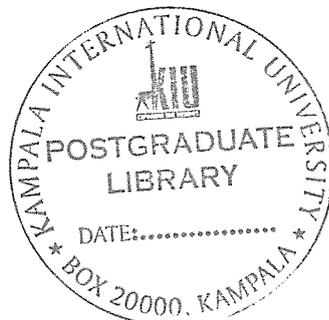
The organization should make effective arrangements to ensure the identification and application of up to date legal, contractual and other requirements applicable to health and safety at work. The requirements are translated into practical instructions so that affected personnel can assess the implications for compliance.

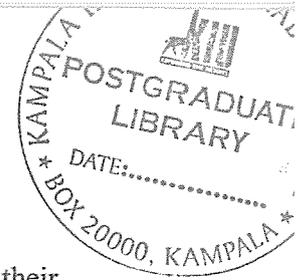
The organization should establish measurable OHS objectives to control reduce and, where practicable, eliminate workplace hazards and risks. Key performance indicators should be identified and monitored for each objective. The objectives should implement the organization's policy commitments (that is, to prevent, comply and improve), be feasible and consider other business objectives (<http://www.icsca.org.au>).

The organization should develop and implement programs describing whom, how, and when objectives can be achieved. These should include appropriate programs to control and, where practical, eliminate, risk in the workplace. Proactive leadership will promote a strong health and safety culture and safe behavior on the job.

The organization should take OHS into account when designing or changing processes and organizations, using new materials, tools or equipment, or making other changes. To reduce or eliminate existing hazards and prevent new hazards from entering the workplace changes be designed and implemented.

Finally yet importantly, top management should assess contractors with respect to their health and safety competencies, training and performance. Where appropriate, arrangements to address multi-employer workplaces may be agreed on. Implementing these arrangements should not change the legal relationship between the organization and its contractors. Contractors should themselves consider designing and implementing





arrangements consistent with this best measure to address the health and safety of their employees and those around them at the work site (<http://www.icsca.org.au>).

According to what has been discussed above, Top Management is like a control room for an industry because every program to address the problem of occupational hazard must be approved by the Top Management before it is implemented in any organization.

#### **2.5.4 Proper Selection and Placement of employees**

Reducing unsafe acts is one of the best measures, and to do this is to screen accident-prone persons before they are hired or recruited. Accidents are similar to other types of poor performance and psychologists have had success in screening out individuals who might be accident prone for some specific jobs. The basic technique is to identify the human trait (such as visual skill) that may be related to the job and the human traits screened include emotional and personality stability, visual skills, muscular coordination, employee reliability and genetics among others (Dessler, 2000).

According to studies carried out by, (Dessler, 2000), psychological test-especially test of emotional stability have been used to screen out accident-prone taxi cars drivers. Here the test was especially effective when administered disturbing and distracting conditions. In this case, researchers found that taxi drivers who made five or more errors in such tests averaged three accidents, while those who made less than five errors were averaged only 1.3 accidents.

Measures of muscular coordination- we also know that coordination is a predictor of safety for certain jobs. In one study, more than 600 employees were divided into two groups according to test scores on coordination tests. Results showed that the poorest quarter had 51% more accidents than those in better three quarter.

In addition to the above, good vision plays a part in preventing accidents in many occupations, including driving and operating machines. In a study (in paper sawmill) 52

accident free employees were compared with 52 accident-prone employees and the researcher found that 63% of non-accident group passed vision tests while 33% of accident-prone passed the test.

Several studies suggest that a test such as employee reliability inventory can help employer reduce unsafe acts at work place. The employee reliability inventory purportedly measures the dimensions such as emotional maturity, consciousness, safe job performance and courteous performance. The findings from this study were not definitive; the addition of the inventory to selection process did seem to be associated with reductions in work related accidents.

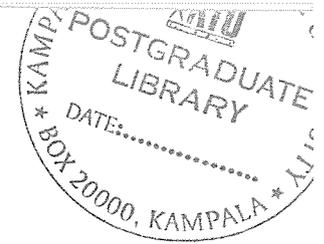
Last but not least, in the face of considerable ethical concerns, some have proposed genetic screening for reducing injuries and diseases at work place. This approach uses genetic tests which are based on the belief that individual differences in susceptibility to toxic exposures exists, in other words, some people are genetically more susceptible to, say, chemicals pollutants than others. Genetic tests might provide information that is predictive of an individual's health status on the job.

Of great practical importance is the fact that there is a definite relationship between these accident proneness tests and proficiency on the job. By selecting employees who do well, that is, score low on accident proneness tests, managers can reduce accidents and improve performance and the caliber of employees at the same time (Dessler, 2000)

### **2.5.5 Occupational Health Services**

Employees are generally uniform about the hazards to which they maybe exposed to and this inhibits the identification or recognition of the disease as occupational (Bruce, 1998). This is why only professional occupational health personnel (Rempel et al, 1997) may do protecting workers against any health and safety hazard that may arise out of work or conditions in which work is carried out. Off-services focus on the employees in relation to work and environment. Such services are aiming at promoting activities that prevent any adverse effects of work, working environment as mental and social wellbeing of a worker, the human resource essentials for economic and social development (Jeyaratnam,





1991; Bruce, 1998). Health professionals should seek frequent opportunities to tour work areas and evaluate job procedures, equipments and working conditions.

However, the type and extent of health services provided in many enterprises in Africa leave much to be desired (Alli, 1991). He adds that emphasis is placed on the desire, accident prevention, and medical care while areas like occupational environmental monitoring, ergonomics and rehabilitation are totally neglected and is supported by (Obua et al, 2002 and Bruce, 1998).

### **2.5.6 The Supervisors' Role**

The supervisor is a crucial link in the management chain and can therefore exert great influence on the health and safety in the organization because they are immediate control. They are the ones to keep constant watch for unsafe conditions or practices (Armstrong, 1999). Employees should be convinced that safety is mainly on the question of attitude and that safety awareness be constantly kept in their minds during work (Andrew et al, 2004). Supervisors can play an important role on social aspects because workers feel comfortable with considerate supervisor, the one who will show concern for their problems (Bhambra, 1999).

### **2.6.0 Research question (c) revisited. (Effects of occupational hazards on employee performance)**

Many studies have shown that ergonomic influence human performance. Ergonomic problems are important causes of poor quality deficiencies in terms of adverse work environmental conditions in appropriate design of technology and unsuitable work organization (Alcoute et al, 1999) supports this. Investment in workers in terms of health and safety is a means of improving productivity because a safe work environment creates willingness and interest in the work (Armstrong, 1999) and is supported by (Dessler, 2000). Example of ergonomic solution in the hotel industry where employees move up and down several times a day and where staff had had a serious musculoskeletal symptoms, productivity was low and absentee rater was 12% as given by (Bodeker, 2000). The hotel industry was carefully observed and the work analyzed to identify frequent and repetitive movements and heavy lifting. Heavy porcelain plates were

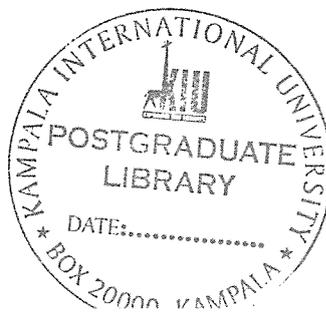
replaced with plastic plates. Changes were also made in the method of plate lifting so that items were lifted with trolleys.

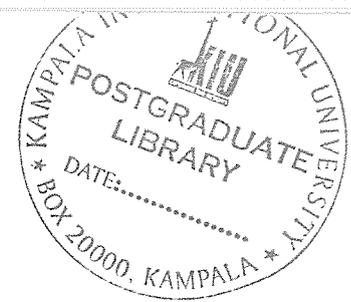
The changes alleviated stressful work postures and repetitive movements and thus had a positive effect because absence and a number of workers in the hotel were reporting reduced musculoskeletal problems. Similar changes made in the hotel industry with similar work problems resulted in decreased rate of absenteeism from 13-10% and a 40% reduction in number of people who reported musculoskeletal (Bodeker, 2000).

Sheraton Kampala hotel (FUE) emphasizes good relationship between hotel employees. They have discovered that this leads to increased productivity because the staff always reflects pleasant personality quality and dedication as this keeps customer royalty.

Another study was carried by Lipold, 2001), established that employees elevator company suffered many sprains because of lifting heavy elevator components on to the elevators counter weight frame. To ease the strains, special magnets were developed to help in lifting and installing elevator components. This led to increased productivity because what used to take two workers a full hour took only fifteen minutes after the changes and this saved many of employees' hours a year. The risk of injuries and absenteeism also reduced drastically.

Sexual harassment has a direct impact on a company's profitability and economic efficiency when the employees' productivity and motivation are reduced by having to work in a climate in which the individual workers' integrity is not respected. Additional expenses are the costs of investigating and defending complaints, legal costs, as well as the business cost of losing public goodwill after negative publicity. Reports indicate that sexual harassment costs a typical Fortune 500 company approximately US\$ 6.7 million each year because of lowered productivity, low morale, and increased absenteeism and turnover (Wilson, 1995). Further still, sexual harassment results in damaging emotional, physical and work-performance stress; it leads to absenteeism, sick leave, being less efficient at work, or leaving the job to seek work elsewhere (Wilson and Walker, 1993)





Additionally, stress hazards affect employee performance both positively and negatively as forwarded by different researchers. Research evidence on the relationship between demand-control-support and performance at work is extremely limited. Focus has been more on associations between demand-control support and health/well-being. However, there is some evidence to suggest that different levels of job demands in combination with job control can have an effect on performance (Sargent and Terry, 1998). Two recent studies (Searle et al, 2001) have examined the impact of demands, control and support on a mail-sorting task. These studies suggested performance was poorer in conditions of high demand and low control although this was not influenced by social support. Further, a linear approach was used in assessment of workplace hazards effect on performance. This indicated a cumulative effect in terms of deficits on tasks measuring speed of response to a target. Similarly, noise and night work in combination tended to produce greater deficits in terms of mood and performance than the experience of either stressor in isolation. This approach was also able to predict fluctuations in performance over the course of a testing session, the working day and the working week, allowing assessment of longer-term effects of exposure (Johnson and Hall, 1988).

In connection to the above, though most stress is probably harmful from the physical health standpoint, not all stress is deleterious to human performance. Indeed, a certain tolerable level of stress can incite employees to action and generate good performance (Beach, 1985). This is supported by studies conducted by (Dessler, 2000), which indicate that some people, for example, work well only when under little stress and find they are more productive as deadline approaches. Others find that stress may result in a search that that leads to a better job or to a career that makes more sense, given more aptitudes. A modest level of stress may even lead to more creativity if competitive situation results and new ideas are generated at workstation.

The employees in UMI are involved in tasks that involve lifting, stressful postures and repetitive movements. According to UMI reports 2003 and 2004, reveal musculoskeletal problems as being high and the cases of workers affected not identified. It was therefore

important that the actual causes of occupational hazards identified and solutions to alleviate the problems be recommended because the studies confirmed that occupational health and safety measures have positive effects on employee performance. Generally, the researcher faced the problem of limited literature about the impact of occupational hazards on employee performance in production sectors due limited time and financial resources.

## 2.7 Conclusion

It can be observed from the review of the literature above that occupational health and safety hazards have an effect on the performance of employees. The studies carried out in developed countries have more or less pointed to it. This makes it important to establish the occupational and safety standards in Uganda.

Additionally, existing theory and research studies have established relationships between employee performance and occupational health and safety hazards. However, these conclusive results have mostly been established overseas and there is need to carry out similar studies on domestic industries operating in the local settings for example in Kampala district. Practical findings would differ from earlier findings due to differences such as level of development and environment hence the need for this study.

More so, this study has highlighted several serious causes for concern and has shown the need for further study of how occupational health and safety standards has been carried out in industries and what the effects of this practice will be on the performance of an organization's employees.





### **3.0 CHAPTER THREE: RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter describes the research methods used in this dissertation and examines the appropriate methodology used during the research. The chapter also considers the research design, population scope, sampling scope, the research problem, research questions and types of empirical data collected. The chapter also specifies the sources of empirical data and techniques used in analyzing the data and finally the study looks at the limitations of the study.

#### **3.2 Research Problem (Restated)**

Employees in UMI are exposed to occupational hazards, which cause accidents and diseases. According to UMI's Quarterly Medical Report (2003) and Report on Quality management, (2004), the actual cause and effects of these hazards have neither been quantified nor analyzed and the health and safety measures in the place do not seem to be sufficient to address the existing problems. Occupational hazards cause, accidents and illness, which may affect the productivity of the worker and impact negatively on the performance. There was a need therefore to investigate the actual causes and possible effects on the performance of employees. Additionally, evidence was further collected to answer the following research questions below.

- a) What are the causes of occupational hazard and what are possible effects do they have on the health of the employees?
- b) What is the effectiveness of existing health and safety measures in the industry?
- c) What is the extent to which occupational hazards affect employees' performance?

#### **3.3 Research Design**

This study was a cross-sectional survey one that employed both qualitative and quantitative methods. The study involved a systematic collection of information; identifying occupational hazards and analyzing their effects on the employees' health, performance and making conclusions and citing areas of improvement. This method was identified as the most appropriate approach as observed by (Hair et al, 2003). Surveys are designed to collect data from the population of varied interest. This is done mainly using interviews and questionnaires as a means to solicit data from the area under study. And

the researcher concentrated on questionnaires to collect data despite other methods used in data collection.

In addition, as noted by (Perreaut et al, 2002), the survey method describes the nature of existing conditions and outcomes in order to determine the relationship that exists between variables. Beside, the method allows close and direct contact between a Researcher and respondents through face- to- face interaction, and hence this further helps to promote firm basis for generalization of findings regarding the research problem.

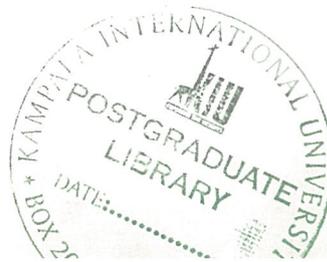
This approach thus, provides basis for drawing logical conclusions that can be relied upon drawing strong recommendations as a way forward. Hence, in the light of the above, survey approach was sought to be the best design to use for the study of the analysis of causes and effects of occupational hazards on employees' health and performance.

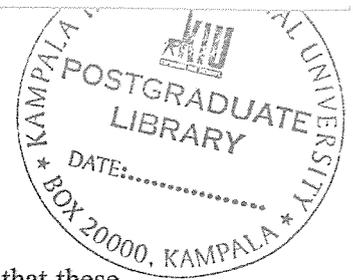
### **3.4 Selection of Respondents**

Purposive random sampling was used to select the respondents from different categories of staff members in UMI. According to Saunders et al, 2003 purposive sampling or judgmental sampling enables the research to select cases that will enable him to answer research questions to meet his research objectives. They said that this form of sampling is suitable when a researcher has a small sample. This inspired the author to use this method of sampling since the sample size is small with 50 respondents. See table 1.

This technique ensured representation of each group providing samples to participate in the study. This also provided a greater opportunity in ascertaining a high degree of accuracy and generation of the results. More so, the investigation based on varied respondents with in an illustrative example (UMI) helped the Researcher to save time and cost of data collection

In connection with the above, two key informants from senior mangers and supervisors were selected using the same method of purposive sampling. Thus, the author used this technique because he deliberately intended to get clarification and supplementary





information from key leaders of the plant (UMI). The researcher then assumed that these leaders have a comprehensive picture on how occupational hazards affect the workers' health and their performance from various departments in UMI.

On this basis, the researcher sought the key informants from UMI in cross-examining the already collected information from respondents as an opportunity of increasing the degree of accuracy and the reliability of findings. Ideally, this approach would further ensure minimization of costs through quick gathering of information with in reasonable vicinity as well as minimization of standard errors.

### 3.5 Population Scope

The population included UMI's staff in categories of senior managers, supervisors, employees who occupy offices and other employees from all departments. The researcher wanted to include in company doctor/nurse who was important to this study but unfortunately, the company had none and used hire one whenever the need arises. The total population of UMI is 75 employees as categorized in correct figures as shown in table one.

### 3.6 Sampling scope

Table 1: Sampling scope

Types of respondents	Population	Sample size	Actual response
Senior managers	7	5	3
Supervisors	6	5	5
Workers that occupy offices	15	10	8
Group employees	47	30	25
Total	75 (100%)	50 (66.7%)	41 (82%)

Appendix V and SPSS output one

The researcher used Purposive type of sampling to determine which staff to interview, with intention of maximizing the number of respondents. Purposive sampling was used because there were four significant categories that a researcher was interested in getting primary data from.

These were senior managers, supervisors, employees who occupy offices and group employees in UMI. Out of a population of 75 employees, the researcher decided to select

a sample size of 50 respondents for quick and easy analysis. For that matter, the researcher distributed structured questionnaires to 5 managers, 5 supervisors, 10 employees who occupy offices and 30 other employees and unfortunately, 3 out of 5 managers responded, 8 out of 10 employees who occupy offices responded and save supervisors who responded all. Thus 41 out 50 participated in the study as shown in the above table one.

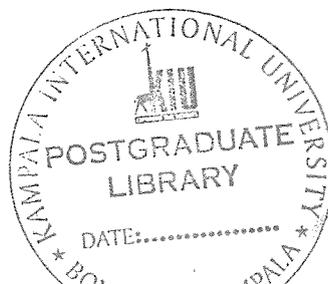
### **3.7 Procedures Applied in Data Collection**

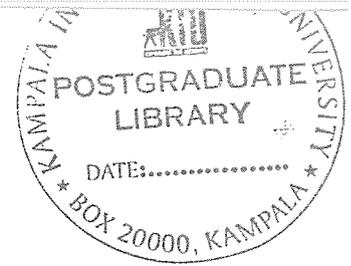
Here, before the researcher interviewed prospective respondents, a letter of introduction from the course director KIU was served. This was to support the researcher's verbal explanation to respondents on why the survey was being carried out and respondents tried to sacrifice their time to participate in the study. This was done to create natural courtesy with the intension to establish good working relationship with the respondents. Filling the questionnaires with each employee who was not well versed with the language lasted for 10 minutes that saved time for the researcher.

As a strategy to create support between researcher and respondents, prior information on subjects to be interviewed upon was sent in advance to the interviewees. This was intended to give respondents enough time to think about the topic as this helped the respondents to pick more interest in the topic and prepare to give well thought answers.

Further more, before meeting the respondents, appointments were sought and granted by the general manager of UMI. Personal administration of questionnaires took place during working hours at the plant. However, some informal interactions continued whenever the chance arose. This helped the Researcher to supplement on information from official version.

More so, besides using formatted instrument guides, the informal reports created between the researcher and respondents helped to generate a number of other key issues that facilitated the study to be more objective in analyzing the findings.





### **3.8 Sources of Data**

There are two general sources of data, which include both primary and secondary sources (Hair et al, 2003). In addition, the researcher applied both primary and secondary sources to get literature for the research study.

#### **3.8.1 Primary Sources of Data**

Primary data are raw data and structure of variables that have been specifically collected and assembled for a current information research problem or opportunity situation (Hair et al, 2003). Therefore, primary sources of data provide first hand information that produce output in both chapter four and five. Thus, primary data was obtained using the following instruments of data collection

#### **3.8.2 Person Administered Questionnaires**

Person administered survey is the one that is characterized by the presence of trained interviewer who asks questions and records the subject answers (Hair et al, 2003) as see in appendix I. Further more, this method was used because the information was known from the out set (Sekaran, 2000). This instrument (Appendix I) was administered to group employees, mainly because the respondents were not well versed with language (Hair et al, 2003). Some were illiterate and the Researcher had to employ services of a translator. In addition, the information on causes and effects of different occupational hazards was collected from this group.

#### **3.8.3 Self Administered Questionnaires**

Self-administered survey method refers to a technique in which respondents read the very questions and records his or her response without the presence of trained interviewer (Hair et al, 2003). This is advantageous due to its low costs and less interview bias (Hair et al, 2003). Thus, that is why the Researcher resorted to the fore mentioned method to collect primary data. See Appendices II-IV.

Additionally, these instruments (Appendices I-IV) were administered to the rest of respondents because they were well versed with English, literate and were in position to analyze complex issues (Hair et al, 2003) and because the survey was confined in one processing plant (UMI). It was easy for the Researcher to collect the complete response

with in short time and any problem regarding the questions was clarified on spot (Sekaran, 2000). See Appendices II-IV.

#### **3.8.4 Senior Managers**

Information regarding the existence and effectiveness of occupational health and safety measures/services in the plant was gathered from this group because it consists the policy makers and implementers of some key issues in the plant about safety and health of employees. See appendix II.

#### **3.8.5 Supervisors of employees**

This group provided the information quality and timeliness of services of employees. They also gave information on the existence and effectiveness of occupational health and safety measures/ services in the plant because they are implementers of management's decisions (Prasad, 2001) and therefore were in position to give information where possible. See appendix III.

#### **3.8.6 Staff Occupying Offices in UMI**

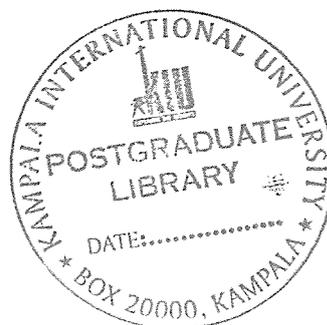
The information regarding quality and timeliness of services of employees was collected from these respondents; because they are regular users of services from group employees in the plant (UMI). See appendix IV.

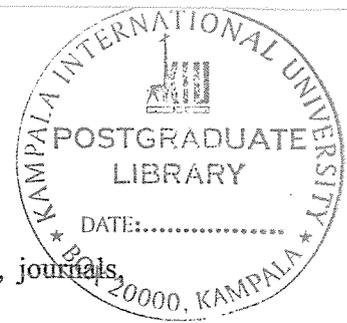
#### **3.7.6 Secondary Data Sources**

Secondary data are historical data structures of variables previously collected and assembled for some research problem or opportunity situation other than the current situation (Hair et al, 2003). This type of data is reflected mainly in chapter one and two of this research. The secondary sources of data are classified into two groups, that is, external and internal sources of the data.

#### **3.8.7 Internal and External Sources of Secondary Data**

The logical starting point for this type of source is the company's own internal information. These include health quarterly reports, company's memos, and manuals





among others. Secondary data was also collected using the library sources, journals, textbooks, reports and Internet articles and newsletters.

### **3.9 Research instruments**

The research instruments used for collection of primary data from UMI staff were structured questionnaires. They were both close and open ended. The open-ended questions were advantageous in that they presented no response options to respondents. That is the respondents were instructed to respond in their own words (Boyd et al, 2000). This gave the respondents full participation in the study. Additionally, a multiple category of closed ended questions were used in order to give respondents a variety of options to those that had little time to attend to my questionnaires. This type of questions eased the exercise since it took few minutes to fill the questionnaire.

#### **3.9.1 Questionnaire**

Questionnaires were administered to all respondents so the question type used was mainly structured. The researcher opted for this research instrument to allow easy quantitative analysis in consideration of busy schedules that the respondents had. A five point likert scale was used to ease quantitative analysis (Saunders et al, 2003). All respondents were briefed before the administration of the questionnaires, to establish rapport with respondents while introducing the survey. This gave the researcher an opportunity to provide clarifications sought by respondents on the spot, and to collect the questionnaires immediately after they were completed. This facilitated high response rate of 82%

#### **3.10 Measurement of variables**

The variables of the study included the occupational hazards as independent variables. Occupational hazards were measured against performance, which constituted the dependent variables of the study. Occupational health and safety measures were intervening variables of the study.

#### **3.11 Data Analysis**

Response pattern as indicated before the production of quantitative and qualitative type of data. Qualitative data were collected in order to clarify on some of quantitative data collected as seen from the primary data collection. While qualitative data was of

continuous process applied in the study and during data collection, all the analysis based on the identification of research problem (Hair et al, 2003) as discussed in chapter one. Presentation of the findings was done in tables to show descriptive statistical and cross tabulation of the data.

The quantitative data was entered, edited, coded and analyzed using the Statistical Package for Social Sciences (SPSS). This analysis was mainly descriptive and cross tabulation, regression analysis, and R-square tests were used in order to realize the different objectives of the study. Mean on all variables were run to examine the existing patterns and trends. Significance (F) change was less than 0.05 that showed the significance of the research problem. This package is useful because it eased the burden of analyzing the data manually that would have consumed a lot of time of the Researcher. Additionally, the package is user friendly. Thus, all the data (both quantitative and qualitative) were used to examine and interpret and examine how occupational hazards affect employees' health and their performance in UMI.

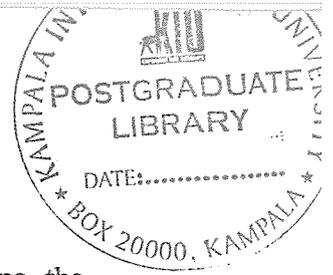
### **3.12 Limitations of the Research**

The researcher-employed person administered survey to employees who were not well versed with English and the researcher provided the services of interpreting the language for them. During data collection, whenever the Researcher could read them the statements under assessment in the study, some employees refused deliberately to identify the correct response because they thought to receive heavy punishments from the supervisors and administrators however much the researcher tried to the importance of the questionnaires used. This problem was common in processing section. This problem can as well affect the final findings of this study. The researcher was also constrained by time as the study run for approximately four months.

### **3.13 Conclusion**

The chapter reviews in depth the appropriate methodology in this research work taking into consideration of the first two chapters that is introduction and literature review. The chapter describes the research problem and questions, the purposive research strategy, the





procedure used in data collection and analysis, the population and sampling scope, the deductive research approach, the research setting and limitations of the study. The chapter further analyzes the choice of data collection and the suitability of data collection medium and finally the chapter looks at the strategy for data processing and analysis especially the use of statistical package for social sciences (SPSS).

## **4.0 CHAPTER FOUR: PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS**

### **4.1 Introduction**

This chapter deals with presentation, analysis and discussion of findings under the objectives and research questions of the study. Thus, collected data is intended to answer the research questions and enable the researcher draw a reasonable conclusion on the study basing on the findings as discussed below

### **4.2 Causes and effects of occupational hazards on employees in UMI**

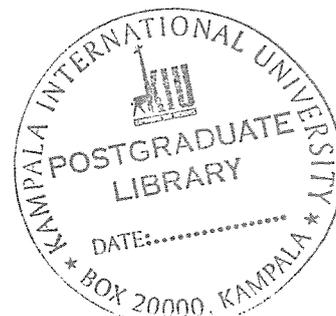
Descriptive analysis was used to review the nature of hazards and possible effects of these hazards on the health of employees at Uganda Meat Industries. According to this method, the means from 1.0-2.4 indicate strongly agree and agree, 2.5-3.4 indicates not sure and means from 3.5 to 5 indicate strongly disagree and disagree respectively.

#### **4.2.1 Physical Hazards**

Respondents indicated that, they are actually exposed to very minimal amounts of dust with a (Mean = 3.800). However, they pointed out that they are exposed to a lot of noise (Mean = 2.12) and this could impair one's sense of hearing. This implies that there is a possibility of failing to hear warning cries from the counter parts of the impending danger as put forward by Mamoria et al, 2001. Therefore, this increases the rate of accidents in the plant that in turn reduces the performance of employees. It is further argued that noise accelerates the normal loss of hearing that occurs, as we grow older, and that every one is affected if exposed to noise long enough and at high intensity, this poses a great danger on the health of employees in UMI.

Additionally, the researcher also noted that UMI's management has tried to protect its employees from calamities that could befall them because of heat, fire and electricity. This is because employees disagreed with the fact that, they were being exposed to electric live wires (mean = 4.2000), reported that they are not at a high risk of fire at their work place (Mean = 3.56) and are free from extreme heat levels (Mean = 3.880) as shown in table 2.



**Table 2: Causes of Physical Hazards**

Descriptive table for various physical occupational Hazards			
Physical Hazards	Minimum	Maximum	Mean
I always use improperly guarded machines	1.00	5.00	3.4800
I risk tripping and falling because of my work environment	1.00	5.00	2.8261
I'm exposed to dangerous machines and tools	1.00	5.00	3.0833
I'm exposed to a lot of coldness	1.00	5.00	2.6800
I'm exposed to a lot of dust	1.00	5.00	3.8000
I'm exposed to a lot of noise	1.00	5.00	2.1200
I'm exposed to electric live wires	1.00	5.00	4.2000
My work environment is at high risk of fire	1.00	5.00	3.5600
My work environment is poorly ventilated	1.00	5.00	2.5000
My work expose me to a lot of coldness	1.00	5.00	2.7083
My work exposes me to a lot of heat	1.00	5.00	3.8800
My work exposes me to a lot of vibrations	1.00	5.00	2.7200
My work involves a lot of heavy lifting	1.00	5.00	2.9167
My work involves a lot of standing	1.00	4.00	2.0000
My work surface is always wet and I risk slipping	1.00	5.00	2.9583
There is a lot of insufficient light in my work environment	2.00	5.00	3.0400
There is inadequate safety devices at work place	1.00	5.00	3.0000

Source: primary data

#### 4.2.2 Ergonomic Hazards

According to this research, employees revealed that they are exposed to poor seats as they disagreed with presence of comfortable seats (mean = 3.7917), excessive bending (mean = 2.4583), repetition (mean = 2.0000) and standing for long hours in angular postures (mean = 2.3333) respectively. This implies that employees in UMI are exposed to ergonomic hazards as shown in table 3. Therefore, different scholars like Andrew et al, (2004) and Silvin, (2000) argued that, exposure to fore mentioned ergonomic hazards is associated with musculoskeletal problems like back pain, injuries like, wrists, fingers and upper and lower back neck, shoulders upper and lower arm, injuries among others. Thus,

the ergonomic hazards as seen are not the best ally with health and the performance of employees in the plant, special attention should be given to address this problem.

In connection with the above, the plant has relatively tried to control causes of ergonomic hazards because employees disagreed with presence of boredom (mean = 3.5000) and monotony in performing work (mean = 3.5000). This indicates that the management in the plant is at least concerned with the health of its employees.

**Table 3: Ergonomic Hazards**

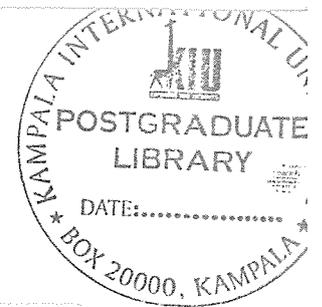
Ergonomic Hazards	Minimum	Maximum	Mean
I always bend a lot in order to perform my work	1.00	5.00	2.4583
I have to stretch a lot in order to perform my work	1.00	5.00	3.0000
I have to work in the same position for long time	1.00	5.00	2.6087
I'm assigned one task for a year without changing	1.00	5.00	3.5000
I'm ever bored at my place of work	1.00	5.00	3.7917
My job is too demanding	1.00	5.00	3.1667
My job is highly repetitive	1.00	4.00	2.0000
My work involves standing for long hours in angular postures	1.00	5.00	2.3333
I am comfortable with seats in my office	2.00	5.00	3.7917
My job involves a lot of movements	1.00	5.00	2.5000

Source: primary data

#### 4.2.3 Chemical Hazards

From this research, the researcher observed that nothing was reflected in the findings as the causes and effects of chemical hazards in the plant because, most employees disagreed with the presence of such a problem and others were not sure about it as reflected in table 4. However, in the researcher's view, this does not mean that, chemical hazards do not surface in UMI but the skills of the researcher could not let him diagnose the whole matter, as it required medical experts. Thus, this would be the best area for further research in public health fields.



**Table 4: Chemical Hazards**

Chemical Hazards	Minimum	Maximum	Mean
Does generator produce a lot of fumes in your section?	1.00	5.00	3.7917
Do machines in production rooms produce a lot of fumes?	1.00	5.00	3.7917
Have you ever been affected by chemicals used in production process?	1.00	5.00	3.3750
Is the proper control of poison for killing rodents and other insects?	1.00	5.00	2.8696

Source: primary data

#### 4.2.4 Stress Hazards

Stress is a work-related disease of multicausal origin and is a physical or physiological stimulus that produces strain or disruption of the individual's normal physiological equilibrium. From this research, it was observed that, employees in UMI are exposed to stress hazards because employees agreed that, there is existence of poor communication (mean = 2.3750), job insecurity (mean = 2.4250), pressure on employees (mean = 2.2500) and excessive bending when performing the work (mean = 2.4417) as shown in table 5. Poor communication in an organization brings a lot of confusion and misunderstanding among employees like conflicts that in turn result in stress as cited at <http://www.cdc.gov/niosh/stresswk.htm>. Additionally, when employees are exposed to job insecurity, they are ever on tension since they aren't certain of their future and fear for unemployment is created which is the main cause of stress. In the presence of fore mentioned stress causes, employees experience musculoskeletal problems like job-strain and discomfort as supported by Vahtera et al, (2000).

In a related development, the researcher observed that supervisors do not perform their duties because employees agreed with the existence of their little control (mean = 3.4348). This implies that there is poor working environment in UMI since the group employees do not recognise the work of supervisors. Moreover, these are implementers of policies formulated by top management. Thus, leading to overworking and poor coordination among the group employees that rise into stress as cited at <http://www.cdc.gov/niosh/stresswk.htm>. However, the management also tried to control

frequent rests since the respondents disagreed with its existence (mean = 3.7826). This means the plant was aiming at reducing monotonous rest that is a source of stress as put forward by Karasek et al, (1990).

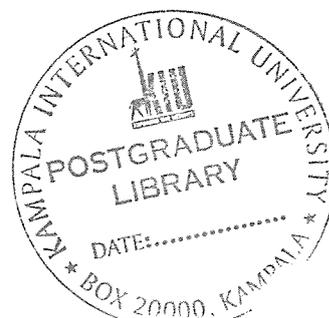
**Table 5: Stress Hazards**

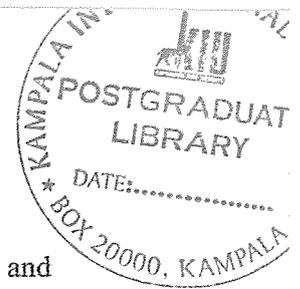
Stress Hazards	Minimum	Maximum	Mean
There are dangerous physical conditions like crowding, noise, air pollution in your section	1.00	5.00	2.6667
I always bend a lot in order to perform my work	1.00	5.00	2.4417
Have you ever been put on pressure to complete a given task in your section?	1.00	5.00	2.2500
I am always facilitated by the management after assigning a task to do.	1.00	4.00	2.5583
My job is insecure.	1.00	5.00	2.4250
Management always promote employee on melt.	1.00	5.00	3.1739
There is poor social environment and lack of support or help from coworkers and supervisors in my section.	1.00	5.00	3.4000
Top management always encourages me to take part in decision-making in my section.	1.00	5.00	2.9167
There is poor communication in the whole plant.	1.00	5.00	2.3750
There is lack of family friendly policies at my place of work	1.00	5.00	3.0000
My supervisors provide little sense of control in my section	1.00	5.00	3.4348
I always carry heavy loads in my section.	1.00	5.00	2.9167
I am always given frequent rests everyday in my section.	1.00	5.00	3.7826

Source: primary data

#### 4.2.5 Social Hazards

From the findings of the research, it was noticed that employees in UMI are exposed to social hazards. This is because; respondents reported that they work for over time (2.4083) and payment for overtime is not enough (mean = 4.1667) and, this is evidenced by, working during weekends (mean = 1.7391) as shown in table 6. This implies that employees are not contented with rewarding system of the company and this leads to various health problems. According to Peter et al, (1997), high effort with little rewards is





associated with cardiovascular risk factors like hypertension, high blood pressure, and smoking among others.

In addition, the researcher found out that there is good relationship in the plant. This is evidenced by, cooperative workers (mean = 2.2174) and willingness of their bosses to listen to their problems (mean = 2.0870) as shown in Appendix VI. This shows the management tried to control some of social problems in the plant, which is important as it maintains good health of workers and their performance. Additionally, workers disagreed with irregular working hours (mean = 3.7826) and supervisors could comment (mean = 2.4783) on the work done as revealed in table 6. This indicated the element of good working environment and cooperation in the plant.

More still, the research findings revealed that employees in UMI are exposed to job insecurity. This is because none of them signed contract with the company (mean = 4.1667) as shown in Appendix VI. This indicates that everyone is worried about his or her future with the company since they cannot foresee what will happen next. That is why employees force themselves to work when they are sick (mean = 3.8750) and cannot refuse hazardous work (mean = 3.5833) as indicted still in Appendix VI. Thus in case of a simple mistake, they think of getting expelled from their existing jobs. According to Bartley et al, (1994), unemployment affects psychological well-being, social participation and physical health of employees. Worse still, considerable negative health outcomes of unemployment are in the early years of potential employment that can have a considerable impact over the remainder of the life course as put forward by Bartley et al., (1999). Thus, the plant should try to solve that problem in order to maintain good health and performance of employees.

Finally yet important, employees in UMI are exposed to sexual harassment. This is because from the findings, respondents reported that they are fond of talking explicit conversations about sex in sections in UMI. This implies that, verbal sexual harassment, is being exercised in the plant as put forward by Wilson, 1995. According to Lebeer et al, (2003), young people between the ages of 20 and 40 years are more likely to report acts

of sexual harassment. Indeed, from the findings, the respondents' demographic features (Appendix V) indicate that employees who are affected, are in range 20-40 years constitute 73.2% actual sample size. Sexual harassment is a bad vice among employees as it can lead to anxiety, tension, irritability, depression, inability to concentrate, sleeplessness, fatigue, headaches, and other manifestations of stress at work (Wilson, 1995)

**Table 6 Social Hazards**

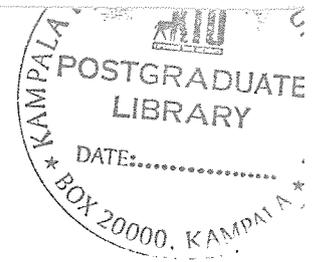
Social Hazards	Minimum	Maximum	Mean
I always work for long hours without resting	1.00	5.00	2.6818
I always work for overtime at my work place	1.00	5.00	2.4083
I am satisfied with the remuneration for overtime.	3.00	5.00	4.1667
I am always given too much responsibility in my section	1.00	5.00	2.8261
I always work for long hours without rest	1.00	5.00	3.0435
I have to work at irregular hours (at night and lunch hours)	1.00	5.00	3.7826
I work during weekends	1.00	5.00	1.7391
I'm always very exhausted at the end of the day	1.00	5.00	2.0435
I receive my salary promptly	1.00	5.00	3.5000
I'm satisfied with what I earn	2.00	5.00	3.1500
I'm always paid overtime	1.00	5.00	3.5000
I'm happy with amount paid for overtime	1.00	5.00	3.8636
I'm satisfied with management concern for my health and safety	1.00	5.00	3.2273
I'm effectively represented in the decision-making organs of the plant	1.00	5.00	2.9565

Source: primary data

#### 4.2.6 Effects of Physical, Ergonomic Hazards

From the findings, the researcher observed that employees are affected by physical hazards in the plant. This is because employees reported that they are exposed to injuries like cuts (mean = 2.3333), falls (mean = 2.2083) and other health complications like backache (mean = 2.0435), chest pain (mean = 2.3333) and headache (mean = 2.2083) as





shown in Appendix VII. This is supported by other research findings by different researchers like Lebeer et al (2003)

Additionally, employees in UMI are affected by ergonomic hazards due to presence of backache, chest pain, and headache because of standing for long hours while performing their duties, lifting heavy loads. These findings therefore, are supported by other researchers like Andrew et al, (2004); Dessler (2000) among others.

#### 4.2.7 Effects of Social and Stress hazards

From the findings, it is observed that employees in UMI are affected by social hazards due identified cases of fear (mean = 2.0833), anger (mean = 1.7391), fatigue (mean = 2.1667), headache (mean = 1.8750) and tension (mean = 2.2273) in the plant as shown in table 7. The effects of social hazards almost affected all sections in the plant. This implies that social hazards are predominant in the plant.

Further more, according to the findings, the researcher found that employees in UMI are also affected by stress hazards since some of its causes and effects like fear, tension, anger and headache with their respective means were revealed in table 7 below.

**Table 7: Effects of Social and Stress hazards**

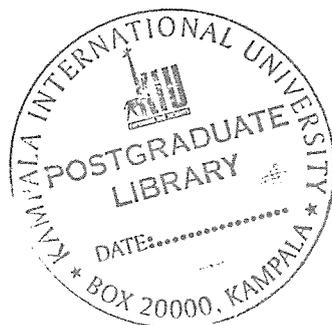
Conditions ever suffered as a result of working conditions	Minimum	Maximum	Mean
Anger	1.00	5.00	1.7391
Fear	1.00	5.00	2.0833
Frustration	1.00	5.00	2.6087
Hatred	1.00	5.00	3.0870
Fatigue	1.00	5.00	2.1667
Headaches	1.00	4.00	1.8750
Depression	1.00	5.00	3.0000
Tension	1.00	5.00	2.2273
Valid N (listwise)			

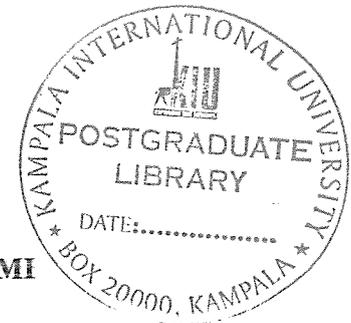
Source: primary data

#### 4.3 Existence of Effective Health and Safety Measures/Programs in UMI

From the findings, it was revealed that, UMI has limited measures in place because the supervisors reported that, the plant has no safety committee (mean = 3.6667), proper records of all accidents, injuries and illness from all employees (mean = 3.5333), safety equipments are not available to all employees (mean = 4.0000) as shown in table 9. Therefore, this implies that, life of employees in UMI is on God's mercy and poor working conditions in the plant cannot be ruled out. According to OSH Act 1970, every USA's organisation with more than 11 employees must have MSHP and is supposed to keep accidents, injuries and illness records of all employees (Dessler, 2000). UMI should have bench marked such policies to create healthy working environment and increase performance of employees in the long run.

Additionally, senior managers also disagreed with provision of PPE to all workers (mean = 3.6667) and reported that employees do not perform their duties in the right manner (mean = 4.0000) as shown in Appendix VII. This means that the plant is careless in putting and implementing health and safety measures in place. Weak labour laws in Uganda as cited by NOTU, (1996), further gear this bad culture in manufacturing sector. However, managers tried to implement some of existing policies on health and safety in all areas in the plant (mean = 2.0000) as shown in Appendix VII.



**Table 8: Existence and effectiveness of health and safety measures in UMI**

Existence and effectiveness of health and safety measures in UMI	Minimum	Maximum	Mean
The plant has health and safety committee to report occupational hazards	2.00	5.00	3.6667
The plant has proper reporting mechanism in place in case of any accident	3.00	5.00	3.6667
Safety coordinators assist the plant with safety seminars and training	3.00	4.00	3.6667
The plant keeps proper records of all accidents and injuries from all employees.	3.00	4.00	3.5333
The industry conducts regular employees' training on occupational hazards	2.00	4.00	3.0000
Management hold regular meeting meetings with the specific categories staff and listen to their problems	2.00	4.00	2.6667
The plant provides health services to employees	2.00	4.00	2.6667
Safety equipment is made available to an employee at subsidized price or free of charge	2.00	5.00	4.0000

Source: primary data

#### 4.3.1 Health Services

From table 9 below, the researcher found that the plant is characterized by giving poor health services to employees because most senior managers were not sure of providing such services. However, some senior managers agreed that employees were being provided with curative services (mean = 2.0000) as shown in table 9. This implies that regardless of the presence of limited measures to address problems created by occupational hazards in the plant, at least the plant has tried to solve some of the health problems though it has no qualified doctor or nurse. Generally, poor services provided by the management are as the result ineffective safety and health measures in the plant.

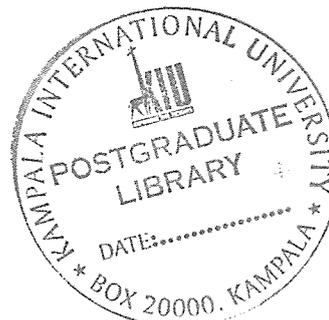
**Table 9: Health Service**

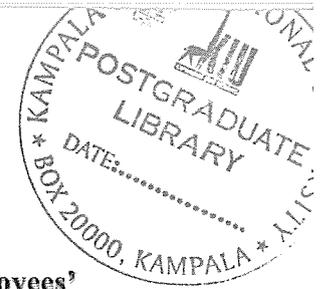
Health Services	Minimum	Maximum	Mean
Plant promotes health and safety	3.00	4.00	3.3333
Plant provides curative services	2.00	2.00	2.0000
The plant provides first aid	2.00	5.00	3.0000
Plant carryout routine medical examination from all employees	2.00	5.00	3.3333
Plant provides counseling services to workers with related problems	3.00	3.00	3.0000
Plant is familiar with working conditions of all employees	2.00	3.00	2.6667
Plant carries out regular supervision of all working environment	2.00	3.00	2.6667

Source: primary data

#### 4.4 The Extent to which Occupational Hazards Affect Employees' Performance

The researcher used regression analysis to determine the extent of which occupational hazards affect employees' performance in UMI. Thus, regression analysis results revealed that occupational hazard effects account for 56.5% of the variance in employees' performance (Adjusted R Square = .565). In other words, if UMI failed to produce 100 tones of beef products with in a week, according to our model, the company will have failed to produce 56.5 tones because of the effects of the occupational hazards that employees are exposed to. The researcher's regression model was significant (Sig. F Change = .000). That is, there is high correlation between occupational hazards and performance as illustrated in table 10





**Table 10: The Extent to which Occupational Hazards Affect Employees' Performance**

Coefficients (a)	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Dependent Variable: Employees Performance
	B	Std. Error	Beta			
(Constant)	.792	.539		1.468	.164	Adjusted R Square .565
Occupational Hazards	.583	.129	.771	4.525	.000	Sig. F Change .000

Source: primary data

#### 4.5 Conclusion

From the findings, it is that employees in UMI are exposed to a variety of occupational hazards that included physical, ergonomics, social and stress hazards. Out of these hazards, social hazards emerged as the predominant one since all sections in the plant are affected by it. Additionally, the plant has minimal measures in place to address the causes and effects since the senior managers and supervisors are not aware of different methods to control hazard as evidenced from the research findings above. Therefore, the performance of employees is strongly affected by occupational hazards since they accounted for the variance 56.5% in total performance of all employees in the plant.

## **5.0 CHAPTER 5: SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS**

### **5.1 Introduction**

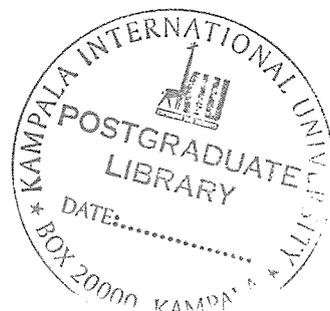
This presents summary of findings, conclusion, recommendations and areas for further research that were generated out of research findings from area of study. Additionally, the findings were produced from existing literature and findings of other scholars cited in the literature review.

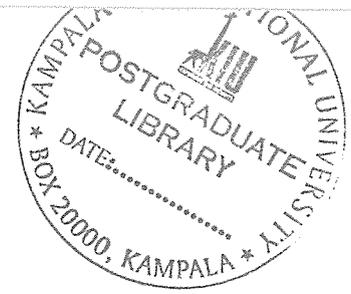
### **5.2 Summary of Findings**

Analysis and interpretation of the findings revealed that employees are exposed to physical, ergonomic, stress and social hazards. Additionally, the findings further revealed that fore mentioned hazards affect the well being of employees because they reported health problems like fear, anger, fatigue, tension, headache, falls, backache, and chest pain. This is a manifestation of musculoskeletal discomfort as supported by Vehtera et al, (2000).

Social hazards are predominant because they affect all employees almost in all sections of the plant. This is because they reported problems of fear, tension, anger, fatigue and headache that are the major effects of social hazards. Therefore, this situation reflects poor relationship between employees and their immediate bosses and their fellow workers though they reported good cooperation in the plant. Additionally, the fore mentioned health problems could be because of poor communication in the plant. This environment creates weak avenues of employees to air out their views that in turn create social problems among employees.

Comparably, research findings revealed that physical hazards also pose another pressing health problems in UMI. This is because most employees reported cases of chest pain, cuts, falls, and headache among others. This reflects slippery and wet floors, lack protective gears like gum boots, helmets, hard gloves and absence of health and safety policy in the plant. Thus, management is risking health of employees at the expense of profits that is unrealistic in Human Resource Management.





In a related development, the management has some strategic measures against occupational hazards that are not enough to address problems created by occupational hazards. For example, the company has a health and safety policy, safety committee, safety coordinator and company doctor in place as revealed by research findings. This is because both senior managers and supervisors were not sure of the existence of such measures in the plant. Ideally, these are policy makers and implementers of new ideas in the plant. For that matter, failure to recognize the fore mentioned key measures to control and prevent effects of occupational hazards mean they do not exist in UMI, which is a big problem in the plant.

### 5.3 Conclusion

From the research findings, performance of employees has greatly been affected in the company due to a multiplicity of occupational hazards and their effects that are partially addressed by management as revealed by the findings above. This explains why the effects of occupational hazards account for the variance of 56.5% in the performance of employee as revealed by research findings.

More still, the plant has ineffective measures to address the negative impact posed by occupational hazards in the plant. This is explained poor health and safety services provided to employees by the management, for example, the plant managed to provide only curative services out of arrange of services as revealed in table 9. Generally, there is a high possibility of poor health and safety conditions at work that affect both health and performance of employees in the plant.

Last but not least, from the research findings, social hazards pose a great danger in the plant. This is because, employees reported fear, anger, fatigue, headache and tension which the effects of social hazards as shown in table 7. This means that the affected employees cannot perform well their work as expected by the management and thus leaving a big gap between desired and actual output of the plant

#### 5.4 Recommendations

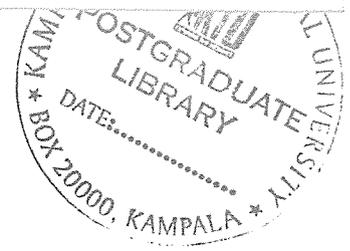
The plant should conduct training of employees in ergonomic issues. This is because many workers suffer from injuries and diseases that result from manual work and the increased mechanization of work. Thus, training employees is important as an ergonomist looks at ways to make the job fit the worker, instead of forcing the worker to fit the job. Additionally, training can be used to improve poor working conditions, prevent bad design from being built into a job if applied when a job, tools or workstations are being set up. Therefore, without the application of ergonomic principles, workers are often forced to adapt themselves to poor a working condition that is costly reduced performance, poor health of workers and heavy expenditure on the side of the plant.

More still, the plant should recognize overtime of employees and should be accompanied by reasonable payment. This intern creates peace of minds of the employees as well as improving their well-being, which in turn, lead to increased productivity. This is because grievances arising due to inequality in payments are controlled in order to avoid negative effects such as strain, tension and depression. Additionally, the plant should allow employees to sign contracts, this will guarantee security of their jobs. This reduces the worries of future unemployment and controls its side effects like damaging emotional, physical and work-performance stress.

In relation to the above, the management should meet employees regularly to listen and solve their problems. This also reduces the problem of social hazard in the plant. Management should allow employees' participation as it involves making systematic provision for consultation with those involved in the program; their suggestions, recommendations and advice. This creates a sense of involvement and commitment. This is especially applicable when determining the priorities of the objectives, which should be tackled first in establishing the program for solving employees' social problems in the plant.

Departments with employees who are subjected to; occupational noise exposure in excess of the limits; should implement "Hearing Conservation Program" to control side effects





of noise. Employees covered under this requirement should be provided with protection against the effects of noise exposure.

The plant should employ a doctor on full-time basis who should make regular visits to different sections in order to understand working conditions. This would enable to provide proper treatment and counseling services. Additionally, routine medical examination should be done so that simple ailments are handled before they become permanent problems in the plant.

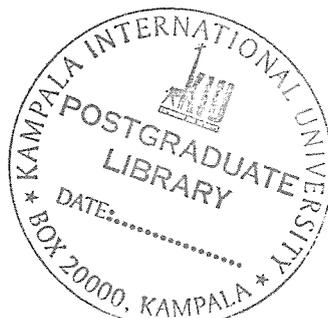
More still, the company should put in place safety and health policy. Ideally, a policy is a plan of action; a course or method of action that has been deliberately chosen and that guides or influences future decision. This addresses issues like individual responsibilities, legal responsibilities, accountability systems, promotion of safety awareness, education and training needs, reporting and correcting safety and health problems, and injury and illness control information in the plant. Once health and safety policy is place, then it means problems of UMI concerning limited measures to address occupational hazards will be over. This explains why most American industries are successful because they all follow OSH Act's regulations.

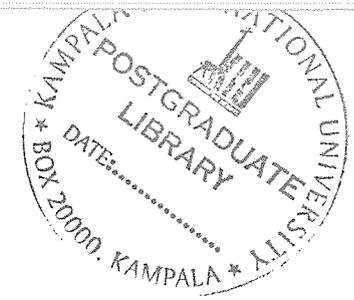
#### **5. 5 Areas of Further Research**

This research was conducted in Kampala city and there is a need to carryout similar research in rural areas like small abattoirs from the rest of the country. This would help in comparison purposes of research findings. Thus creating avenues for further research since the research findings would look the same due to different environments and locations.

Additionally, this research failed to get valid results about biological and chemical hazards due to lack of skills. This calls for people with medical skills to conduct research on those two variables.

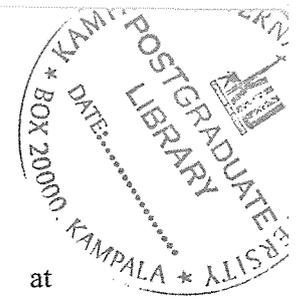
Lastly, the researcher suggests that future should also be conducted on how other factors affect employees' performance other than occupational hazards like employee rewarding system, labour turnover, and recruitment and placement systems among others.





## 6.0 REFERENCES:

- Alli B.O (1991) 'experience in organizing Health Services in Enterprises in Africa', African News letter on Occupational Health and Safety: Vol 2 No 5
- Alcouette J, Manilar P, Brehier M and Faupin F, (1999). 'Ergonomics, Occupational and Environmental Medicine. Vol 56 No 10'.
- Andrew Smith, Rachel McNamara and Benjamin Wellens, (2004). Combined Effects of Occupational Health hazards. Printed and Published by the Health and Safety Executive.
- Armstrong Michael, (2001). A Hand Book of Human Resource Management Practice, 8th Edition. The Bath Press: Bath.
- Armstrong Micheal, (1977). A Handbook of Personnel Management Practice, 2nd Edition. Printed and Bound in Great Britain By Billing and Sons Ltd: Worcester.
- Aswathappa. K, (1999). Human Resource and Personnel Management, 2<sup>nd</sup> Edition. Tata McGraw-Hill Publishing Company Ltd: New Delhi.
- Braun, S. and Hollander, R. (1987). A study of job stress among women and men in the Federal Republic of Germany. *Health Education Research*, 2(1), 45.51
- Barya.J.J, (1993). Workers and Law. Kampala CBR Publications: Kampala
- Bartley, M. (1994). Unemployment and ill health: understanding the relationship. *Journal of Epidemiology and Community Health* 48: 333-7.
- Bartley, M.J Wadsworth, M.E.J.and Montgomery S.M, (1999). The persisting effect of unemployment on health and social well-being in men in early working life. *Social Science and Medicine* 48: 1491-9.
- Bartley M.J, Sacker A, Frith, D, Fitzpatrick, R.M and Marmot M.G, (2001). The relationship between job strain and coronary heart disease: Evidence from an English sample of the working male population. *Psychological Medicine*, 31(2), 279-290
- Beach Dale S, (1985).The Management of People at Work, 5<sup>th</sup> Edition: Macmillan Publishing Company: New York.
- Bhambra. A, (1999). Human Resource Management, Influence and Employee Behaviors. Common wealth Publishers: New Delhi.
- Bjorsten M.G, Boquist B, Talback M and Edling C, (2001). Report on Neck and Shoulder Problems in Female Industrial Workers. *International Journal of Industrial Ergonomics*, Vol 7, No 13.
- Bodeker W, (2000). The influence of work related stressors on disease specific sickness absence. *Sozial Und Praventivmedizin*, 45(1), 25-34.



Guide to Writing an OHS Policy Statement, (2000) Available at <http://www.osha.gov/pls/oshaweb/owadisp.show>. (Accessed on 27<sup>th</sup> August 2006)

Gruber, J. (1992). A typology of personal and environmental sexual harassment: Research and policy implications for the 1990's *Sex Roles* 26:447-464.

Granville, schilling RSF and Wood C.H, (1999). Occupational Health; AMFEF- Nairobi.

Guttek, B.A. (1985), *Sex and the Workplace: The Impact of Sexual Behavior and Harassment on Women, Men, and Organizations*, Jossey-Bass, San Francisco

Hair Joseph Jr, Bush Robert P and David Ortanau, (2003). *Marketing Research*. McGraw-Hill.

Herbert G. Hanneman III, Donald P. Schwab, John A. Fossun and Lee D. Dyer, (2000) *Personnel/ Human Resource Management*, 4<sup>th</sup> Edition: Universal Book Stall New Delhi.

ILO, (2003). *Your Health and safety at Work*, Available from <http://www.itcilo.it/english/actrav/telearn/osh/intro/introduc.htm>. [Retrieved on 30 June 2006 02:09:04 GMT]

ILO, (1999), *Lighting and working Environment at Work*- Geneva.

ILO, (1996). *Stress at work*. The National Institute for Occupational Safety and Health (NIOSH) - USA available at <http://www.cdc.gov/niosh/stresswk.html> (accessed 29 July 6:00 pm)

✓ Ivancevich John M., (2001). *Human Resource Management*, Eighth Edition. The McGraw-Hill Companies: USA.

Johnson J.V and HALL, E.M. (1988). Job strain, workplace social support, and Cardiovascular disease: a cross-sectional study of a random sample of the Swedish working Population. *American Journal of Public Health*, 78, 1336-1342.

Karasek R. and T.Theorell (1990). *Healthy work, stress, productivity and the recognition of working life*. Basic Books Inc Publishers, New York

| Koh, D. and Jeyaratnam, J. (2002) *Occupational health*, Cambridge: Polity Press

Kauppinen-Toropainen, K. (1993), Sexual harassment at the workplace, in OECD panel group on women, work and health. *Ministry of Social Affairs and Health, Publications, Helsinki*, 6:153-157

Lebeer, Lorenzo and Munar Suard, (2003). Health and Safety in the Private Security Sector and Identifying the Risks. CSS-UBL Press.

Lipold, Ann Marie and Geddes (2001). Six Ideas to Boost Employee Productivity. African News Letters: Finland.

Lloyds Byarsb and Lussie Rue, (2000), Human Resource Management- McGraw Hill.

Mamoria, S. V. Gankar and Udia Pareek, (2001). Personnel Management, 21<sup>st</sup> Revised and Enlarged Edition. Himalaya Publishing House: Mumbai.

Marmot M And Kuper, H, (2003). Job Strain, Job Demands, Decision Latitude and Risk of Coronary Heart Disease.

NOTU, (1996). Working Environment Occupational Health and Safety. Kampala, Nalasata Done 2001 Workers welfare protected” The New Vision Uganda.

Nicolson, P. 1996, Gender, Power and Organization: A psychological perspective, Routledge, London

Obua P.and Okimain, (2000) “Occupational Health and Safety Services in Uganda, African News Letter on Health and Safety, Kampala.

Peter, R. and Siegrist, J, (1997). Chronic work Stress, Sickness Absence, and Hypertension in Middle Managers: General or Specific Sociological Explanations? *Social Science Medicine*, 45(7), 1111-1120.

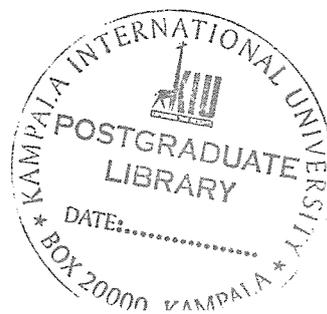
Perreaut William and Jerome McCarthy, (2002). Basic Marketing: Global Managerial Approach. McGraw: Irwin.

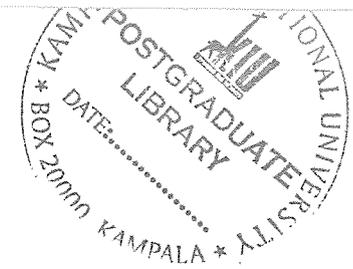
Prasad L M (2001). Principles and Practice of Management. Educational Publishers: New Delhi.

Repel M, David and Janowitz, (1997). Ergonomics and Prevention of Occupational Injuries. *Occupational and Environmental Medicines. Vol 10 No 5*

Rubenstein M, (1988). The Dignity of Women at Work’ in A report on the Problem of Sexual Harassment on the Member States of the European Communities, Office for Official Publications of the European Communities, Luxemburg.

Sargent, L.D. and Terry, D.J. (1998). The effects of work control and job demands on Employee adjustment and work performance. *Journal of occupational and organizational Psychology*, 71(3), 219-236.





Skov, T., Borg, V. and Orhede. E, (1996). Psychosocial and physical risk factors for Musculoskeletal Disorders of the Neck, Shoulders, and Lower Back in Sales People. *Occupational and Environmental Medicine*, 53(5), 351-356.

Siegrist J, Joksimovic L, Tarke S, D and Knesebecsk O.V.D, (2002). Perceived work stress, over commitment, and self-reported musculoskeletal pain: A cross-sectional investigation. *International Journal of Behavioural Medicine*, 9(2), 122-138.

Silvin S, (2000). Biomechanical Stress on Workers in Meat Cutting Shop. Institute of National Research and Securities.

Storr, C.L., Trinkoff, A.M. and Anthony, J.C. (1999). Job strain and non-medical drug use. *Drug and Alcohol Dependence*, 55, 45-51.

Saunders Mark, Lewis Philip and Adrian Thornhill, (2003). Research Methods for Business Students, 3<sup>rd</sup> Edition. Prentice Hall

Searle, B.J., Bright, J.E.H. and Bochner, s. (2001). Helping people sort it out: the role of social support in the job strain model. *Work and stress*, 15(4), 328-346.

Sekaran Uma, (2000). Research Methods for Business. A Skill Building Approach, Willy and Sonic Inc, New York.

Taris, De Lange, A.H., T.W., Kompier, M.A.J., Houtman, I.L.D. and Bongers, P.M. (2002). Effects of stable and changing demand-control histories on worker health. *Scandinavian Journal of Work, Environment and Health*, 28(2), 94-108.

The New Vision Newspaper (1997) "Do you know your rights" Labour Day Supplements.

The Monitor 2000 "Inadequate funds, Old Laws Hinder Workers Safety, Labour Day Supplement.

Tsutsumi, A, Ishitake, T, Peter, R, Siegrist, J. and Matoba, T, (2001). The Japanese version of the effort-reward imbalance questionnaire: A study in dental technicians, *Work and Stress*, 15(1), 86-96.

UMI-Quality Management System Manual (2004) Reference Standard: ISO 90001-2000 Series.

UMI (2004) Quarterly Medical Report ID No: UMI/QM/01.

Vahtera, J., Pentti, J. and Uutela, A. (1996). The effect of objective job demands on registered sickness absence spells: Do personal, social and job-related resources act as moderators? *Work and Stress*, 10(4), 286-308.

Vahtera, J., F M., Pentti, j. and Theorell, T, (2000). Effect of change in the psychosocial work environment on sickness absence: A seven-year follow up of initially healthy employees. *Journal of Epidemiology and Community Health*, 54, 484-493.

Van Der Doef M. and Maes S, (1999). The Job Demand-Control (Support) Model and Psychological Well-being: a review of 20 years of empirical research. *Work and Stress*, 13(2), 87-114

Vastina Rukiramira, Nsanze and Ann L. Bateson, (2000). *Laws of the Republic of Uganda Revised Edition, Volume IX.*

Vegchel, N., De Jonge, J., Bakker, A.B. and Schaufeli, W.B. (2002). Testing global and specific indicators of rewards in the effort-reward imbalance model: Does it make any difference? *European Journal of Work and Organizational Psychology*, 11(4), 403-421.

Voss M, Floderous and Didesrhen (2001). Physical Psychosocial and Organisaational Factors Re lative to sickness and Absence. *Ocupatioal and Medicines. Vol. 58 No8.*

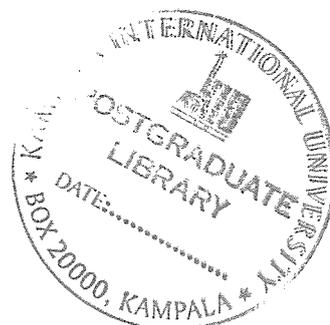
Wamala, S.P., Mittleman, M.A., Horsten, M., Schenck-Gustafsson, K. and Orth-Gomér, K. (2000). Job stress and the occupational gradient in coronary heart disease risk in women: the Stockholm Female Coronary Risk Study. *Social Science and Medicine*, 51,481-489.

Watanabe T, Harada, N., Furuya, H, Kaneko and Yoshida T, (1996). The effect of work-related stress with changes in working conditions for workers with alcohol drinking habits and liver disorder. *Japan*, 31(1), 81-94.

WHO, (1995), *Occupational health at workplace - Geneva* available at [http://www.who.int/peh/Occupational\\_health/occupational\\_health2.htm](http://www.who.int/peh/Occupational_health/occupational_health2.htm) (accessed 25th July 2006)

WHO, (2002), *Industry Best Practice on Health and Safety at Work* available at <http://www.icsca.org.au> (accessed on 25 July 2006)

WHO, (1997), *Protection of the Human Environment*, Available from [http://www.who.int/peh/Occupational\\_health/occupational\\_health2.htm](http://www.who.int/peh/Occupational_health/occupational_health2.htm) [as retrieved on 16 Aug 2006 21:19:22 GMT]



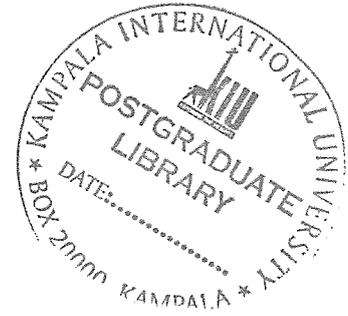
Wilson, F.M. (1995), *Organizational Behaviour and Gender*. McGraw-Hill Book Company, London

Wilson, S. and Walker, G. (1993), Unemployment and health: a review, *Society of Public Health*. 107:53-162



Mwesigye Jimmy

MBA/HRM (KIU-2006)



**7.0 APPENDICES**

**Appendix I**

Questionnaire for group employees

Dear Sir/Madam,

This interview guide is intended to quantify and analyze the causes and effects of occupational hazards on employees in UMI. The information obtained will be strictly confidential and for purely academic purposes leading to the award of a Masters Degree in Business Administration (MBA-Human Resource Management), your cooperation in achieving this objective will be highly appreciated.

Hoping for positive response  
Mwesigye Jimmy, a researcher  
Contact number 0772 978 142

**PART I**

Causes and effects of occupational hazards

Instructions:

Say whether you strongly agree, agree, not sure or disagree, strongly disagree with given statements by ticking the most appropriate box.

Strongly agree	Agree	Not sure	Disagree	Strongly disagree
1	2	3	4	5

1) Physical hazards

	Research statements provided under assessment	1	2	3	4	5
1	I always use improperly guarded machines					
2	I risk tripping and falling because of my work environment					
3	I'm exposed to dangerous machines and tools					
4	I'm exposed to a lot of coldness					
5	I'm exposed to a lot of dust					
6	I'm exposed to a lot of noise					
7	I'm exposed to electric live wires					
8	My work environment is at high risk of fire					
9	My work environment is poorly ventilated					
10	My work expose me to a lot of coldness					
11	My work exposes me to a lot of heat					
12	My work exposes me to a lot of vibrations					
13	My work involves a lot of heavy lifting					
14	My work involves a lot of standing					
15	My work surface is always wet and I risk slipping					
16	There is a lot of insufficient light in my work environment					
17	There is inadequate safety devices at work place					

Others, please specify

1. ....
2. ....
3. ....

2) Ergonomic hazards:

	Research statements provided under assessment	1	2	3	4	5
1	I always bend in order to perform my work					
2	I have to stretch a lot in order to perform my work					
3	I have to work in the same position for long time					
4	I'm assigned one task for a year without changing					
5	I'm ever bored at my place of work					
6	My job is too demanding					
7	My job is highly repetitive					
8	My work involves standing for long hours					
9	I am comfortable with seats my office					
10	My job involves a lot of movements					

Others, please specify

- 1.....
- 2.....
- 3.....

3) Chemical hazards

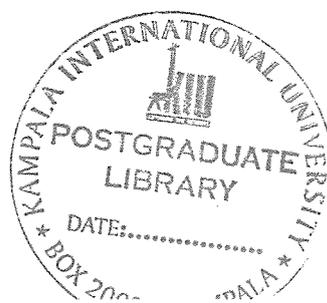
	Research statements provided under assessment	1	2	3	4	5
1	Does generator produce a lot of fumes in your section?					
2	Do machines in production rooms produce a lot of fumes?					
3	Have you ever been affected by chemicals used in production process?					
4	Is the proper control of poison for killing rodents and other insects?					

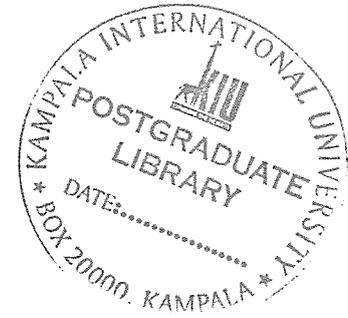
Others, please specify

- 1.....
- 2.....
- 3.....

4) Stress hazards

	Research statements provided under assessment	1	2	3	4	5
1	There are dangerous physical conditions like crowding, noise, air pollution in your section					
2	I always bend a lot in order to perform my work					
3	Have you ever been put on pressure to complete a given task in your section?					
4	I am always facilitated by the management after assigning a task to do.					
5	My job is insecure.					
6	Management always promote employee on merit.					
7	There is poor social environment and lack of support or help from coworkers and supervisors in my section.					
8	Top management always encourages me to take part in decision-making in my section.					
9	There is poor communication in the whole plant.					
10	There is lack of family friendly policies at my place of work					
11	My supervisors provide little sense of control in my section					
12	I always carry heavy loads in my section.					
13	I am always given frequent rests everyday in my section.					
14	I always work for long hours without resting					
15	I always work for overtime at my work place					
16	I am satisfied with the remuneration for overtime.					
17	I am always given too much responsibility in my section					





Others, please specify

- 1.....
- 2.....
- 3.....

5) Social hazards:

(i)	Research statements provided under assessment	1	2	3	4	5
1	I always work for long hours without rest					
2	I have to work at irregular hours (at night and lunch hours)					
3	I work during weekends					
4	I'm always very exhausted at the end of the day					
5	I receive my salary promptly					
6	I'm satisfied with what I learn					
7	I'm always paid overtime					
8	I'm happy with amount paid for overtime					
9	I'm satisfied with management concern for my health and safety					
10	I'm effectively represented in the decision-making organs of the plant					

Others, please specify

- 1.....
- 2.....
- 3.....

(ii) Relationships:

	Research statements provided under assessment	1	2	3	4	5
a1	My boss allocates the work fairly					
b1	My boss is understanding when I have the problem					
c1	My boss is always willing to listen					
d1	My co-workers are cooperative					
e1	My boss is always with us and listen to our problems					
f1	My boss always talks to about the quality of my work					

(iii) Job security:

	Research statements provided under assessment	1	2	3	4	5
a2	I'm satisfied the security I have for my job					
b2	I can stay home to rest when I'm not feeling well without fearing of my job					
c2	I can refuse hazardous work without fear of my job					
e2	I can rely on my boss to defend my job when I have a problem					
f2	I signed contract with UMI					

Others, please specify

- 1.....
- 3.....
- 3.....

(iv) Sexual harassment:

	Research statements provided under assessment	1	2	3	4	5
a3	My co-workers always talk explicit conversations about sex in my section					
b3	My boss is found of making sexual remarks					

c3	My boss is found of staring at me with a romantic smile					
d3	My co-workers are found of standing too close to me for comfort with threatening body postures.					
e3	There are sexist calendars and romantic written materials in our office.					
f3	My boss always touch on my sensitive parts					

Others, please specify

- 1.....
- 2.....
- 3.....

Effects of occupational hazards

(i)	I have ever suffered the following injuries while performing my work	1	2	3	4	5
A4	Bruises					
B4	Burns					
C4	Cuts					
D4	Electric shock					
F4	Falls					
H4	Fracture					
J4	Sprains					

Others, please specify

- 1.....
- 2.....
- 3.....

(ii)	I have ever suffered the following health problems as a result of my work.	1	2	3	4	5
A5	Backache					
B5	Chest pain					
C5	Cough					
D5	Eye strains					
E5	Flu					
F5	Headache					
G5	Hearing difficulties					
H5	Muscular pain					
I5	Heart attacks					
J5	Emotional upsets					
K5	Stomach ulcers					
L5	Allergy					

Others, please specify

- 1.....
- 2.....
- 3.....

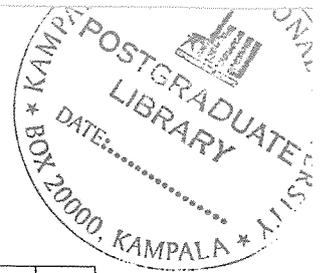
Social hazards:

iii	I have ever suffered from the following because of working conditions.	1	2	3	4	5
a6	Anger					
b6	Fear					
c6	Frustration					
d6	Hatred					



Mwesigye Jimmy

MBA/HRM (KIU-2006)



e6	Fatigue						
f6	Headaches						
g6	Depression						
h6	Tension						

Others, please specify

- 1.....
- 2.....
- 3.....

**PART II**

Profile of the respondent

Instructions:

Tick the most appropriate box

**PART II**

Profile of the respondent

Instructions:

Tick the most appropriate box

- A) Sex: male ; Female
- B) Age (Years): less than 20 years ; 21-30 ; 31-40 ; above 41 years
- C) Marital status: single , married ; widowed ; separated ; divorced ; Remarried
- D) Highest Education level attained:
  - (i) Primary ; (ii) Ordinary level ; (iii) Advanced level ; (iv) Tertially ; v) others
- E) Job Title.....
- F) Section for example, processing section, stores section, administration section, Purchasing section among others.....
- G) Duration of service
  - Less than one year ; 1 - 5 ; 6 - 10 ; 11 - 15 ; 16 and above
- H) Number of full time employees in this organization
  - Less than 50 ; 50-60 ; 61-70 ; 71and above

Thank you for your cooperation

**Appendix II**

Questionnaire for senior managers

Dear Sir/Madam,

This interview guide is intended to quantify and analyze the causes and effects of occupational hazards on employees in UMI. The information obtained will be strictly confidential and for purely academic purposes leading to the award of a Masters Degree in Business Administration (MBA-Human Resource Management), your cooperation in achieving this objective will be highly appreciated.

Hoping for positive response  
 Mwesigye Jimmy a researcher  
 Contact number 0772 978 142

Existence and effectiveness of health and safety measures in UMI

Part I

Instructions:

Say whether you strongly agree, agree, not sure or disagree, strongly disagree with given statements by ticking in appropriate box.

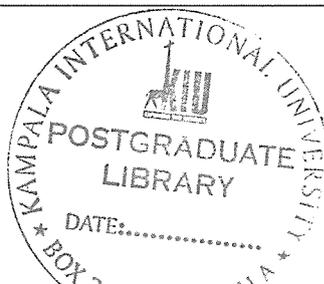
Instructions: please indicate the most appropriate response to the statement by ticking corresponding boxes using given categories.

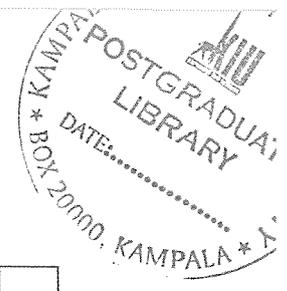
Strongly agree    Agree    Not sure    Disagree    Strongly disagree  
                   1            2            3            4            5

	Research statements provided under assessment	1	2	3	4	5
1	The plant has health and safety committee to report occupational hazards					
2	The plant has proper reporting mechanism in place in case of any accident					
	Safety coordinators assist the plant with safety seminars and training					
3	The plant keeps proper records of all accidents and injuries from all employees.					
4	The industry conducts regular employees' training on occupational hazards					
5	Management hold regular meeting meetings with the specific categories staff and listen to their problems					
6	The plant provides health services to employees					
7	Safety equipment is made available to an employee at subsidized price or free of charge					

8)Health services:

a7	Plant promotes health and safety					
b7	Plant provides curative services					





c7	The plant provides first aid						
d7	Plant carryout routine medical examination from all employees						
e7	Plant provides counseling services to workers with related problems						
f7	Plant is familiar with working conditions of all employees						
f7	Plant carries out regular supervision of all working environment						
g7	Safety and health director advises the management on safety and health conditions in the plant						

9	The plant provides PPE to all workers who require them						
10	The plant has installed firefighting equipments in the building						
11	The plant has drilled all supervisors in firefighting techniques						
12	All categories of workers are effectively represented in decision-making organs in the plant						

13	Safety officers advise management and employees on legal requirements affecting safety, health and welfare in the plant						
14	Employees carry out work in a manner so as not to create a health and safety hazard to yourself or others						
15	Do employees assist in the reduction and controlling of accident and illness producing conditions						
15	Both workers and supervisors co-operate with health and safety committee members and representatives						
17	Managers provide a statement of policy relating to the safety program.						
18	Managers understand and enforce the accident prevention policy as well as the occupational health and safety legislation						
19	Managers provide ongoing health and safety education programs and approved first aid training courses as required.						
20	Do managers ensure that all established safety policies are administered and enforced in all areas?						

Others, please specify

- 21 .....
- 22 .....
- 23 .....

24 List measures /programs that you know which are used to maintain good health and safety of employees in the plant.

.....  
 .....

**PART II**

Profile of the respondent

Instructions:

Tick the most appropriate box

A) Sex: male ; Female

Mwesigye Jimmy

MBA/HRM (KIU-2006)

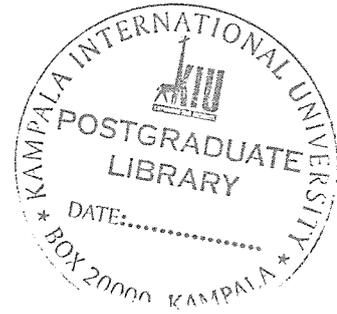
- B) Age (Years): less than 20 years ; 21-30 ; 31-40 ; above 41 years
- C) Marital status: single , married ; widowed ; separated ; divorced ; Remarried
- D) Highest Education level attained:  
(i) Primary ; (ii) Ordinary level ; (iii) Advanced level , (iv) Tertially ; v) others
- E) Job Title.....
- F) Section for example, processing section, stores section, administration section,  
Purchasing section among others.....
- G) Duration of service: Less than one year ; 1 - 5 ; 6 - 10 ; 11 - 15 ; 16 and above
- H) Number of full time employees in this organization Less than 50 ; 50-60 ; 61-70 ; 71and above

Thank you for your cooperation.



Mwesigye Jimmy

MBA/HRM (KIU-2006)



**APPENDIX III**

Questionnaire for supervisors

Dear Sir/Madam,

This interview guide is intended to quantify and analyze the causes and effects of occupational hazards on employees in UMI. The information obtained will be strictly confidential and for purely academic purposes leading to the award of a Masters Degree in Business Administration (MBA-Human Resource Management), your cooperation in achieving this objective will be highly appreciated.

Hoping for positive response  
Mwesigye Jimmy a researcher  
Contact number 0772 978 142

Part I.

Performance (Quality and quantity)

Instructions:

Say whether you strongly agree, agree not sure undecided or disagree, strongly disagree with given statements by ticking in appropriate box.

Instructions: please indicate the most appropriate response to the statement by ticking corresponding boxes using given categories.

Strongly agree	Agree	Not sure	Disagree	Strongly disagree
1	2	3	4	5

(a) Performance:

	Research statements provided under assessment	1	2	3	4	5
a	Workers always complete their work assigned to them					
b	They complete work to my satisfaction					
c	I sometimes make them re-do the work					
d	They always complete the work assigned to them on time					
e	Some workers complain a lot because of the work assigned to them					
f	Some work may not be completed because of the absence of other employees					
g	Some work maybe carried forward because it is beyond workers' capacity					
h	The working conditions hinder the performance of employees					

(b) Health and safety measures:

	My section has firefighting equipments					
a	I am drilled in fire fighting techniques					
b	There is a provision of reporting all related accidents and injuries in my section					

c	I have a record of all work-related accidents of my worker in the section				
d	I have a record of all related illness of my workers in my section for the management				
e	Management always act promptly on the reports of work related accidents and illness				
f	I have proper storage facilities for materials and equipments in my section				
g	Workers in my section have to carry heavy loads because there is no devices for moving heavy objects				
h	I have waste containers in my section				
i	I always talk to my employees in my section about quality of their work				
j	Workers in my section always put on PPE				
k	I always ensure the use of PPE by workers under my supervision				
l	I always talk about the importance of PPE				
m	Workers in my section are aware of the importance of PPE				
n	Workers in my section are not safety minded				
o	I always caution the employees in my section about the hazardous works				
p	I always hold regular meetings with my workers and listen to their problems				
q	I always serve as an example for others by always directing and performing work in a safe manner.				
r	I always arrange for medical treatment as required, including transportation to a doctor or hospital as necessary.				
s	I always conduct regular inspections for unsafe practices and conditions and ensure prompt corrective action.				

Others, please specify

t.....  
 u.....  
 v.....

w) List measures /programs that you know which are used to maintain good health and safety of employees in the plant.

.....  
 .....

**PART II**

**Profile of the respondent**

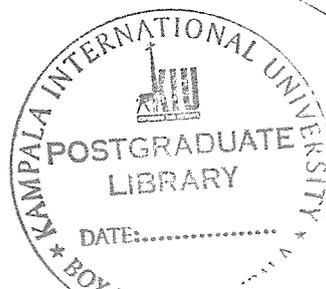
Instructions:

Tick the most appropriate box

A (i) Sex: male ; Female

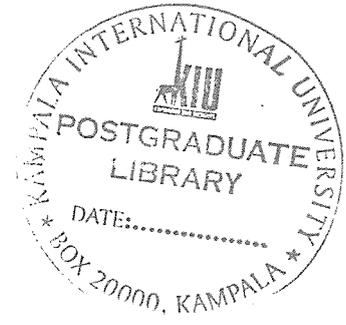
(ii) Age (Years): less than 20 years ; 21-30 ; 31-40 ; above 41 years

(iii) Marital status: single , married ; widowed ; separated ; divorced ;



Mwesigye Jimmy

MBA/HRM (KIU-2006)



Remarried

B Highest Education level attained:

(a) Primary ; (b) Ordinary level ; (c) Advanced level ; (d) Tertially ; others

C (i) Job Title.....

ii) Section for example, processing section, stores section, administration section, Purchasing section among others.....

D. Duration of service

Less than one year ; 1 - 5 ; 6 - 10 ; 11 - 15 ; 16 and above

F. Number of full time employees in this organization

Less than 50 ; 50-60 ; 61-70 ; 71and above

Thank you for your cooperation

Appendix IV

Questionnaire for employees who occupy offices in UMI

Dear Sir/Madam,

This interview guide is intended to quantify and analyze the causes and effects of occupational hazards on employees in UMI. The information obtained will be strictly confidential and for purely academic purposes leading to the award of a Masters Degree in Business Administration (MBA-Human Resource Management), your cooperation in achieving this objective will be highly appreciated.

Hoping for positive response  
Mwesigye Jimmy a researcher  
Contact number 0772 978 142

Instructions:

Say whether you strongly agree, agree, not sure or disagree, strongly disagree with given statements by ticking the most appropriate box.

Instructions: please indicate the most appropriate response to the statement by ticking corresponding boxes using given categories.

Strongly agree	Agree	Not sure	Disagree	Strongly disagree
1	2	3	4	5

Performance measurement

To be filled by staff who occupy offices

Research statements provided under assessment		1	2	3	4	5
a	My office is always cleaned					

b	It is cleaned to my satisfaction					
c	My office is always cleaned on time					
d	Cleaning does not interrupt my work					
e	I sometimes have to make cleaner repeat the work					
f	The toilets are always cleaned					
g	I am satisfied with level of cleanliness of toilets					
h	Toilets are cleaned on time					
i	Tea is always prepared on time					
j	The tea girl is always available when I need tea					
k	I am satisfied with the services of a tea girl					

Others, please specify

- l.....
- m.....
- n.....

**PART II**

Profile of the respondent

Instructions:

Tick the most appropriate box

A (i) Sex: male ; Female

(ii) Age (Years): less than 20 years ; 21-30 ; 31-40 ; above 41 years

(iii) Marital status: single , married ; widowed ; separated ; divorced ;  
Remarried

B Highest Education level attained:

(a) Primary ; (b) Ordinary level ; (c) Advanced level , (d) Tertiary ; others

C (i) Job Title.....

ii) Section for example, processing section, stores section, administration section,  
Purchasing section among others.....

D. Duration of service

Less than one year ; 1 - 5 ; 6 - 10 ; 11 - 15 ; 16 and above

F. Number of full time employees in this organization

Less than 50 ; 50-60 ; 61-70 ; 71 and above

Thank you for your cooperation.





**Appendix V (Demographic Characteristics- SPSS out put one)**

**Table 1; Status By Gender Crosstabulation**

			Gender		Total
			Male	Female	
Status	Employees	Count	16	9	25
		Row %	64.0%	36.0%	100.0%
		Column %	59.3%	64.3%	61.0%
	Senior Manager	Count	3		3
		Row %	100.0%		100.0%
		Column %	11.1%		7.3%
	Supervisors	Count	5		5
		Row %	100.0%		100.0%
		Column %	18.5%		12.2%
	UMI Occupants	Count	3	5	8
		Row %	37.5%	62.5%	100.0%
		Column %	11.1%	35.7%	19.5%
Total	Count	27	14	41	
	Row %	65.9%	34.1%	100.0%	
	Column %	100.0%	100.0%	100.0%	

			Highest Education					Total
			Primary	O Level	A Level	Tertiary	Others	
Status	Employees	Count	1	6	10	7	1	25
		Row %	4.0%	24.0%	40.0%	28.0%	4.0%	100.0%
		Column %	100.0%	75.0%	62.5%	50.0%	50.0%	61.0%
	Senior Manager	Count			1	2		3
		Row %			33.3%	66.7%		100.0%
		Column %			6.3%	14.3%		7.3%
	Supervisors	Count		2	1	2		5
		Row %		40.0%	20.0%	40.0%		100.0%
		Column %		25.0%	6.3%	14.3%		12.2%

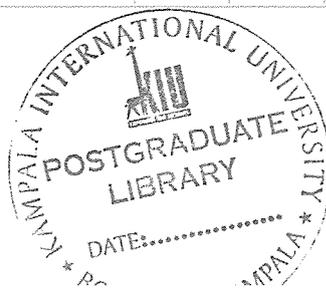
UMI Occupants	Count			4	3	1	8
	Row %			50.0%	37.5%	12.5%	100.0%
	Column %			25.0%	21.4%	50.0%	19.5%
Total	Count	1	8	16	14	2	41
	Row %	2.4%	19.5%	39.0%	34.1%	4.9%	100.0%
	Column %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

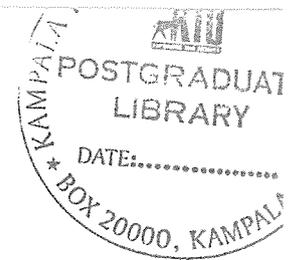
Age \* Marital Status Crosstabulation

			Marital Status			Total
			Single	Married	Separated	
Age	Less than 20 yrs	Count	3			3
		Row %	100.0%			100.0%
		Column %	27.3%			7.3%
	21-30 yrs	Count	8	7		15
		Row %	53.3%	46.7%		100.0%
		Column %	72.7%	25.0%		36.6%
	31-40 yrs	Count		14	1	15
		Row %		93.3%	6.7%	100.0%
		Column %		50.0%	50.0%	36.6%
	Above 41 yrs	Count		7	1	8
		Row %		87.5%	12.5%	100.0%
		Column %		25.0%	50.0%	19.5%
Total	Count	11	28	2	41	
	Row %	26.8%	68.3%	4.9%	100.0%	
	Column %	100.0%	100.0%	100.0%	100.0%	

Duration of Service \* No of full time employees in this Organisation Crosstabulation

			No of full time employees in this Organization				Total
			Less than 50	50-60	61-70	71 and above	
Duration of Service	Less than 1 yr	Count	1	1	2	1	5
		Row %	20.0%	20.0%	40.0%	20.0%	100.0%
		Column %	25.0%	11.1%	9.5%	14.3%	12.2%
	1-5 yrs	Count	2	7	11	3	23
		Row %	8.7%	30.4%	47.8%	13.0%	100.0%
		Column %	50.0%	77.8%	52.4%	42.9%	56.1%
	6-10 yrs	Count	1	1	5	3	10
		Row %					
		Column %					





Mwesigye Jimmy

MBA/HIRM (KIU-2006)

		Row %	10.0%	10.0%	50.0%	30.0%	100.0%
		Column %	25.0%	11.1%	23.8%	42.9%	24.4%
	11-15 yrs	Count			1		1
		Row %			100.0%		100.0%
		Column %			4.8%		2.4%
	16 yrs & Above	Count			2		2
		Row %			100.0%		100.0%
		Column %			9.5%		4.9%
Total		Count	4	9	21	7	41
		Row %	9.8%	22.0%	51.2%	17.1%	100.0%
		Column %	100.0%	100.0%	100.0%	100.0%	100.0%

Appendix VI (SPSS file 1 out put one )

Relationships	Minimum	Maximum	Mean
My boss allocates the work fairly	1.00	5.00	2.9130
My boss is understanding when I have the problem	1.00	5.00	2.5217
My boss is always willing to listen	1.00	4.00	2.0870
My co-workers are cooperative	1.00	5.00	2.2174
My boss is always with us and listen to our problems	1.00	5.00	2.6087
My boss always talks to about the quality of my work	1.00	5.00	2.4783

Job Security	Minimum	Maximum	Mean
I'm satisfied the security I have for my job	1.00	5.00	3.1667
I can stay home to rest when I'm not feeling well without fearing of my job	2.00	5.00	3.8750
I can refuse hazardous work without fear of my job	1.00	5.00	3.5833
I can rely on my boss to defend my job when I have a problem	1.00	5.00	2.9167
I signed contract with UMI	1.00	5.00	4.1667

Sexual Harassment	Minimum	Maximum	Mean
-------------------	---------	---------	------

My co-workers always talk explicit conversations about sex in my section	1.00	5.00	2.2083
My boss is found of making sexual remarks	1.00	5.00	3.0000
My boss is found of staring at me with a romantic smile	1.00	5.00	3.4348
My co-workers are found of standing too close to me for comfort with threatening body postures.	1.00	5.00	3.5000
There are sexist calendars and romantic written materials in our office.	2.00	5.00	4.0435
My boss always touch on my sensitive parts	2.00	5.00	4.1304

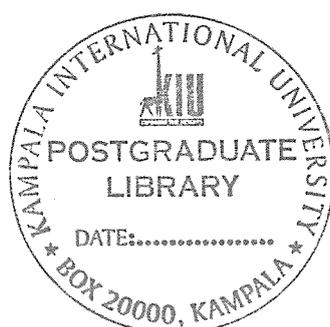


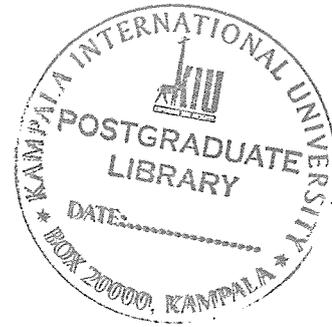


Effects of physical, ergonomic and stresses hazards	Minimum	Maximum	Mean
Bruises	1.00	5.00	3.2917
Burns	1.00	5.00	4.0435
Cuts	1.00	5.00	2.3333
Electric shock	2.00	5.00	4.1818
Falls	1.00	5.00	2.2083
Fracture	1.00	5.00	3.7391
Sprains	1.00	5.00	2.7917
Backache	1.00	5.00	2.0435
Chest pain	1.00	5.00	2.3333
Cough	1.00	5.00	3.0952
Eye strains	1.00	22.00	3.8750
Flu	1.00	5.00	2.5217
Headache	1.00	5.00	2.2083
Hearing difficulties	2.00	5.00	3.8696
Muscular pain	1.00	5.00	2.8696
Heart attacks	1.00	5.00	3.6087
Emotional upsets	1.00	5.00	2.9565
Stomach ulcers	1.00	5.00	3.3913
Allergy	1.00	5.00	3.5833
Effects of physical, ergonomic and stresses hazards	Minimum	Maximum	Mean
Bruises	1.00	5.00	3.2917
Burns	1.00	5.00	4.0435
Cuts	1.00	5.00	2.3333
Electric shock	2.00	5.00	4.1818
Falls	1.00	5.00	2.2083
Fracture	1.00	5.00	3.7391
Sprains	1.00	5.00	2.7917
Backache	1.00	5.00	2.0435
Chest pain	1.00	5.00	2.3333
Cough	1.00	5.00	3.0952
Eye strains	1.00	22.00	3.8750
Flu	1.00	5.00	2.5217
Headache	1.00	5.00	2.2083
Hearing difficulties	2.00	5.00	3.8696
Muscular pain	1.00	5.00	2.8696
Heart attacks	1.00	5.00	3.6087
Emotional upsets	1.00	5.00	2.9565
Stomach ulcers	1.00	5.00	3.3913

**Appendix VII (spss file2 out put 2)**

Existence and effectiveness of health and safety measures in UMI	Minimum	Maximum	Mean
The plant provides PPE to all workers who require them	3.00	5.00	3.6667
The plant has installed firefighting equipments in the building	2.00	4.00	3.0000
The plant has drilled all supervisors in firefighting techniques	3.00	4.00	3.6667
All categories of workers are effectively represented in decision-making organs in the plant	1.00	4.00	2.6667
Safety officers advise management and employees on legal requirements affecting safety, health and welfare in the plant	2.00	4.00	3.3333
Employees carry out work in a manner so as not to create a health and safety hazard to yourself or others	4.00	4.00	4.0000
Do employees assist in the reduction and controlling of accident and illness producing conditions	2.00	5.00	3.3333
Both workers and supervisors co-operate with health and safety committee members and representatives	2.00	3.00	2.6667
Managers provide a statement of policy relating to the safety program.	3.00	4.00	3.3333
Managers understand and enforce the accident prevention policy as well as the occupational health and safety legislation	2.00	4.00	3.0000
Managers provide ongoing health and safety education programs and approved first aid training courses as required.	2.00	4.00	3.0000
Do managers ensure that all established safety policies are administered and enforced in all areas?	2.00	2.00	2.0000





## Appendix VIII

### Job safety and health protection requirements per OSH Act 1970

#### JOB SAFETY AND HEALTH PROTECTION REQUIREMENTS PER OSHA

The Organizational Safety and Health Act of 1970 provide job safety and health protection for workers through the protection of safe and healthful working conditions throughout the nation.

The requirements of the Act include the following:

##### Employers:

Each employer must furnish to each employee employment and place of employment free from recognized hazards that are causing or likely to cause death or serious harm to employees; and shall comply with Occupational Safety and Health Standards (OSHS) issued under the Act.

##### Employees:

Each employee shall comply with OSHS, rules, regulation, and orders issued under the Act that apply to his/her own actions and conduct on the job. The OSHA of department of labour has primary responsibility of administering the Act. OSHA issues OSHS and compliance safety and health officers conduct jobsite inspection to ensure compliance with the Act.

##### Inspection:

The Act requires representative of the employer and representative authorized by the employees be given an opportunity to accompany the OSHA inspector for aiding the inspection. Where there is no employee-authorized representative, the OSHA compliance officer must consult with reasonable number of employees concerning health and safety conditions in the work place.

##### Complaint:

Employees or their representatives have the right to file complaint with nearest OSHA office registering an inspection if they believe unsafe or unhealthful conditions exist in their work place. OSHA will withhold, on request names of employees complaining. The Act provides that employees may be not discharged or discriminated against in any way for filling safety and health complaints or otherwise exercising their rights under the Act. An employee who believes he/she has been discriminated against complaint may file a complaint with the nearest OSHA office with in 30 days of the alleged discrimination.

##### Citation:

If upon inspection OSHA believes an employer has violated the Act, a citation alleging such violation will be issued to the employer. Each citation will specify a time with in which the alleged violation must be corrected. The OSHA citation must be prominently displayed at or near the place of alleged violation with three days, or until it is corrected, whichever is later, to warn employees of dangers that may exist there.

##### Proposed penalty:

The Act provides for mandatory penalties against employers up to \$ 1,000 for each non-serious violation. Penalties up to \$1,000 per day may be proposed for failure to correct violations with the proposed period. In addition, any employer who will fully or repeatedly violates the Act maybe penalties up to \$ 70,000 for each violation. Criminal penalties are also provided in the Act. Any willful violation resulting in death of an employee, upon conviction, is punishable by a fine of not more than \$10,000 or for imprisonment for not more than six months, or both. Conviction of the employer after the first conviction doubles these maximum penalties.

##### Voluntary activity:

While providing penalties for violation, the Act also encourages effects by labour and management, before OSHA inspection, to reduce injuries and illness arising out of employment. The Department of Labour encourages employers and employees to reduce work place hazards voluntarily and to develop and improve safety and health programs in all work places and industries. Such cooperative action would initially focus on identification and elimination of the hazards that could cause death, injury and illness to employees and

Appendix X1

Introduction letter



KAMPALA INTERNATIONAL UNIVERSITY

P.O. BOX 20000  
KAMPALA-UGANDA  
TEL:-041-266813

OFFICE OF THE ASSOCIATE DIRECTOR  
SCHOOL OF POST-GRADUATE STUDIES

7<sup>th</sup> September, 2006

The General Manager  
Uganda Meat Industries LTD  
KAMPALA

Dear Sir,

RE: INTRODUCTORY LETTER FOR MR. MWESIGYE JIMMY  
(MBA-PT-2004-016)

The above mentioned, is our student in the School of Post Graduate Studies. He is doing a **Masters in Business Administration (MBA)**.

Jimmy is currently doing his research on "The Causes and Effects of Occupational Hazards on Employees' Performance in Uganda Meat Industries Ltd." as a final requirement for the award of Masters in Business Administration of Kampala International University.

Any assistance accorded to him will be highly appreciated.

Thank you very much for your services.



DR. ANGELITA PESCADERO-CANENE  
Associate Director, SPGS

*Did his research at  
Uganda Meat Industries  
Ltd.*



*Mwesigye Francis  
11/09/06.*

*RC969. H43  
• M9949  
2006*

