

MIDLANDS STATE UNIVERSITY

FACULTY OF COMMERCE



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DEPARTMENT OF ACCOUNTING

***'AN INVESTIGATION OF SAFETY, HEALTH AND ENVIRONMENT (SHE)
PROGRAMMES COSTS TO THE PERFORMANCE OF UNKI MINE'***

By

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This dissertation is submitted in partial fulfilment of the requirements of the Bachelor of Commerce (Honours) Degree in Accounting in the Department of Accounting at MSU.

Gweru: Zimbabwe, 2016

APPROVAL FORM

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DEDICATION

This dissertation is devoted to two man, my late father Mr R Mutero and my husband Mr J Sithole and two women in my life; my mother Mrs R Mutero and my daughter Kayleigh Makatendeka Sithole whose determination and hardwork has driven my education strait, without those forbearance, this thesis would not have been completed.

ACKNOWLEDGEMENTS

Success depends on leveraging execution momentum and accelerating delivery pace while acknowledging the help of natural and supernatural beings around us that comfort and keep us believing in ourselves and tomorrow. Firstly I would like to give thanks to Almighty God for His love reflected through Jesus Christ that allowed grace to flow upon the researcher during the research process by connecting the researcher to humble and heartfelt respected children of God. These worth mentioning people are my husband Mr J Sithole and my supervisor Mr K Mazhindu, most importantly this is dedicated to my daughter Kayleigh Makatendeka Sithole as well as my late father Rowland Mutero for their support and they are my pillar of strength. I would also like to extend my sincere gratitude to my family members especially my brothers Dydmus, Gabriel, David, Nesbert and Tinashe for encouraging me to take this path. I would not like to forget my mother Ronia Mutero for her firm support since birth and throughout the whole period I was doing this research. May the good Lord bless my precious friends for their love and support especially Loveness Mukwani, Mrs Nyabanga, Rumbidzai Mbire and Audrey Moyo, my sisters Listener and Mercyline and my respected aunties Mercy and Moreblessing. This research would not have been carried without the support of my work related learning supervisors who include Mr Panganayi Chovi, Mr Robert Nyamayawo, Mr Wonderful Hofisi. I would not know where I would be without your support and may the good Lord our God bless you all.

ABSTRACT

The study is on investigation of SHE programmes costs to the performance of Unki Mine. The problem was that the firm experienced decreases in profits and major finding was that there were no blue prints for cost cutting strategies implementation resulting in continuous increase in costs since the introduction of SHE programmes to the firm in 1995 and decrease of income and profits due to the changes in the market. Literature review was carried out in an attempt to explore on what authors said on SHE policies and programmes. The main sources of related literature were internet journals, accounting text books and accounting package developers websites. The researcher made use of descriptive research design where both qualitative and quantitative research design were made use of on questionnaires and interviews. A sample size of forty one was carried out. Both primary and secondary data were analyse, presented and interpreted. Presentation was in form of tables, graphs and pie charts that was simplified through the use of the Likert Scaling model. Conclusion and recommendations were made to the organisation to implement and communicate SHE policies regularly as well as job safety analysis on each specific task or job.

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ABBREVIATIONS

AIDS- Acquired Immuno-Deficiency Syndrome

SHE- Safety, Health and Environment

BBI- Behavior Based Intervention

CBA- Cost-Benefit Analysis

EMS- Environment Management System

LTI- Lost Time Injury

HIV- Human Immune Virus

HFRI- High Fatality Risk Incident

ISO-International Standard Organization

NSSA- National Social Security Association

OHSAS- Occupational Health and Safety Management Systems

PDCA- Plan, Do, Check, Act

ROI-Return on Investment

CHAPTER 1

INTRODUCTION

1.0 Introduction

This study covers up the background of the study, the statement of the problem, main research question, sub research questions, research objectives, significance of the study, the research delimitation, limitations of the study, assumption, definition of terms and the summary.

1.1 Background to the study

UNKI mine is an subsidiary of Anglo-American gathering of mines which perceives that some of its activities, exercises and administrations have an impact on the safety and health of stakeholders security and soundness especially employees, contractual labourers and customers and moreover its environment. This made it to set out a formalized Safety, Health and Environment (SHE) policy. In its SHE policy, the organization set out a framework, courses of action, corporate measures and other SHE related issues that ought to be adjusted on matters relating to the development of a strong and safe environment. Unki mine endeavours to be a safe environment for all its stakeholders in producing and supplying reliable and quality platinum products for its clientele.

The organisation has spent more than US\$6 million per year since 1995 preparing its employees (permanent and temporary) and other stakeholders through its SHE programs. The programmes include behaviour based interventions (BBI), environmental management system (EMSs), occupational health management system (OHMSs) and the integrated management system. The costs related to these programmes have been ballooning since their execution as shown in table 1.1.

Table 1.1 SHE costs versus revenue statistics (2012 – 2015)

Year	Revenue from sale of Platinum	(SHE) program costs	Safety/ Revenue	Other Operational costs	Profit
2012	\$166 million	\$6 million	3.6%	\$114 million	\$57 million
2013	\$160 million	\$7.3 million	4.5%	\$103 million	\$53.8 million
2014	\$147 million	\$8.4 million	5.7%	\$97 million	\$48 million
2015	\$146 million	\$9.5 million	6.5%	\$95 million	\$32.8 million

Adapted from 2015- Anglo-American Unki mine performance report

Table 1.2 Budgeted SHE costs versus Actual SHE costs incurred (2012-2015)

Year	Budgeted SHE program costs	Actual SHE program costs	Variances
2012	\$5.5 million	\$6 million	\$0.5 million (Adverse)
2013	\$5.7 million	\$7.3 million	\$1.6 million (Adverse)
2014	\$6.1 million	\$8.4 million	\$2.3 million (Adverse)
2015	\$6.0 million	\$9.5 million	\$3.5 million (Adverse)

Table 1.1 presents the statistics for SHE programmes expenditure 2012-2015. The platinum market price was used to determine revenue figures and table 1.1 shows that the price continued to fall. As SHE costs continuously increased, revenue declined. Health care costs of US\$6 million in 2012 increased to US\$7.3 million in 2013 and continued to increase in 2014 and 2015. The revenue of US \$160 million was recorded in 2013 which declined to US\$147 million in 2014 giving a variance of \$13 million. The organization is incurring millions of dollars each year through increasing safety training costs, paying an amount in excess of 20% of SHE personnel payroll expenses. Furthermore, the token paid by the

company of appreciation to employees when no accidents have occurred in the form of increased health care coverage and platinum incentives have also increased the total of SHE programs related expenditure. Moreover, audit costs have increased by US\$100 000 between 2012 and 2013 as employees' compliance with SHE policy requirements is monitored.

Fig 1.1 below highlights the downward trend of the platinum price has been on a downward trend since October 2015.

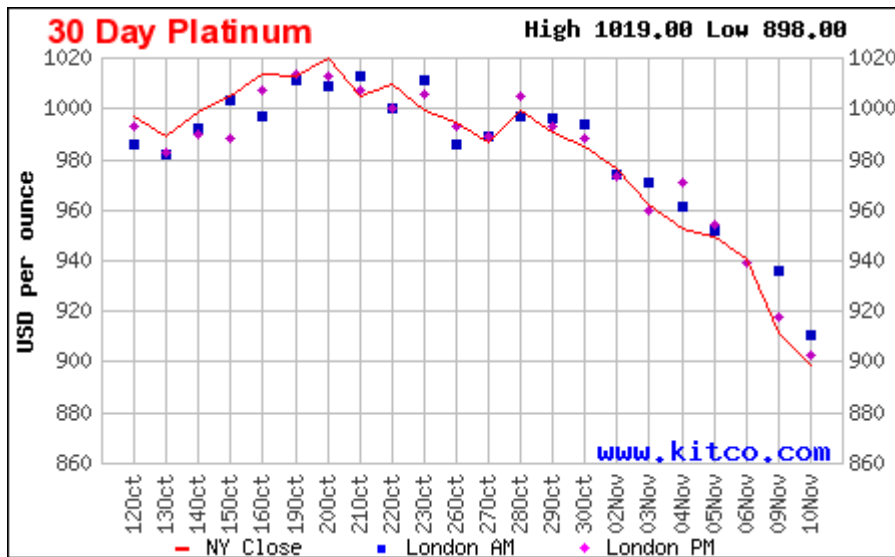


Fig 1.1. Adapted from www.kitco.com.

Management is concerned with the SHE programmes cost benefit relationship as the cost of ensuring a safe and healthy environment has been increasing from 2012 to 2015. This has resulted in the sharp decline of revenue by \$13 million from 2013 to 2014 while SHE costs had increased by \$1.1 million.

The Finance Director in October 2015 was quoted saying that Unki mine is spending much on SHE related activities and programs shifting its focus from the core business of platinum mining and supply.

1.2 Statement of the problem

SHE programs have been actualized with the aim of making the environment safe and healthy to attain the organization objectives, targets and goals. Unki mine profits have however been declining as a result of the constant and sharp increase of SHE costs. Costs from SHE audits and reviews expanded also because of the continuous implementation of SHE programmes.

Unki mine administration board is of the opinion that the continuous implementation of SHE programmes will result in less accidents although this results in an increase in costs. This inevitable adverse relationship of costs and benefits associated with safety health and environment have motivated this research to be undertaken.

1.3 Main Research Question

An investigation of SHE programmes costs on the performance of Unki mine.

1.4 Sub research questions

- (a) What are the SHE programmes adopted by Unki mine?
- (b) What are SHE program implementation guidelines?
- (c) What personnel factors affect the SHE policy implementation at Unki mine?
- (d) What controls are in place over the SHE programmes and implementation?
- (e) How is SHE programmes evaluated?
- (f) How best can these programmes be implemented and controlled in line with best practise?

1.5 Research objectives

- (a) To obtain the SHE programmes adopted by Unki mine.
- (b) To establish SHE programme implementation guidelines at Unki mine
- (c) To obtain understanding about the personnel factors that affect SHE policy implementation at Unki mine.
- (d) To obtain an understanding of the existence of controls over SHE programs and policy implementation.
- (e) To determine the methods used in the evaluation of SHE programs.
- (f) To establish the best practice of SHE program policies, implementation and control

1.6 Significance of the study

To the Researcher

This research was done as a requirement for the completion of the Bachelors of Commerce Accounting (Honors) Degree at Midlands State University. It also develops my research skills.

To Midlands State University

The research is a contribution to literature that may be used by current and future students in carrying out research.

To Unki mine

This research highlights the possible practices that can be considered for adoption by Unki mine

1.7 Delimitation of the study

The research focuses on Unki mine, a subsidiary of Anglo-American group in Shurugwi for the period 2012 to 2015.

1.8 Limitations of the study

Financial

The researcher had limited funds for typing, printing, travelling and other costs related to the research. The researcher used budgeted savings from work and borrowings from family members to finance these costs.

Confidentiality

The researcher had limited access to confidential information which was useful to carry out the study due to the corporate governance policies of the company. However this limitation was negotiated with management and assurance was provided that findings would be used for academic purposes only.

Time

The researcher had limited time to carry out the research since she had to attend to lectures and also travel a lot to Shurugwi to complete the research. The researcher worked after hours and during weekends to make sure the research was thoroughly done and completed.

1.9 ABBREVIATIONS

AIDS- Acquired Immuno-Deficiency Syndrome

SHE- Safety, Health and Environment

BBI- Behavior Based Intervention

CBA- Cost-Benefit Analysis

EMS- Environment Management System

LTI- Lost Time Injury

HIV- Human Immune Virus

HFRI- High Fatality Risk Incident

ISO-International Standard Organization

NSSA- National Social Security Association

OHSAS- Occupational Health and Safety Management Systems

PDCA- Plan, Do, Check, Act

ROI-Return on Investment

1.10 Summary

This chapter covered the background of the problem, statement of the problem, main research question, sub research questions and research objectives. Delimitation, limitations and assumptions of the study, definition of terms and summary were also under discussion in this chapter. Chapter two is on review of literature.

CHAPTER 2

LITERATURE REVIEW

2.0 INTRODUCTION

Skene (2007) defines literature review as the gathering and analysis of published information concerning a particular topic, theory or subject. The main purpose of the exercise is to try to synthesize information gathered with regards to the research in question according to www.utoronto.ca (04/02/16: 2:16). The chapter highlights different opinions of several authors or scholars about SHE policies, programmes implementation guidelines, personnel factors affecting implementation, controls over SHE programmes and policy implementation and many other issues bordering around SHE programmes implementation. The research gap is also identified.

2.1 What is a SHE policy?

A SHE policy is an organization's overall plan, statement or declaration of how it intends to keep the environment healthy and safe for its employees according to Edwards (2007). VWA report (2010) asserts that the SHE policy is made up of sub policies that are more specific to health or hazardous issues for instance smoking in the workplace, protective clothing, handling of materials, emergencies, accidents and first aid. Each policy contains step by step procedures of how the policy will be adopted and implemented to achieve total safety in the workplace according to Government of South Australia (2012).

The Oxford dictionary (1996) also defines a SHE policy the work plan or course of action adopted by any organisation to ensure employees work in a safe and healthy environment. According to www.hsa.com (26/02/16:10.01) a healthy and safety policy is generally a statement of an organisation's approach to preventing or dealing with any safety and health related issues within the working environment. The researcher appreciates that the basic description of a SHE policy is that it is an organisation statement laying down its preventive and corrective approach to safety and health issues.

Best (2001) highlights that since the policy is the overall plan, there exist in that plan several programmes that aim to ensure safety dealing with specific issues. This is supported by Burke et al (2012) who states that there is a number of issues that should be clearly highlighted in

the SHE policy and these include details of the employer's safety and health objectives, the responsible officers on SHE related issues, responsibility and accountability of SHE officers and supervisors and management commitment to creating a safe and accident free environment. Victorian Workcover Authority (2001) also stipulated that a SHE policy and SHE programmes are interlinked as the programmes are the classes of procedures set up to control and minimise workplace hazards.

The SHE policy is a management tool to providing a healthy and safe working environment thus it states safety goals of a workplace. Best (2001) also asserts that management's commitment to ensure safety and comply with their stated safety and healthy duties or responsibilities should be affirmed by their signatures in the SHE policy document as it is a legal document.

The South African Occupational Health and Safety Act (1993) S 7 ss1 (b)) emphasises that an organisation's SHE policy is a written statement of its commitment to the protection of the health and safety of employees at work. The Roche Group (2007) asserts that in a SHE policy management draw up programs to ensure productivity by maintaining the safety and health of workers with the aim of ensuring quality, productivity and cost efficiency and products and services delivered. The researcher also acknowledges the need for proper documentation of the SHE policy.

2.1.1 Safety laws surrounding Health and Safety in the workplace in Zimbabwe

According to <http://www.mywage.org/zimbabwe> accessed (28/02/2016 16.22) the Zimbabwe Labour Act Chapter 28:01 is the major legal draft that states health and safety laws applicable to all employers and employees across sectors in Zimbabwe. NSSA (Accident prevention & Workers Compensation Scheme) Notice No. 68 of 1990 also outlines other laws on employees' safety and health related issues in the workplace.

These laws may include the Protection from Smoking (Public Health) (Control of Tobacco) Regulations (2002) that prohibits smoking in enclosed workplaces and the Labour Relations (HIV and AIDS) regulations (1998) which prohibits HIV/AIDS discrimination. The Labour Relation (HIV/AIDS) laws prohibit mandatory testing for HIV as a precondition of employment and states that it is management duty to respect the confidentiality of HIV status

of employees and the organisation shall provide protective clothing and other safety devices to prevent the spread of HIV/AIDS at the workplace.

The Environmental Management Act (Chapter 20:27) provides that it is every worker's right to work in a safe and healthy environment. The Act and its regulations control the storage, usage, labelling and disposal of hazardous substances and articles. Other Zimbabwean laws on safety and health include Pneumoconiosis Act(Chapter 15:08); Mines and Minerals Act (Chapter 21:05) and Factories Act (Chapter 14:08) and its regulations that include : Factories and Works Act(General) S.1.302 of 1976 and Factories and Works Act (Registration and Control of Factories) Regulations S1 262 of 1976.

2.2 Implementation guidelines

Implementation guidelines are described as documented strategies on how best to reach the set policy goals and objectives, Best (2001). Guidelines are the game plan, or route followed when implementing the policy objectives. Common policy guidelines state the major strategies, how they will be executed and by who. Brendy (1998) alludes that the major issues that boarder around implementation guidelines is their communication and review.

The implementation of SHE programmes also has its own guidelines that involve the synchronisation of the policy objectives and stakeholder duties and participation. It is the writer's opinion that implementation guidelines are the road towards successful implementation of the SHE policy and these are discussed below.

2.2.1SHE program implementation guidelines

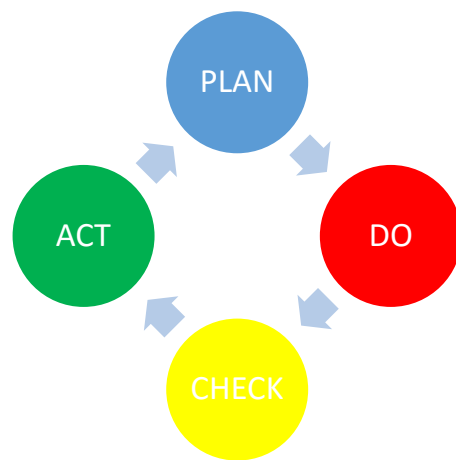
The Australian Government Comcare (2010) emphasised on the need for SHE programmes implementation guidelines as they allow for the coordinating of SHE and management activities. Best (2001) also supports that the workforce should have a genuine understanding of the SHE policy, how, why and when to implement the programs because ignorance in workers makes unsuccessful implementation inevitable.

Primary Health Care by Commonwealth of Australia (2009) mentioned the key competencies representing generic skills for effective participation by an individual. There is need for good communication of ideas, working in teams, using mathematical ideas and technology as guidelines for effective SHE programmes implementation. Major guidelines were identified by Comcare (2010) as maximizing employee participation, constant follow ups on processes,

use of incentives for motivating employees and creating a supportive environment so health promotion behavior will become easier to initiate and maintain. Checklist evaluation processes also help ensure guidelines are followed step-by-step.

Drummond and Jefferson (1996) ascertain that an allowance for uncertainty should be provided whenever a program is being implemented. OHSAS standards designed the Deming's cycle in figure 2.1 below as an ongoing process and guideline that helps implement and maintain an entity's health and safety policy.

Figure 2.1- PDCA- Deming's Cycle



Source: OHSAS Guide (2002:3)

Plan- OHSAS Guide (2002:3)

A plan is defined as a method, scheme or designed course of action towards achieving set goals according to Jackson (2001). OHSAS (2002) highlights the need for management to establish and draw up processes necessary to the set SHE policy objectives of an organisation. Effective implementation is a result of a good planning system hence management have to take the planning phase seriously as it sets the tone for success. The planning process may comprise of the following activities:the devise of the SHE policy; hazard identification; risk assessment and determination of controls among many others.

Do: OHSAS Guide (2002:3)

The next stage after the plan has been made is the implementation. OHSAS (2002) asserts that to ensure smooth and successful implementation of the policy a senior manager should be in control of the new program then other supervisors can manage specific tasks in the

program. Tasks should be allocated to personnel that are competent and well experienced from the requirements of the program in plan so that nothing goes wrong.

Check: OHSAS Guide (2002:3)

OHSAS (2002) states that there must be regular review and monitoring of the system performance against the policy objectives and results then reports prepared. This can be done by conducting internal audits; identifying, analysing accidents and analysing other non-conformities.

Act: OHSAS Guide (2002:3)

OHSAS states that this is the final stage of taking action to perfect the safety and health program or system. Actions must be taken by supervisors and management to continuously improve and modify the SHE policy to meet the needs of the dynamic environment by assessing opportunities for improvement in the policy, objectives or implementation process. Non-conformities also need to be dealt with immediately when they occur to discourage reoccurring and controls should be adopted to minimise problems brought about by bureaucracy in the workplace.

As highlighted by OHSAS guide (2002) and supported by Best (2001), to successfully implement a SHE programme management need to fully and clearly communicate and involve employees. Management can also consult employees on how the risks they face in their areas can be controlled and minimised. The researcher is of the opinion that training and other personnel factors must also be provided among other provisions identified by different authors and the personnel issues are discussed below.

2.3 SHE policy implementation personnel.

Best (2001) asserts that for successful implementation of a SHE policy, implementers must be dedicated, trained and well involved from policy formulation. This was supported by Wegner (2010) who stated that the right workforce, adequate, trained, experienced and motivated always result in the success of the implementation process.

It is the researcher's opinion that a lot of personnel factors affect policy implementation as highlighted by other authors but their participation, training among others result in their

dedication towards attaining implementation goals. The major personnel elements identified by the authors are discussed below.

2.3.1 Dedication and commitment

In order to successfully implement a SHE policy there is need for personnel dedication and commitment, Best (2001). www.ccohs.ca accessed (26/02/16:13.34) supports that personnel involvement, participation and cooperation are key factors that can result in an effective safety program. VWA report (2010) emphasizes the need for the establishment of a health and safety committee that can discuss job analysis, job relationships, general company policies and procedures so that they can create programmes that are tailor made to prevent accidents and other health and or safety hazards from occurring. The committee should be provided with resources to perform its task. The researcher agrees that workers have to be involved for effective SHE programs and that a committee fosters teamwork and involvement of the workforce.

The U.S Department of Interior Safety and Health Community (2008) also highlight the need for adequate resources and personnel workplace safety and occupational health. The workforce must also be well trained with the requisite skills, qualifications and authorities to enable them to work in the workplace with caution and minimise risks of accidents and other safety hazards, Brendy (1998). There also is the need for other professionals or experts, consultants or certified industrial hygienists to regularly visit the workplace to monitor and assist the SHE committee.

2.3.2 Supervision by SHE Representatives

SAOHC Act (1993 S17 ss1) states that an organisation that has 20 or more employees should have health and safety representatives who have signed agreements. The Act further highlights that these representatives can only be employees permanently employed by the organisation. According to OHSAS handbook different types of organisations have specific safety needs such that shops and offices may have one representative for every 100 employees while sensitive industries including mining, agriculture or manufacturing are recommended to have one representative for every 50 or less employees.

The researcher acknowledges that industries have different safety and health needs where some areas for instance in mines personnel are more exposed to safety and health hazards and there is need for more SHE programmes and supervision.

2.4 Controls

Mitchell (1996) describes controls as the policies and procedures that help ensure management directives are carried out and necessary actions are taken to address risks to achievement of an organisation's objectives. The management of projects also requires controls that ensure that all activities go according to prescription. NOSA (2006) reports that in order to control risk four components must be considered which are controls, exposure, severity and probability as depicted in the formula : $\text{Controlled Risk} = \text{Probability} * \text{Severity} * \text{Exposure} * \text{Controls}$.

The Victoria Workcover Authority (2001) outlined the following controls needed to ensure that SHE policy implementation is not distorted: elimination, isolation, engineering, administrative and protective clothing and equipment controls described below.

2.4.1 Controls on SHE programmes and policy implementation

VWA (2001) describe elimination controls as focusing on getting rid of all poisonous or toxic substances which are not necessary for a system of work. Hazardous substances are also enclosed from employees to reduce risk of injury and these are referred to as isolation controls. VWA (2001) also defines engineering controls stating that such controls include changing or servicing equipment or tools for example ventilation to remove chemical fumes and dusts. Personal protective clothing and equipment are devices or clothing which provides employees with protection from hazards or dangerous equipment to ensure standards are enforced.

The Roche Group (2007) agreed with the above controls but further states that controls are adopted in order of importance, focusing on risk elimination first then lastly protective clothing but with the same objective in mind.

Commonwealth of Australia (2009) reports that there is need to communicate hazards to appropriate personnel. Safe work instructions and emergency procedures also need to be communicated and used for instance emergency exits and completing walkabout reports by managers (Management by Walking Around-MBWA).

Best (2010) adds that above these general there is need for financial controls to monitor and ensure SHE costs are cost effective. Roche group report (2007) asserts that management may be keen to minimise SHE costs at the expense of human life and safety therefore financial controls should be in place to ensure that the allocated amounts for a specific department

should be used accordingly. An example of such insensitivity was reported by Little (2007) who concluded that encouraging smoking among Czech citizens was a financial boom to the government because it lessened the country's mortality age and thus reduced government health care, pensions and compensations expenditures. Financial controls that can be employed in SHE programmes include the segregation of duties, authorisation of expenditure, preparation and review of costs reports among others.

The writer supports the fact that there is need for controls both general and financial controls to ensure effective implementation of the SHE policy and that costs are kept minimal or reasonable.

2.5 Evaluation of SHE program implementation

According to Wright (2000) the process of evaluation involves reviewing set objectives and actual results on the ground. Levin (1994) further highlights that the best way to evaluate SHE programmes is by reviewing and monitoring the rates of accidents in the workplace, their fatality and the reactions that were to those accidents.

The U.S Department of the Interior (2008) states the following as evaluation procedures of SHE programmes: initial policy reviews and evaluations, regional leading indicators, objectives implementation and measurement, monitoring, assessment and management reviews of processes or outcomes and follow ups.

Kelleher (1999) advises that an audit should be carried out to measure the effectiveness of a program before, during and after implementation of a SHE program. This is done by using records, observations, interviews and questionnaires. Audits are used to evaluate performance through the critical review of elements in the program, Leedy (1980). Weaknesses in the health and safety programs are also identified in the audit so that management can draw up procedures to correct such deficiencies according to Kelleher (1999). Such procedures should include provision for target dates for remedial action and checks to confirm completion. The writer supports the need for independent auditors or experts to monitor and review the effectiveness of SHE programmes and the related costs.

2.6 Best practice in SHE policy implementation and control

McBride et al (2009) states a number of recommendations for organisations implementing SHE programs and they are outlined below.

2.6.1 Intervention Program

A workplace intervention program must be carried out to communicate and reduce the burden of accidents, injuries and disease, McBride et al (2009). Proposed interventions should be evaluated for efficiency in one or more accident under controlled conditions and modified to ensure it meets the standards of a supportive program. Jackson (1999) also supports that an intervention program helps empower, encourage and influence personnel towards maintaining a health and safe workplace for their own and the company's good.

2.6.2 Identifying hazards and barriers

Causes of injuries and poor health must be identified and addressed. Brendy (1998) states that barriers to implementation or factors limiting the SHE programs must be identified as they hazards to maintaining a safe environment too. This practice allows an organisation draw a plan or act directly on the root of the problem and not the surface only for example resistance from personnel such that management can come up with a plan to deal with the resistance, Brendy (1998). The dissemination of health and safety information to employees should include more than written communications.

2.6.3 Employee education and empowerment in other areas

Carolyn (2005) asserts that the safety and health of personnel is also determined by other factors besides the working environment and these include social, biological, and cultural and other issues. OHSAS (2002) therefore suggests that SHE programs and interventions should be broad, multifaceted and reach beyond educational interventions. Interventions other than only educational should be considered in addressing employees for instance healthy eating interventions, HIV preventions and stress management among others according to Brendy (1998).

The researcher agrees with the opinions brought about by the authors especially that to maintain a healthy and safe working environment the workers must be happy and free from stress and so educational campaigns need to be multifaceted and address a number of other areas affecting people in general.

Davis (2011) states that an entity should establish benchmarks for supervisor responsibility and accountability, prepare management review accident reports, acknowledge accident trends and provide necessary resources and follow up for corrections, designate a safety and health person within a facility who will be the champion of the company’s safety and health vision.

2.6.4 Job Safety analysis

Job safety analysis was another practise recommended, Brendy (1998). This is where each job is examined to identify hazards and to determine the safest way to do the job as highlighted in table 2.1 below.

Table 2.1

An illustration of Job Safety Analysis in SHE policy and program implementation.

Job Safety Analysis (JSA) Worksheet Industry: Agriculture Operation: Road repair Job: Pavement repair			
Task	Who does it	Hazards	How to prevent injury/accident
Operating jack-hammer	Anne Ganyau	-noise -vibration	-earmuffs - vibration absorbing gloves

Applicable Legislation:

Occupational Health & Safety Act and Regulations _____

Date: _____

Developed by: _____

Source: Canadian Centre for Occupational Health and Safety (2013)

2.6.5 Creating rescue teams

Chamber of Mines of Zimbabwe (2010) highlights the needs for a rescue team to carry out rescue and first aid activities. It created the Mine Rescue Association of Zimbabwe which is mandated to coordinate mine rescue activities in the country. This association ensures that any mine accidents are attended to immediately when they occur by professionals and they also educate employees on safety procedures in the case of mine collapses or other accidents.

Besty (2001) asserts that rescue teams are more efficient as they are available any time to undertake rescues in irrespirable foul atmosphere and other incidents. The mines that are risky of underground fire are encouraged to operate with mine rescue teams. The researcher supports the establishment of rescue teams as they are made up of professionals who help in taking corrective measures.

2.6.6 Preventing accidents or injuries

Wenlan (2009) stated that occupational illness and injuries are costing China huge amounts of money. This was supported by WHO Regional Committee for the Western Mediterranean (2010) who stated that preventing a health care associated injury saves roughly US \$ 10 000 and reduces patient's risk of death from almost 7% to 1.6% in that region. WHO report (2010) states their recommendations of SHE implementation practices that can be help prevent or accidents and injuries discussed below.

- Development, dissemination and implementation of evidence-based guidelines.

A set of basic safety guidelines should be developed stating: guidance on standard precautions; guidelines on early detection of diseases, isolation precautions, device management among others.

- Surveillance and assessment of compliance with prevention and control practices.

This is aimed at outbreak identification, establishment of endemic baseline rates of infection and evaluation of the effectiveness of injury control measures. Monitoring and evaluation of injury prevention and control programme.

- Management should establish a mechanism that provides regular reports on the state of the local and national goals and strategies as well as a process to collect and analyse national indicators should be defined.
- Links with public health and other societal bodies

SHE management should create links between public health services and health care facilities for events of mandatory reporting for example outbreaks.

2.6.7 Tobacco and alcohol consumption control

Major health hazards or employees emanate from excessive smoking and alcohol consumption. World Health Organization Geneva (2008) stated that a smoke-free work zone and public places reduce lung diseases. Table 2.3 below shows how tobacco consumption has been controlled in other countries.

Table 2.2

Cost effective policies on tobacco consumption

Box 1. Cost-effective policies: increasing taxes and prices on tobacco products

Bangladesh, Egypt, Pakistan, Turkey and the Ukraine increased taxes on tobacco products to reduce consumption and save lives.

Turkey became one of the smoke-free countries in 2010 after it increased tobacco taxes by **77%** leading to a significant increase on the cost of cigarettes. The following tobacco controls were implemented by Turkey: pictorial health warnings on tobacco packaging, comprehensive ban on tobacco advertising, and a comprehensive smoke-free law for all public and work places.

Egypt increased taxes by **87%** for cigarettes and **100%** for loose tobacco. This led to an estimated increase of **44%** in average retail prices and a **21%** reduction in cigarette consumption.

The Ukraine elevated taxes by **127%** on filtered cigarettes, leading to a **73%** increase in retail prices in 2010.

Source: World Health Organization, Geneva (2009): WHO global report on the global tobacco epidemic: implementing smoke-free environments.

Conclusively, tobacco control best practices should be integrated into development programs and related investment initiatives.

World Health Assembly (2010) also highlights the control of alcohol consumption as another practise to ensure healthy personnel habits. The following measures were stated by Best (2001) as practises to reduce and discourage alcohol consumption: increasing excise taxes on alcoholic beverages; regulating availability of alcoholic beverages including minimum legal purchase age, restrictions on outlet density and time of sale; drink-driving counter measures including random breath testing and restricting exposure to marketing of alcoholic beverages through effective marketing regulations.

The researcher agrees that the use of the best practises above will go a long way in reducing accidents, creating a healthy working environment and still minimising costs on SHE programmes.

2.6 Research gap

The major objective of any organisation in business is profit maximisation but SHE programs and policies are very important in keeping the environment safe and health contributing to that sane profit and creating a good image for the organisation. However it is also important for a company to look into costs of the SHE programmes in relation to its performance as a whole to make sure there is a favourable cost benefit analysis.

This research will focus on the gap on how to control or cut costs on SHE programs as these affect a firm in an adverse way if they are not controlled. All the mentioned authors or researchers in the above review concentrated on the positive side of SHE programs hence ignoring its demerits which the research will cover. Roche group (2007) reported that other managers would want to minimise company costs at the expense of human life or safety but this was one side which is of human life ignoring the impact of SHE cost on organisation overall objectives. The research will also cover the effectiveness of SHE programs cost in relation to its productivity.

2.7 Summary

The chapter dealt with the review of literature concerning SHE costs related issues using published books, company handouts, journals, internet and magazines. Chapter 3 will focus on the research methodology used to gather information for the research.

CHAPTER 3

RESEARCH METHODOLOGY

3.0 Introduction

The chapter focused on describing the research methodology, target population and the sample size derived. Sampling techniques used in the research were also identified, sources of data and instruments used in gathering the data. It also highlights the way data is to be presented and analyzed and the chapter summary.

3.1 Research Design

Remenyi et al (2009) describes the research design as a blue print, plan or guideline of how the researcher conducted the research. Cooper and Schindler (2003) also highlights that a research design is a plan and structure of investigation prepared to aid in getting answers to the research questions. The research design therefore is a plan for the entire research study that gives the framework of the research's plan of action. There are a number of research design techniques for instance historical, case and field, descriptive and many others, www.education-portal.com (22/02/2016; 11:59)

The researcher used the descriptive research design technique. Research outline will likewise serve as a scaffold between what has been set up, that is, the exploration goals and what can anyone do the behavior of the examination to understand those destinations. The researcher made use of this research design technique to accumulate data and answer the exploration inquiry and goals.

3.1.1 Descriptive design

The descriptive research design method's purpose is to produce an accurate representation of findings from people, situations or events according to Leedy (1980). Descriptive survey attempts to give a picture of the present conditions and circumstances. A case study on the other hand is an approach in which the researcher makes inferences based on certain cases whereas action approach involves actual participation of the researcher in the issues under

review. The technique is used as it helps in fact finding and giving a clearer description of a phenomenon. The research was able to find out the relevance and effectiveness of SHE programmes and policies by employing this research design as the conditions around the SHE programmes were described.

Descriptive research design allows the gathering of information using qualitative, quantitative data or both. The research was also able to gather both written and verbal information by using this research design method. It was easy to express the data obtained in a statistical form although the research design took considerable time to organize findings. Descriptive research design proved to be a better method that identified the attitudes and opinions of the sample population as supported by Wegner (2010).

3.1.2 Explanatory Research design

This is a research design to find out what is happening in order to seek new insights and also it is a type of initial research aiming to clarify and define the nature of problems (<http://www.emerald-library.com> 28/02/2016:20.09) Assist Prof. Dr. OzgeOzgen, in his Research Methodology pg.2 highlighted that an explanatory research design is an initial research conducted to clarify and define the nature of a problem which does not provide conclusive evidence and has subsequent research expected.

According to [http://www.answers.com\(28/02/2016;11.32\)](http://www.answers.com(28/02/2016;11.32)), the merits and demerits of explanatory research design are as follows:

3.1.2.1 Advantages of Explanatory research design

The research design is relatively simple, versatile and flexible and can allow testing of expected relationship between and among variables and the making of predictions. The design can assess these relationships in everyday life events.

3.1.2.2 Disadvantages of explanatory research design

The design cannot be used to draw inferences about the casual relationships between and among variables.

3.1.3 Case study

The use of the case study allows both quantitative and qualitative details to be gathered in a research unlike other research methods. The case study chosen by the research aimed at drawing an in-depth understanding of the effectiveness of SHE programmes in relation to their costs. The data collected in a case study is of greater depth and richer than from other designs thus making it the best source compared to all others according to Remenyi et.al (2009).

The researcher used the descriptive design because it shows a representation of a wider population and not that of the individual participating in the research plus it is reliable. The design also produced data that was very easy to express statistically, could be tested and thus could not be duplicated. Descriptive research which the researcher used helped her define questions, identify people under survey and define the analysis method before beginning the data collection. Concisely, this type of research design explored who, what, where, how, when and why aspects of the research.

3.2 Population

Wright (2000) describes a population as a community of people, animals or objects that meets the interests of the research in question. The researcher considered Unki mine employees as the population in carrying out this research.

3.2.1 Target population

Target population is a particular group or class of individuals or objects that have similar characteristics from which the researcher intends to draw conclusions for the whole group according to Cooper and Schindler (2013). Employees from the following departments were considered as the target population: Finance, Procurement, SHE, Mining and IT.

3.3 Sample

Levin (1994) defines a sample as representative part of the whole group that can be used to describe the whole group. The sample for this research was drawn from the departments mentioned as the target population. A sample is therefore a part of the target population taken

to represent or highlight the entire population. It only allows the researcher to scale down on the population under study but still be able to get a picture of the whole population, Wegner (2010).

3.3.1 Sampling unit

Laser (2003) asserts that a sampling unit is a singular item chosen to represent the whole population. In this study one manager was chosen per each department to represent or speak for the whole department in the interview.

3.3.2 Sample size

Wegner (2010) defined a sample as the number or subset of all observations that represents the whole population in the study. The table 3.1 below shows the population and the sample size of 41 employees chosen from 5 departments. The sample of the research has representation from all levels of management to get a broader view of the whole population.

Table 3.1 Sample Size

Department	Population	Sample	%age	Questionnaires	interviews
Finance	10	10	100%	8	2
Procurement	9	8	89%	7	1
SHE	10	6	60%	6	0
Mining	10	9	90%	8	1
I.T	8	8	100%	7	1
Total	47	41	87%	36	5

The sample is made up of the 5 departments selected randomly.

3.4 Sampling Methods

3.4.1 Convenience sampling

Convenience sampling is a random sampling technique where the sample is chosen because of their accessibility, proximity and availability according to www.explorables.com (27/02/2012; 15:23)

Advantages

Convenience sampling is a simple and easy way of gathering data without complications. Wegner (2010) supports that this technique also allows the user to gain basic data and information trend at the same time determining relationships among different phenomena.

Disadvantages

This sampling technique however may not represent the entire population and there may be bias in selecting respondents as there is no factual basis for selection. Results of convenience sample usually vary substantially with the results from the whole population due to bias that is inherent with using convenience sampling.

3.4.2 Stratified random sampling

The researcher used stratified sampling technique to come with selected individuals where the following stratus were considered low, middle, senior managers and non-managerial staff members. The non-managerial staff members were sub-divided into debtors, creditors, stores and treasury in order to cover all the components affected by SHE programs costs.

Black (1999) gives an outline of the merits and demerits of using stratified random sampling.

Merits of Stratified random sampling

Black (1999) asserts that the technique can ensure that specific groups are represented, even proportionally in the sample that is it guards against the unrepresented group. This techniques allows the researcher to choose representation from each stratum to avoid the possibility of having a group not represented.

Demerits of Stratified random sampling

It may be difficult and time consuming however to put the population into stratus first then try to choose from every strata.

3.5 Data Sources

Cooper and Schindler (2003) define data as raw facts or figures collected for research, reference or analysis from the research environment. This data is used by the researcher to draw up conclusions and it can be primary or secondary data. Primary data is facts or statistics collected for a specific and current research while secondary data has already been collected for other researches in the past.

3.5.1 Primary data

According to Wegner (2010) primary data is first hand, original data collected during the actual time of the study or research. Weller (1999) supports that primary data sources originate in the time period in which the researchers are carrying out the study. Primary data sources include memos, emails and postcards among others.

<http://www.yale.edu> (27/02/2016:13.34) also highlights that primary sources provide authentic, first hand testimony or evidence in relation to a topic of study as gathered by a direct witness. Questionnaires and interviews were used to derive primary data on SHE costs and the effectiveness of the implementation of SHE programs at Unki mine. The advantages and disadvantages of primary data sources are discussed below.

Advantages

Primary data is directly applicable as it is collected for the purpose of the research in question according to Laser (2003). The researcher based most of the study on this type of data collection procedure because data collected is more reliable, valid and relevant.

Disadvantages

Laser (2003) asserts that primary data is however expensive to gather, requires a lot of time and proper planning. This is because the data is collected first hand and raw. The researcher designed a time plan for collecting data to ensure that time was used productively in collecting data.

3.5.2 Secondary data

Brendy (1998) defined secondary data as that information collected by researchers for other studies in the past. Secondary data therefore already exist at the time of the research and it can be from internal or external sources. External sources include textbooks and newspapers while examples of internal source include written documents, internal financial statements, audit reports, and annual budgets of Unki mine among others.

Advantages of Secondary data

Laser (2003) asserts that secondary data is already available and arranged such that it is cheaper and easier to gather and analyze unlike raw primary data. Secondary data also allows the researcher to identify changes and analyze trends within the period which the study is focused.

Disadvantages of secondary data

However secondary sources of data might be irrelevant and not applicable to the particular current research as it was collected for other researches or studies. This is because secondary data may not cover all aspects relating to the topic in question, Wegner (2010).

This research combines the use of secondary and primary data in the same study because there is dependence between the two techniques according to Laser (2003).

3.6 Research Instruments

These are methods used in collecting primary data and in this research self-administered questionnaires and in-depth interviews were the main sources of primary data employed.

3.6.1 Interviews

According to Wegner (2010) an interview can be described as a formal conversation or meeting where the researcher seeks to find out direct information about a subject or topic. It provides the chance to discover personality, mood, attitude and talents in a face to face setting between the interviewer and the interviewee. The purpose of interviews is to explore the views, experiences and get explanations according to Gill et al (2009). Interviews also

emphasize validity that is, how close answers get to the respondent's real views, Langley (1987). There are three types of interviews namely face-to-face, telephone or electronically interviews and in this research face to face interviews were used. Questions were as per the interview guide while others depended on answers or responses from the interviewee.

Advantages of in-depth interviews

Wegner (2010) highlights that the major advantage of using interviews is that the researcher is flexible to answer questions to get clearer answers. The researcher can also ask or use probing for clarity on complex questions and face to face stimulate respondents to reveal more in their attitudes regarding the questions asked. In addition the response rate is quicker in interviews thereby reducing the time constraint and the researcher can make sure all questions are answered. Face to face interviews also allows researchers to use non-verbal communication and read gestures of respondents.

Disadvantages of in-depth interviews

Esteves (2010) asserts that r during face to face interviews respondents may feel intimidated this can result in the collection of biased or inaccurate data. Moreover respondents may still choose to hold back some information that may be useful in the study.

3.6.2 Questionnaires

Cooper and Schindler (2013) described a questionnaire as a set of simple, straight forward questions designed to extract standardized information to enable easy analysis of data collected. Self-administered questionnaires were used in this research to collect data from the sample. A questionnaire is a written document where respondents by choosing the best response from the standardized responses. A good questionnaire should be clear, have simple questions and avoid leading questions.

Advantages of using questionnaires

Cooper and Schandler (2013) highlights that the major advantage of questionnaires is that answers are guided making it easy for respondents to answer. A questionnaire also saves time and is a less costly way of gathering primary data. Analysis of findings is also easy as responses can be grouped and self-administered questionnaire offer respondents the

flexibility of filling in the questionnaires in their own time Questionnaires are therefore attract simple and easy to analyze answers.

Disadvantage of questionnaires

Questionnaires might be unclear or vague to respondents and respondents may not be able to ask for clarity resulting in the collection of wrong feedback or data. Respondents may also be lazy to think and end up putting any answer as there already exists a guide.

3.6.3 Type of Questions

Questions are ways of drawing out factual information whether they are written or face to face asked questions. There are two types of questions open ended and closed ended questions discussed below.

3.6.3.1 Closed ended questions

According to Jackson (2009) closed-ended questions are easy to analyze statistically, but they seriously limit the responses that participants can give. These questions make it easier to self-administer the questionnaire as they are simple and understandable and it is also easier and faster to tabulate the data thereon. The Likert scale is normally used for these questions as it easier to statistically analyze the responses.

Advantages of closed-ended questions

Closed-ended questions are easy to statistically analyze as answers can be easily grouped and interpreted. These questions also take less time in gathering data, analyzing and interpreting them and they are also suitable for computer analysis.

Disadvantages of closed-ended questions

The answers are limiting and narrow such that respondents are not able to explain and fully express themselves. There is also no room for explanations for questions that are not being understood by respondents such that badly structured questions result in poor or incorrect data collected <http://www.expertprogrammanagement.com> (28/02/2016:15.49).

3.6.4 Open ended questions

Open ended questions are limitless and give respondents the chance to answer freely and fully express their thoughts. Open ended questions therefore stimulate free thought, probe for more detail and creative, broad, quality suggestions according to Powell (1998).

Advantages of Open-ended questions

These questions allow respondents to include information including their understanding of the study area giving the researcher more information to choose from. Respondents are also not limited to standard answers or responses and so wide information is collected.

Disadvantages of Open-ended questions

Laszer (2003) highlights that the major drawback of using open ended questions is the fact that they are difficult to analyze statistically because to do so the qualitative information has to be reduced to coding thus answers tend to lose their original meaning. The rate of response is lower with surveys that use open ended questions than with those that use closed-ended questions plus the effort required by the researcher to digest the information may be overwhelming.

3.6.4 Likert scale

A Likert scale is a psychometric scale commonly involved in research questionnaires according to Wegner (2010). In simple terms, it is actually the sum of responses to several statements that the respondent is asked to evaluate. Likert (1932) developed the idea of measuring attitudes by asking a number of people to respond to a series of statements about a topic in terms of the extent to which agree or disagree using the 5 components tabulated in 3.2 below.

Table 3.2: The Likert scale

Item	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
Points	1	2	3	4	5

Advantages of Likert scale

The main advantage of using the Likert scale according to Wegner (2010) is the fact that it makes it easy to quantify responses and analyze findings. It is also easy to understand since it uses a universal standardized method of collecting data. It is therefore easy to draw conclusions, reports and results from the responses. Respondents can also choose to be neutral and not be forced to agree or disagree when they are not sure.

Disadvantages of Likert scale

Respondents normally respond with the answer they think is expected of them and also avoid extremes or what they may think to be tarnishing the organization image thereby resulting in incorrect or poor information collected.

3.7 Data validity

Davies (2011) states that validity refers to the degree of soundness, relevance and reliability of the method of collecting data. According to Pierce (2007) valid data must be appropriate to the study or research in question. A research instrument is valid if it measures what is intended accurately and achieves designed purpose by enabling the researcher to gather, analyze and make conclusions on the study Carolyn (2005).

In carrying out this research the writer employed a number of techniques to ensure data collected was valid namely interviews, questionnaires, annual financial statements, textbooks and other primary and secondary sources of data together. In addition information gathered was also equated to the research objectives.

The interview schedules and questionnaires were also piloted first before they were administered to the respondents to ensure that questions were clear and data gathered could be valid and reliable.

3.8 Data presentation

The researcher uses bar graphs, line graphs, tables and pie charts to present the data collected. Qualitative data was collected therefore to present it the research edited, segmented and summarized the information collected from all techniques.

These presentation techniques were used because they provided different ways of showing the findings figures, percentages, pie charts, tables and graphs to make sure different users can understand at least one of the methods. The data presentation methods used can be easily understood and interpreted when analyzing qualitative and quantitative data and can reveal trends more clearly while graphs and pie charts are more appealing, Pierce (2007).

3.9 Data Analysis

Levine (1996) asserts that data analysis involves methods that focus on describing facts, detecting trends and patterns and develop explanations or conclusions. Data analysis is very vital for understanding results or information on data graphs and formulating quality objectives among other things and the examples of data analysis techniques are mean, mode, median, and standard deviation.

In this research Microsoft Excel was used to help analyze the data together with the mode which allowed the writer to draw conclusions.

3.8 Summary

The chapter outlined sampling issues, types of data obtained and the methods of data collection and analysis procedures. The researcher now moves to the next chapter of data presentation, analysis and discussion of the research findings.

CHAPTER 4

DATA PRESENTATION AND ANALYSIS

4.0 Introduction

The chapter focuses on the presentation, interpretation and analysis of data gathered through questionnaires and interviews in accordance with the objectives and sub research questions of this research. Tables, pie charts and bar graphs were used to analysis the data. The discussions on these are the basis on which conclusions and recommendations are to be made.

4.1 Analysis of Response Rate

Table 4.1 Questionnaire Response

Department	Total Questionnaires	Questionnaires Returned	Response Rate(%)
Finance	8	8	100%
Procurement	7	5	71%
SHE	6	6	100%
Mining	8	4	50%
IT	7	6	86%
Total	36	30	83%

The researcher distributed 36 questionnaires, 30 were returned giving a response rate of 83% on questionnaires. Table 4.1 also shows that 6 out of 36 (17%) of the respondents did not return the questionnaires as some went on leave while others in the Mining department were in Harare for a workshop.

The response rate was good as Shukla(2012) state that a response rate of at least 50% is adequate for analysis and reporting while 60% plus is good and more than 70% is very good.

4.2 Interview response rate

Table 4.2- Interview response rate

Description	Interviews	Interviews conducted	Response rate
Managers	5	4	80%

Source- Primary data

The researcher managed to interview 4 out of the 5 managers chosen as shown in table 4.2 as one of the managers was in Harare on business.

The response rate was however adequate enough for reasonable responses.

4.3 Questionnaires

4.3.1 Response rate by Gender

Table 4.3 Gender of respondents

	Frequency	Outcome (%)
Female	9	29
Male	21	71
Total	30	100

Table 4.3 shows that 9/30 (29%) of the respondents were female and 21/30(71%) were male indicating that there is no gender balance in Unki as there are males (71%) against (29%) females.

4.3.2 Position at Unki mine

Table 4.4- Level of management

Management level	Top	Middle	Staff	Total
Number of personnel	5	9	16	30
Percentage	17%	30%	53%	100%

Table 4.4 shows that 5/30(17%) of respondents were top management, 9/30(30%) were middle management and 16/30(53%) were lower level staff.

This implies that employees in different levels of management were considered to come up with an overall and clearer view with representation across the organisation structure.

4.3.3 Responses to Highest Qualifications Attained

Table 4.5- Highest Qualifications

Description	O/A Level	Prof courses	Diploma	Degree	HND	Masters	PHD
Number of respondent	0	9	6	10	2	3	0
Percentage%	0	30	20	33	7	10	0

Source- Primary data

Table 4.5 above shows that 9/30(30%) of the respondents have professional or other general courses, 6/30(20%) have diplomas while 10/30(33%) are degree qualified, 2/30(7%) have HNDs and 3/30(10%) have masters.

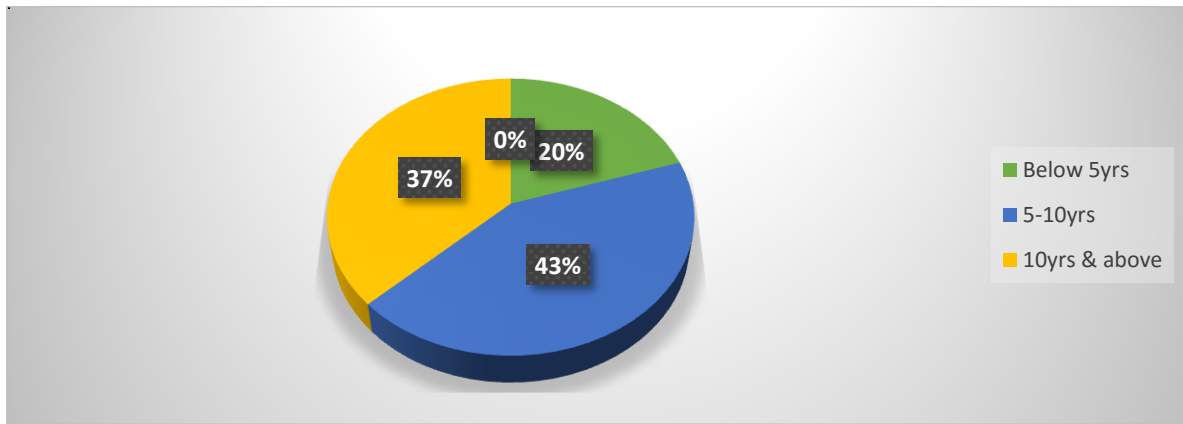
It can be concluded that the respondent's level of qualifications were relevant enough for them to be highly knowledgeable of the questions presented to them in the questionnaires.

4.3.4 Indicate your work experience (years)

Table 4.6 Showing respondent's years of working for Unki Mine

Description	Frequency	Frequency %
Below 5 years	6	20
5 to 10 years	13	43
10 years & above	11	37
Total	30	100

Figure 4.1 Work experience



Information from figure 4.1 indicates that 6/30 (20%) of the employees at Unki Mine have less than 5years working experience, 13/30 (43%) have worked for the company for between 5 to 10years and 11/30 (37%) have working experience of over 10years.

Overallly 80% of the respondents have been working for Unki for more than 5years and this ensures that the data collected is of high quality and can be relied on in drawing conclusions as the respondents have been in the organisation for long enough to be able to adequately answer questions on the SHE programmes of Unki mine.

4.3.5 Unki mine has a SHE policy

Table 4.7- Responses for the Existence of a SHE policy

Description	Strongly agree	Agree	Unsure	Disagree	Strongly disagree	Total
Response	19	8	3	0	0	30
Percentage(%)	63	27	10	0	0	100

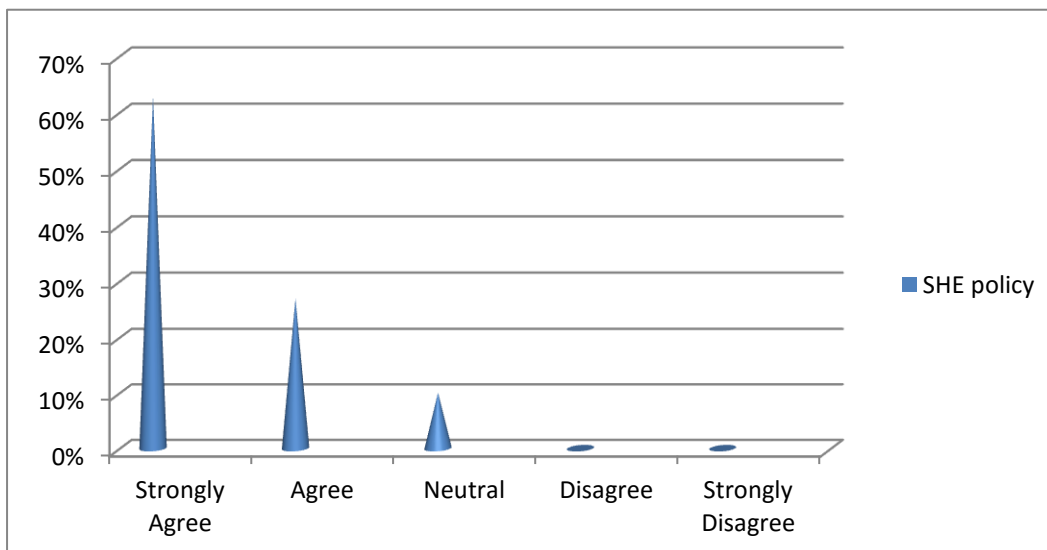


Fig 4.2- Unki mine has a SHE policy

Fig 4.2 above shows that 19/30(63%) of the respondents strongly agreed that Unki mine has a SHE policy, 8/30(27%) only agreed while the remaining 3/30(10%) were neutral.

This shows that 90% agreed while 10% disagreed.

Outcome of the interviews indicated that 4/4(100%) of the respondents strongly agreed that there is a SHE policy.

Basing on the mode of 90% and the outcome of the interviews it can be concluded that Unki has a SHE policy in place

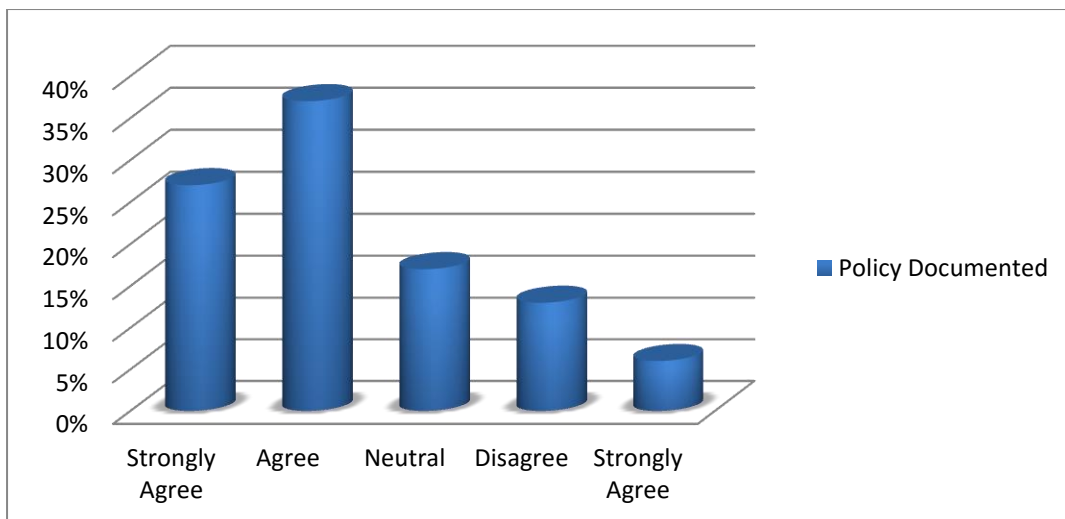
The Environmental Management Act (Chapter 20.27) it is the duty of every organisation to come up with a policy to ensure that the right of every worker to work in an environment that does not endanger his or her safety is met.

4.3.6 Policy is documented

Table 4.8- The policy is documented

Description	Strongly agree	Agree	Unsure	Disagree	Strongly disagree	Total
Response	8	11	5	4	2	30
Percentage	27	37	17	13	6	100

Fig 4.3 SHE policy is documented



As shown in Fig 4.3 above 8/30(27%) of the respondents strongly agreed that the policy is documented, 11/30(37%) only agreed, 5/30(17%) were neutral, 4/30(13%) only disagreed and 2/30(6%) strongly disagreed.

Overallly 64% of the respondents agreed while 36% disagreed.

Out of the 4 interviewees 4/4(100%) supported that the SHE policy is documented.

Basing on the mode of 64% it can be concluded that the SHE policy is documented.

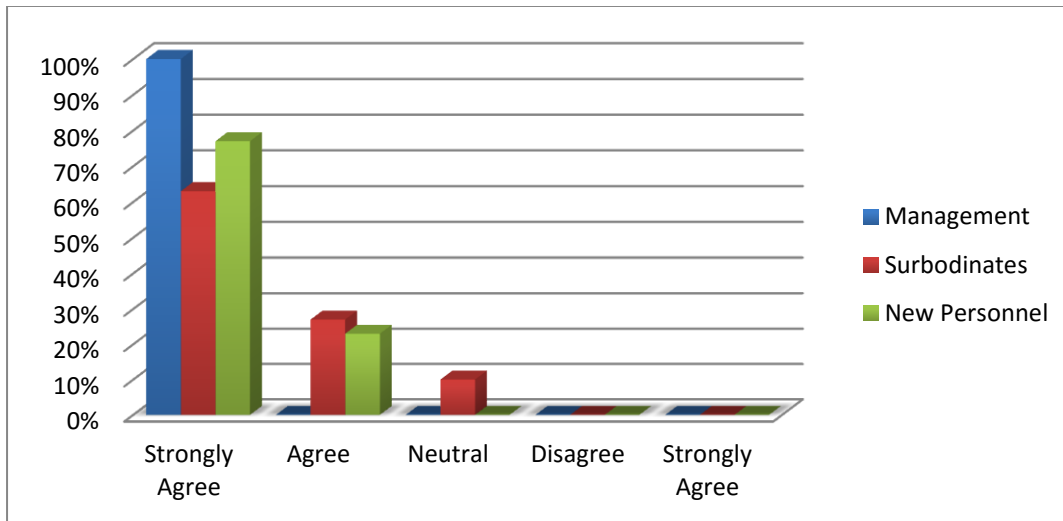
According to South African Occupational Health and Safety Act (1993 S 7 ss1) a SHE policy should be a written policy of an employer concerning the protection of the health and safety of his employees at work.

4.3.7 Unki SHE programmes are communicated to management, subordinates and new employees

Table 4.9- SHE programmes are communicated to:

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	Total
(i)Management	30	0	0	0	0	30
Percentage	100	0	0	0	0	100
(ii)Subordinates	19	8	3	0	0	30
Percentage	63	27	10	0	0	100
(iii)New Employees	23	7	0	0	0	30
Percentage	77	23	0	0	0	100

Fig 4.4- SHE programmes are communicated



(i)Management

As shown in Fig 4.4 above 100% (30/30) of the respondents strongly agreed that the programmes are communicated to management as they are the policy makers.

Conclusively the mode of 100% and the result from the management interviews shows that the policy is communicated to employees.

(ii)Subordinates

Fig 4.4 also shows that 67% (19/30) strongly agreed that the SHE programmes are communicated to subordinates, 27% (8/30) only agreed and 10% (3/30) were neutral.

This means that 90% of the respondents could attest that the SHE programmes are communicated to subordinates while 10% disagreed

It can be concluded based on the mode of 90% that SHE programmes are communicated to subordinates.

(iii)New personnel

Fig 4.4 also shows that 77% (23/30) strongly agreed that the SHE programmes are communicated to new personnel and 23%(7/30) only agreed.

This means that 100% of the respondents could attest that the SHE programmes are communicated to new employees.

Therefore the mode of 100% highlights that SHE programmes are communicated.

Interview finding indicated that 4/4 (100%) of the respondents agree that the SHE policy is communicated to management, subordinates and new personnel.

Drummond and Jefferson (1996) highlight that safety and health programmes need to be thoroughly communicated to every member in the organisation from management to general staff to ensure effective implementation and reduce accidents.

4.3.8 The SHE policy is understandable.

Table 4.10- Responses to Policy is understandable

Description	Strongly agree	Agree	Unsure	Disagree	Strongly disagree	Total
Response	7	6	10	6	1	30
Percentage	23	20	34	20	3	100

Fig 4.5- Policy is understandable

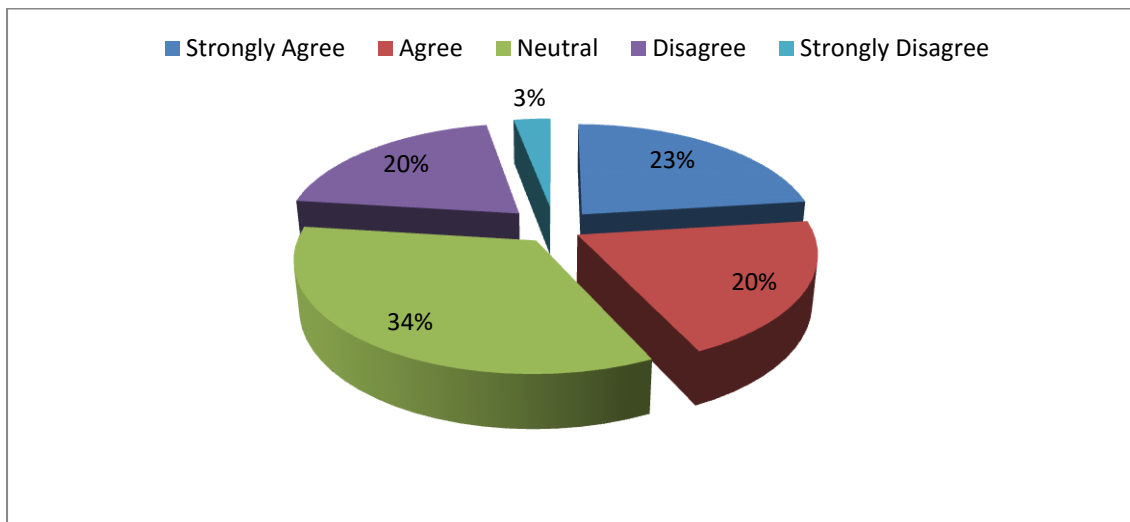


Fig 4.5 above shows that 7/30(23%) of the respondents strongly agreed that Unki SHE policy is understandable, 6/30(20%) only agreed, 10/30(34%) were neutral while 6/30(20%) only disagreed and 1/30(3%) strongly disagreed.

Overallly 53% of the respondents agreed that the policy is understandable while 46% disagreed.

Conclusively, using the mode of 53% it shows that the policy is understandable.

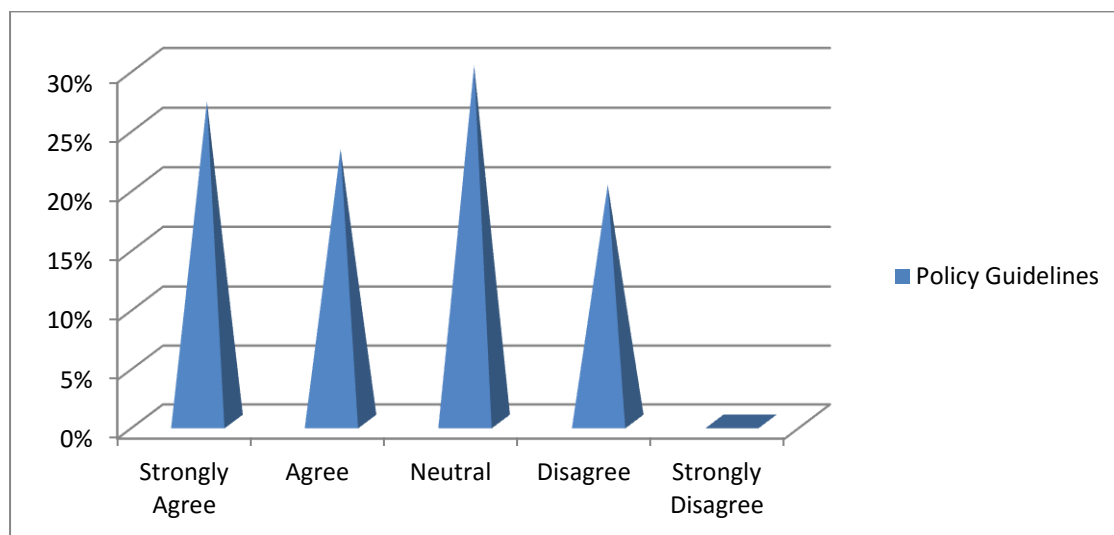
The VictorianWork cover Authority (2001) stipulate that a SHE policy and SHE programs must be understandable to minimize and control workplace hazards.

4.3.9 The SHE programmes have implementation guidelines in place.

Table 4.11- Responses to Implementation guidelines

Description	Strongly agree	Agree	Unsure	Disagree	Strongly disagree	Total
Response	8	10	8	4	0	30
Percentage	27	33	27	13	10	100

Fig 4.6- Unki has policy guidelines to facilitate implementation.



As shown in fig 4.6 above 8/30(27%) of the respondents strongly agreed that there are policy guidelines to facilitate policy implementation, 10/30(33%) only agreed and 8/30(27%) were not sure and 4/30(13%) only disagreed.

This means that 60% of the responses confirmed the existence of policy guidelines while 40% disagreed.

Interviews also highlighted that 100% of the responses agreed that there are policy implementation guidelines.

Considering the mode of 60% and the interview results there are SHE programmes implementation guidelines in place.

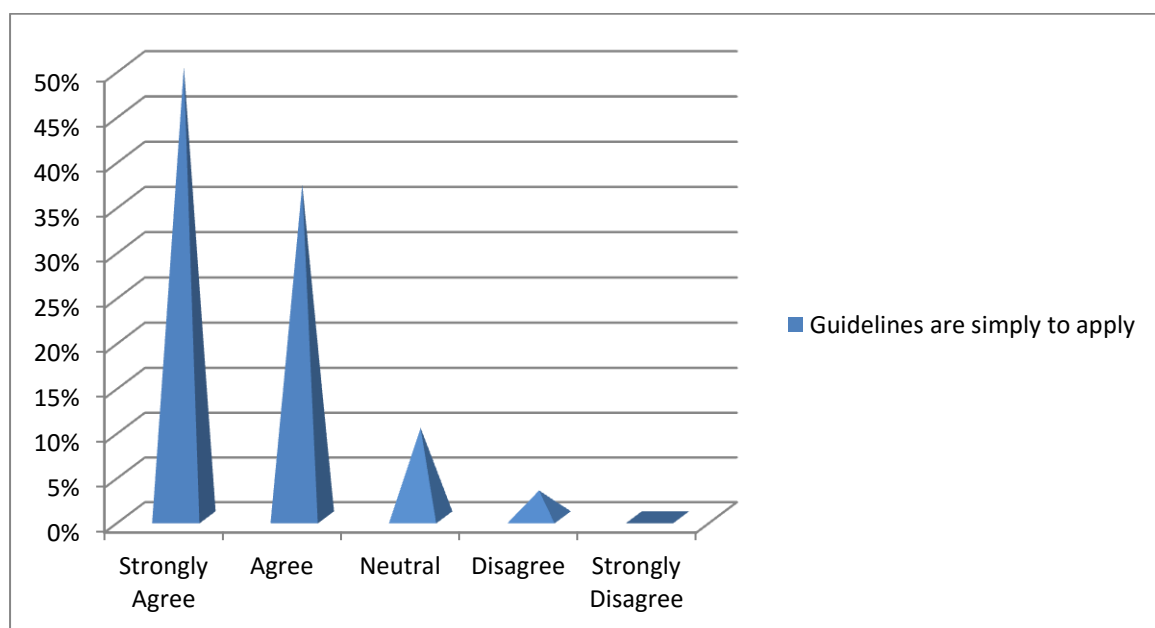
Burke et al (2012) states that implementation is a process and so guidelines should be communicated at each stage to facilitate the effective implementation of the SHE policy.

4.3.10 Implementation guidelines are simple to apply

Table 4.12- Guidelines are simple to apply.

Description	Strongly agree	Agree	Unsure	Disagree	Strongly disagree	Total
Response	15	11	3	1	0	30
Percentage	50	37	10	3	0	100

Fig 4.7-Guidelines are simple to apply.



As shown in fig 4.7 above 15/30(50%) of the respondents strongly agreed that SHE programme guidelines are simple to apply, 11/30(37%) only agreed, 3/30(10%) were undecided and 1/30(3%) only disagreed.

This means that 87% of the responses confirmed that SHE programme implementation guidelines are simple to apply while 17% disagreed.

The mode of 87% shows that implementation guidelines of SHE programmes are simple to apply.

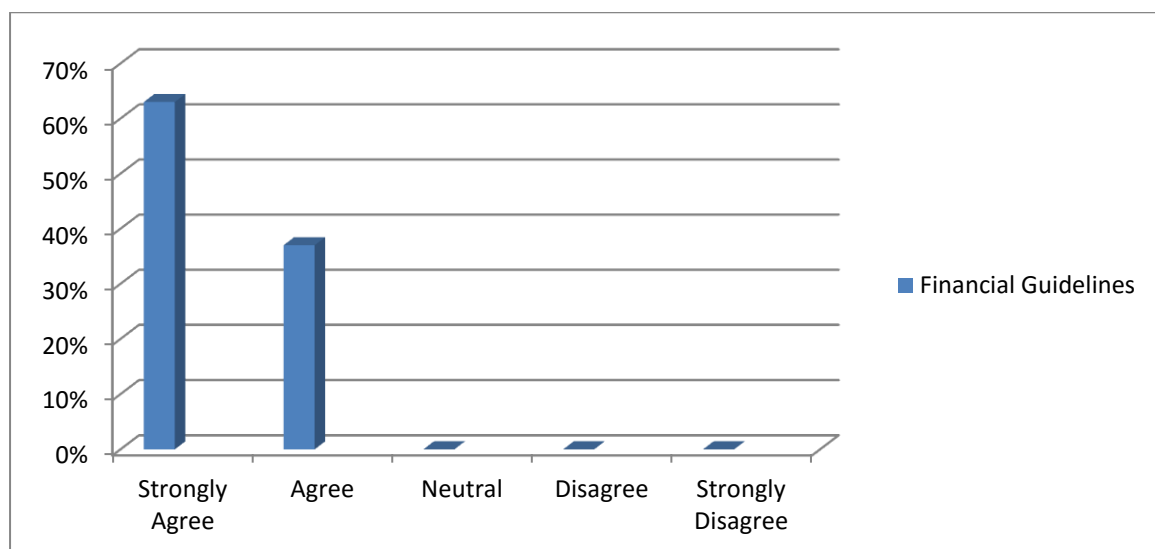
The Australian Government Comcare (2010) emphasised that implementation guidelines on SHE programmes must involve well-coordinated activities and the guidelines themselves should be simple.

4.3.11 There are financial usage guidelines in place for SHE programmes

Table 4.13- Responses to financial guidelines existence

Description	Strongly agree	Agree	Unsure	Disagree	Strongly disagree	Total
Response	19	11	0	0	0	30
Percentage	63	37	10	0	0	100

Fig 4.8- Unki has financial guidelines for SHE programmes.



As shown in fig 4.8 above 63%(19/30) of the respondents strongly agreed that there are financial guidelines and 37%(11/30).

This means that 100% of the responses confirmed the existence of financial guidelines on the use of the finance.

Interview results show that 4/4(100%) of the interviewees agreed that there are financial guidelines in managing funds for SHE policies.

Considering the mode of 100% and interview responses it can be concluded that Unki SHE policy has financial guidelines in place.

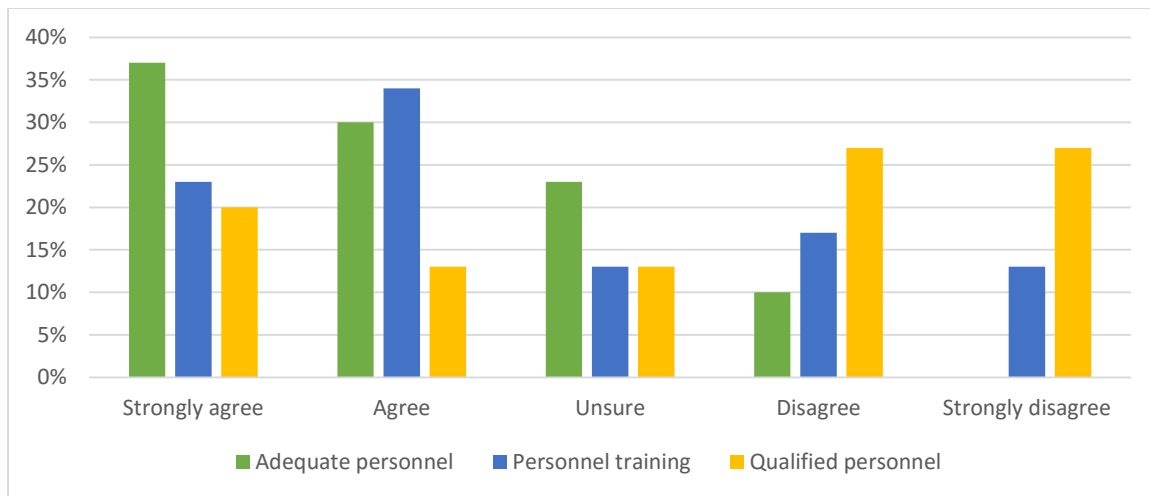
Drummond and Jefferson (1996) also emphasizes the need for financial guidelines when implementing SHE programmes.

4.3.12 The following personnel factors exist to effectively implement SHE programmes:

Table 4.14- Personnel factors

	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree	Total
(i)Adequate personnel	11	9	7	3	0	30
Percentage	37	30	23	10	0	100
(ii)Personnel training	7	10	4	5	4	30
Percentage	23	34	13	17	13	100
(iii)Qualified personnel	6	4	4	8	8	30
Percentage	20	13	13	27	27	100

Fig 4.9- Personnel Factors



(i) Adequate personnel

As shown in Fig 4.9 above 11/30(37%) of the respondents strongly agreed that there is adequate personnel on the ground while 9/30(30%) only agreed, 7/30(23%) were neutral and 3/30(10%).

This shows that 67% of the respondents agreed while 33% disagreed.

Conclusively the mode of 67% shows that there is adequate personnel to implement SHE programmes in Unki.

(ii) Personnel training

Fig 4.9 also shows that 7/30(23%) of the respondents strongly agreed that personnel training is done to successfully implement SHE programmes at Unki, 10/30(34%) only agreed, 4/30(13%) were neutral, 5/30(17%) disagreed and 4/30(13%) strongly disagreed.

Overallly 57% agreed that there is personnel training at Unki while 43% disagreed.

It can be concluded based on the mode of 57% that personnel training is done to facilitate SHE programmes implementation at Unki.

(iii) Qualified personnel

Fig 4.9 also shows that 17/30(57%) strongly agreed that there are qualified personnel to implement SHE programmes and 13/30(43%) only agreed.

This means that 100% of the respondents could attest that there are qualified personnel.

Interview findings indicated that 4/4 (100%) of the respondents agreed all personnel factors are considered training, hiring adequate and qualified personnel when implementing SHE programmes.

Therefore the mode of 100% highlights that qualified personnel are implementing SHE programmes at Unki.

The U.S Department of Interior Safety and Health Community (2008) suggests that management must commit to assembling and maintaining adequate personnel resources and facilitate requisite skills, training and authorities to fulfil assigned responsibilities.

4.3.13 There are senior supervisors to assist in the implementation of the SHE policy.

Table 4.15- Responses to supervisors at Unki

Description	Strongly agree	Agree	Unsure	Disagree	Strongly disagree	Total
Response	30	0	0	0	0	30
Percentage	100	0	0	0	0	100

As shown in table 4.15 above 100%(30/30) of the respondents strongly agreed that there are supervisors at are senior supervisors overseeing the implementation of SHE programmes at Unki.

Conclusively, the mode of 100% shows that there are supervisors at Unki.

OHSAS 18001(2002) states that there should always exist qualified people supervising the implementation of SHE programmes.

4.3.14 A First Aid team exists on site and its awareness on attending to emergencies

Table 4.16- Existence of a First Aid team on site

Description	Strongly agree	Agree	Unsure	Disagree	Strongly disagree	Total
Response	30	0	0	0	0	30
Percentage	100	0	0	0	0	100

According to table 4.14 above 100% (30/30) of the respondents strongly agreed that a First aid team exists on site at Unki and that they are aware of their duties of attending any emergencies.

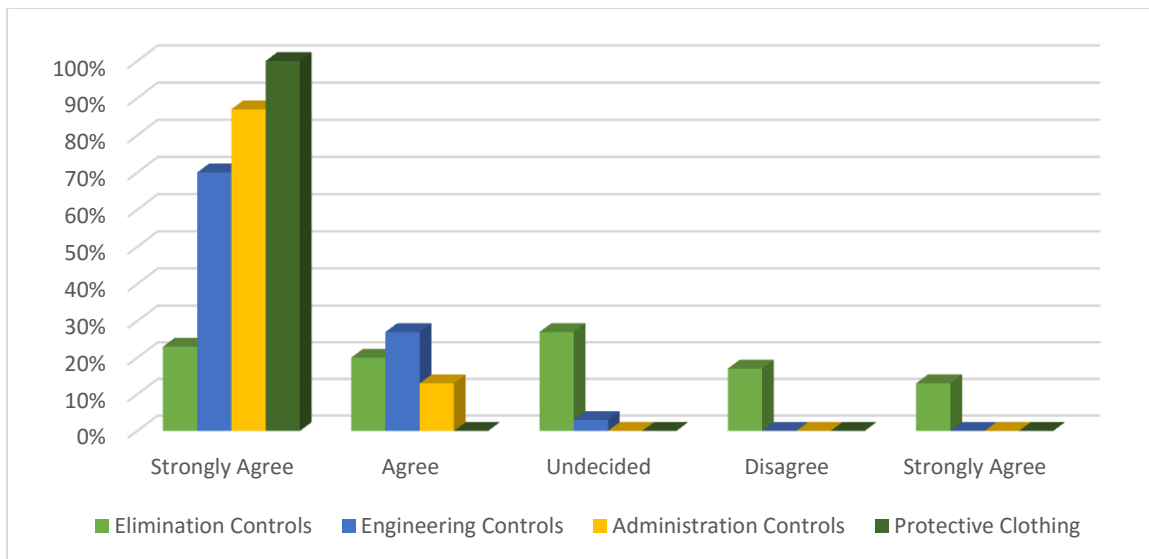
Therefore using the mode of 100% can conclude that there is a first aid team on site.

The U.S Department of Interior Safety and Health Community (2008) highlights that management must provide all resources needed for workplace safety and occupational health for instance an ambulance for any emergencies.

4.3.15 The following controls are present on SHE programmes implementation: Table 4.17- General controls

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	Total
(i)Elimination controls	7	6	8	5	4	30
Percentage	23	20	27	17	13	100
(ii)Isolation controls	6	4	9	8	3	30
Percentage	20	13	30	27	10	100
(iii)Engineering controls	21	8	1	0	0	30
Percentage	70	27	3	0	0	100
(iv)Administration controls	26	4	0	0	0	30
Percentage	87	13	0	0	0	100
(v)Personnel protective clothing and safety equipment	30	0	0	0	0	30
Percentage	100	0	0	0	0	100

Fig 4.10 Existence of general controls



(ii)Protective clothing

As shown in Fig 4.10 above 100% (30/30) of the employees acknowledge the existence of personnel protective clothing and safety equipment for their health and safety.

This means that 100% of the respondents agree that protective clothing is provided as a protection and safety measure at Unki.

(ii)Administration controls

Fig 4.10 also shows that 26/30(87%) strongly agreed that there are administration controls while 4/30(13%) only agreed that Unki SHE policy has administration controls in place.

This shows 100% of respondents agreed that there are administration controls over the SHE programmes at Unki.

(iii)Elimination controls

Only 7/30(23%) strongly agreed, 6/30(20%) agreed while 8/30(27%) were undecided, 5/30(17%) only disagreed and 4/30(13%) strongly disagreed that there are elimination controls.

This overallly means that 43% agreed while 57% disagreed.

Conclusively the mode of 57% means that there are not adequate elimination controls on SHE programmes implementation at Unki.

(iv)Engineering controls

As shown in Fig 4.10 21/30(70%) of the respondents strongly agreed that there are engineering controls in place while 8/30(27%) only agreed and 1/30(3%) was undecided.

This shows that 97% of respondents attest to the fact that there are engineering controls at Unki SHE programmes while 3% disagreed.

The mode of 97% means that there are engineering controls in place.

Results from interviews show that 4/4(100%) of interviewees agreed that there are the following controls; engineering, elimination, administration and protective clothing and equipment.

The Victoria Workcover Authority (2001) states the following as major SHE implementation controls: engineering, elimination, administration and protective clothing and highlights that effective adoption of these controls results in successful implementation.

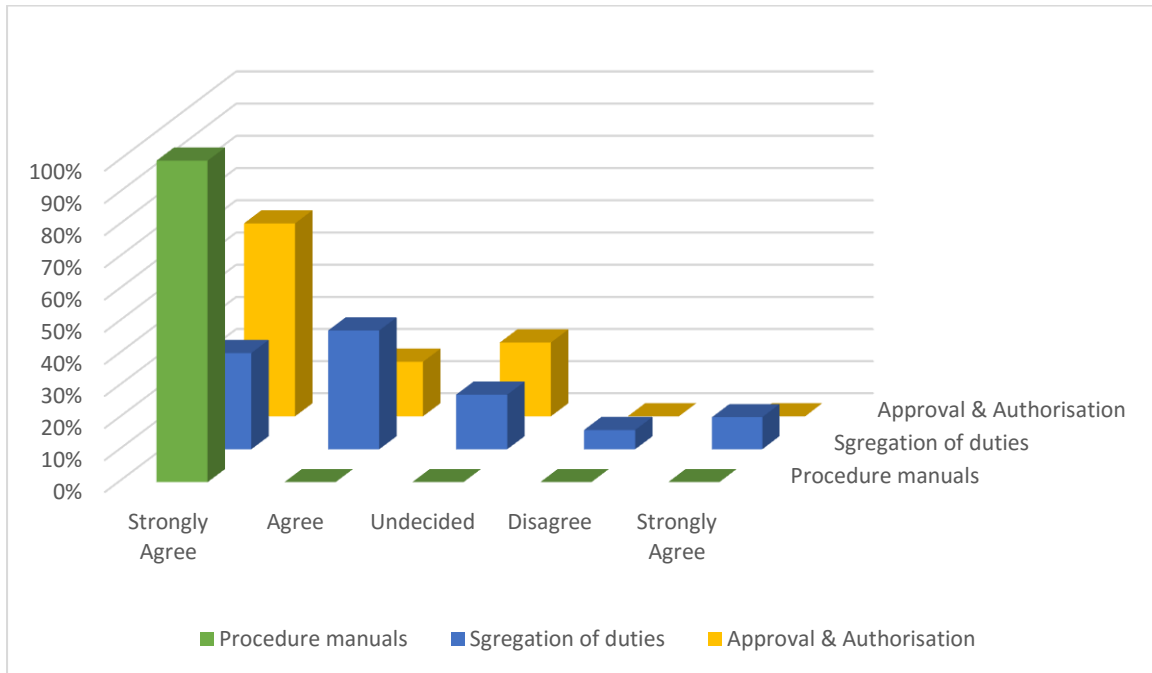
4.15 The following controls are present on SHE programmes implementation:

Table 4.18

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	Total
(i)Procedures manuals	30	0	0	0	0	30
Percentage	100	0	0	0	0	100
(ii)Segregation of duties	9	11	5	2	3	30
Percentage	30	37	17	6	10	100
(iii)Approval and authorisation costs and transactions	18	5	7	0	0	30

Percentage	60	17	23	0	0	100
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Fig 4.11 Existence of financial controls



(i) Procedure manuals

As shown in Fig 4.11 above 30/30(100%) of the employees acknowledge the existence of procedure manuals on the implementation process of SHE programmes.

Considering the mode of 100% one can safely conclude that there are procedure manuals.

(ii) Segregation of duties

Fig 4.11 also shows that 9/30(30%) strongly agreed that there is segregation of duties in the implementation processes, 11/30(37%) only agreed while 5/30(17%) were unsure, 2/30(6%) only disagreed and 3/30(10%) strongly disagreed.

Overallly 67% agreed that there is proper segregation of duties with only 23% disagreed.

The mode of 67% therefore shows that there is proper segregation of duties in managing the finances when implementing SHE programmes.

(iii) Approval and Authorisation

As shown in Fig 4.11 18/30(60%) strongly agreed that SHE costs are approved and authorised, 5/30(17%) only agreed and 23%(7/30) were undecided.

This overall shows that 77% agreed while 23% disagreed.

The mode of 77% shows that SHE costs are approved and authorised.

Interview results showed that 4/4(100%) of interview results agreed that there are financial controls in place.

The Roche Group (2007:27) agreed that there is need for the adoption of financial controls to ensure funds are appropriately in implementing SHE programmes.

4.3.17 Budget forecasts

Table 4.19- Budget forecasts are prepared in prior periods for SHE costs.

Description	Strongly agree	Agree	Unsure	Disagree	Strongly disagree	Total
Response	30	0	0	0	0	30
Percentage	100	0	0	0	0	100

As shown table 4.16 above 30/30(100%) of the respondents agreed that there are budget forecasts for SHE costs in prior periods.

Interview responses showed that 4/4(100%) agreed that budget forecasts are done in prior periods for SHE costs.

The mode of 100% and interview responses show that budget forecasts are prepared in prior periods for SHE costs.

MacBride (2009) highlights that proper budgeting procedures need to be followed to be able to monitor safety and health related costs.

4.3.18 Comparisons are done of budgeted and actual SHE cost budgets for variance analysis.

Table 4.20- Variance analysis done

Description	Strongly agree	Agree	Unsure	Disagree	Strongly disagree	Total
Response	12	9	5	3	1	30
Percentage	40	30	17	10	3	100

Fig 4.12- Variance analysis done

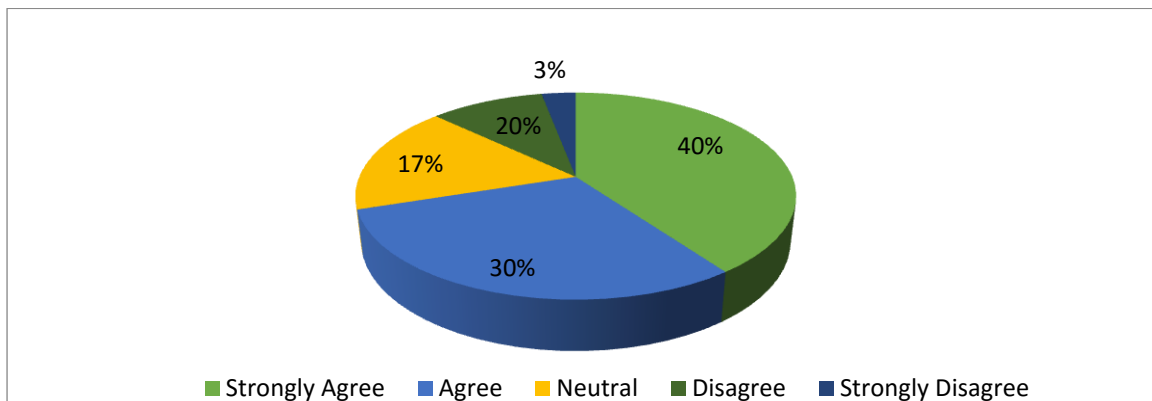


Fig 4.12 above shows that 12/30(40%) of the respondents strongly agreed that a variance analysis is done to compare SHE programmes actual costs to the budget, 9/30(30%) only agreed, 5/30(17%) were neutral while 3/30(10%) only disagreed and 1/30(3%) strongly disagreed.

Overallly 70% of the respondents agreed that Unki mine does variance analysis while 30% disagreed.

The mode of 70% means variance analysis is done on SHE costs.

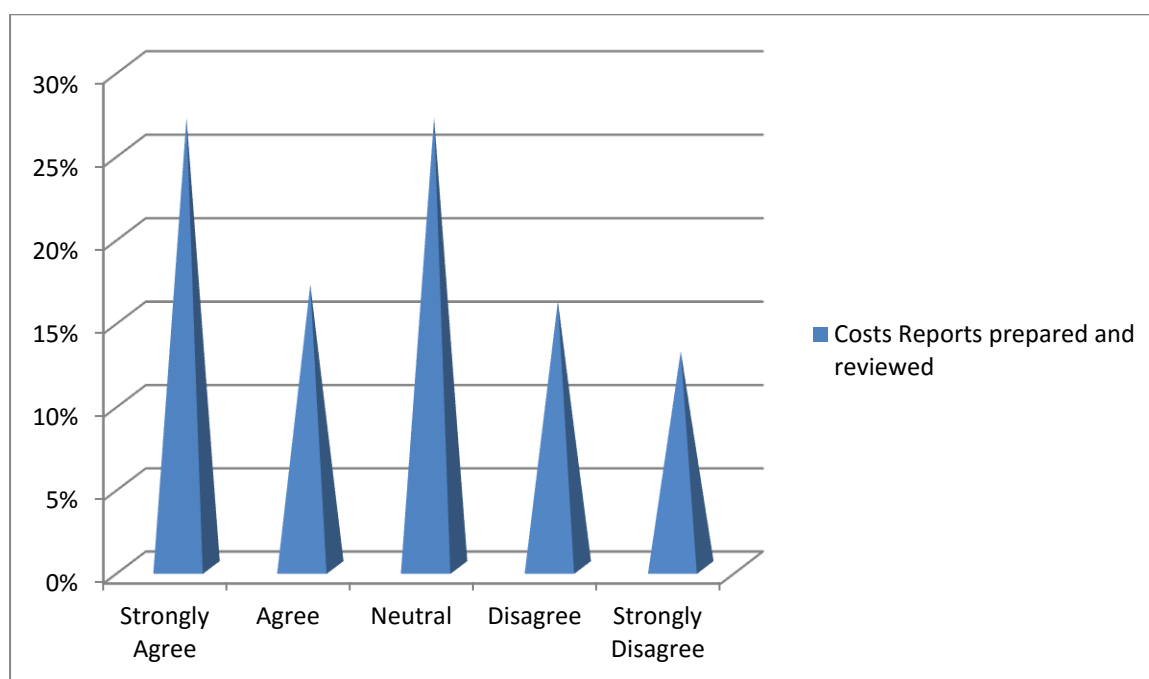
According to McBride(2009) variance analysis is a very important tool that enables management to monitor and control costs.

4.3.19 SHE cost reports are regularly reviewed.

Table 4.21- Costs reports are regularly reviewed.

Description	Strongly agree	Agree	Unsure	Disagree	Strongly disagree	Total
Response	8	5	8	5	4	30
Percentage	27	17	27	17	13	100

Fig 4.13- Costs reports are regularly reviewed.



As shown in fig 4.13 above 27%(8/30) of the respondents strongly agreed that SHE programme costs reports are regularly reviewed, 17%(5/30) only agreed and 27%(8/30) were undecided and 16%(5/30)only disagreed and 13%(4/30).

Overallly 44% of the responses confirmed that SHE costs reports are regularly reviewed while 56% disagreed.

The mode of 56% shows that costs are not regularly prepared and reviewed.

According to Wenlan (2009) management should establish a mechanism that provides regular cost reports and regularly review the reports.

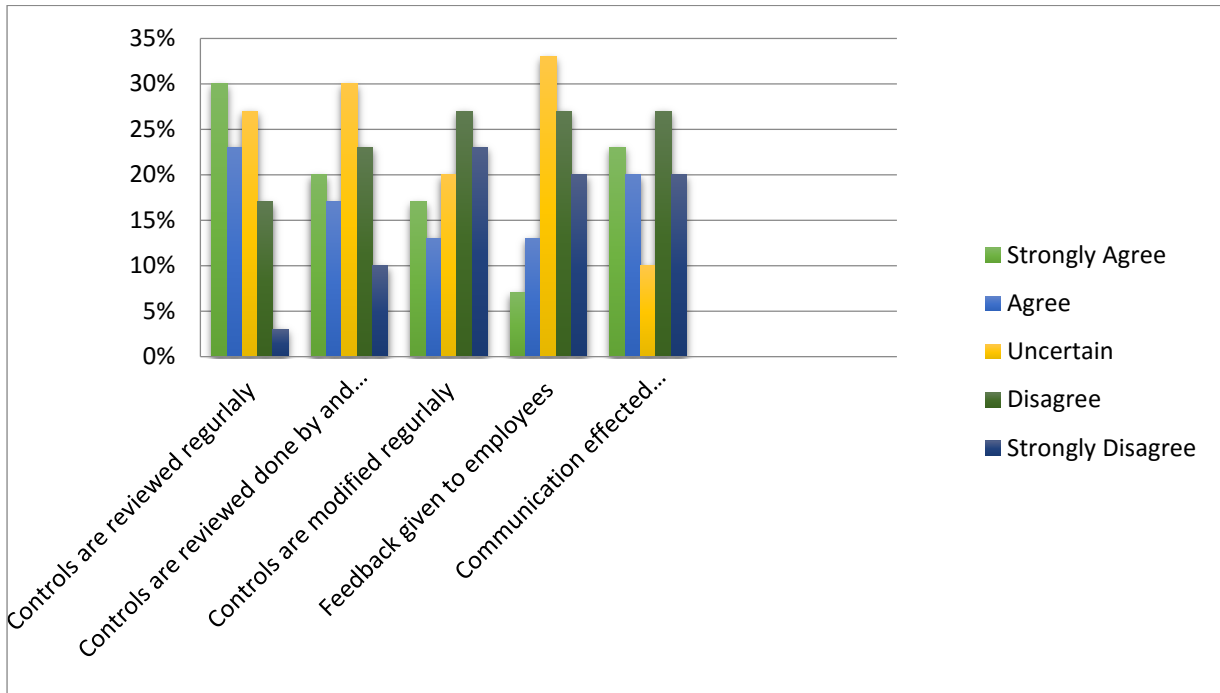
4.3.20. SHE policy controls are reviewed, evaluated and feedback communicated:

4.22 Controls are reviewed.

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	Total
(i)Controls are reviewed regularly	9	7	8	5	1	30
Percentage	30	23	27	17	3	100
(ii)Controls are reviewed by an independent committee	6	5	9	7	3	30
Percentage	20	17	30	23	10	100
(iii) Controls are modified regularly	5	4	6	8	7	30
Percentage	17	13	20	27	23	100
(v)Feedback is given to subordinates.	2	4	10	8	6	30
Percentage	6	13	33	27	20	100
(vi) Communication is effected immediately when accident occurs.	7	6	3	8	6	30

Percentage	23	20	10	27	20	100
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Fig 4.14 Controls are reviewed, evaluated and feedback communicated



(i) Controls are reviewed regularly

As shown in Fig 4.14 above 9/30(30%) of the employees acknowledge that controls are reviewed regularly, 7/30(23%) only agreed, 8/30(27%) were undecided, 5/30(17%) disagreed and 1/30(3%) strongly disagreed.

Overall 53% agreed and 47% disagreed.

The mode of 53% shows that controls are indeed reviewed regularly.

(ii) Review of Controls done by an Independent Committee

Fig 4.14 also shows that 6/30(20%) strongly agreed that the review of controls is done by an Independent committee, 5/30(17%) only agreed, 9/30(30%) were neutral, 7/30(23%) disagreed and 3/30(10%) strongly disagreed.

This shows that only 37% agreed while 63% disagreed.

The mode of 63% shows that the controls on SHE programmes are not reviewed by an independent committee.

(iii) Controls are modified regularly

Only 5/30(17%) strongly agreed, 4/30(13%) agreed while 6/30(20%) were undecided, 8/30(27%) only disagreed and 7/30(23%) strongly disagreed.

This means that only 30% agreed while 70% disagreed.

The mode of 70% means that there are no modifications done to the controls in place.

(iv) Feedback is given to subordinates

Fig 4.14 also show 2/30(7%) of the respondents strongly agreed that feedback is given to subordinates, 4/30(13%) only agreed while 10/30(33%) were undecided, 8/30(27%) only disagreed and 6/30(20%) strongly disagreed.

Overallly 43% agreed while 57% disagreed.

The mode of 57% shows that feedback is not given to subordinates.

(v) Communication is effected immediately when accident occurs

As shown in Fig 4.14 7/30(23%) of the respondents strongly agreed that communication is effected immediately when accident occurs, 6/30(20%) only agreed, 3/30(10%) were undecided, 8/30(27%) disagreed and 6/30(20%) strongly disagreed.

This shows that 43% of respondents attest to the fact that there is immediate communication while 57% disagreed.

Interview reports show that 4/4(100%) of the respondents agreed that controls are reviewed but however highlighted that they are not regularly modified.

The mode of 57% means that communication is not effected immediately when an accident occurs.

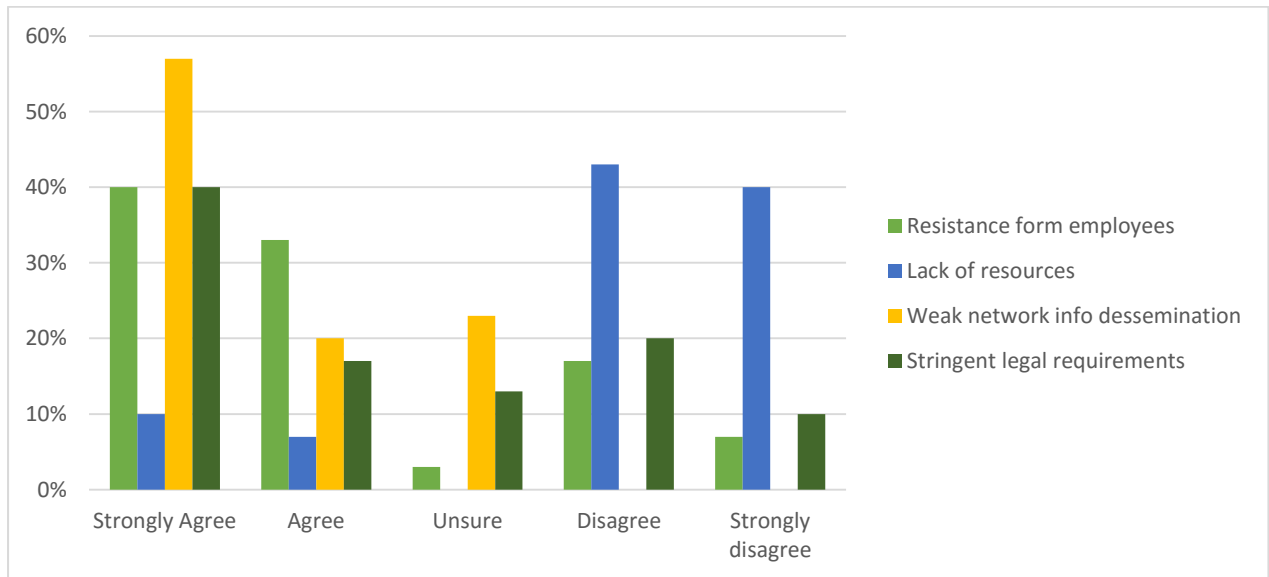
According to Wenlan (2009) management should establish a mechanism that provides regular review of controls and their modification.

4.3.21 The following problems are encountered on the implementation of a SHE program:

Table 4.23 Problems encountered on implementation

	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree	Total
(i)Resistance from employees	12	10	1	5	2	30
Percentage	40	33	3	17	7	100
(ii)Lack of resources.	3	2	0	13	12	30
Percentage	10	6	0	43	40	100
(iii)Weak network information dissemination	17	6	7	0	0	30
Percentage	57	20	23	0	0	100
(iv) Stringent legal requirements	12	5	4	6	3	30
Percentage	40	17	13	20	10	100

Fig 4.15 Challenges faced in implementation.



(i)Resistance from employees

As shown in Fig 4.15 above 12/30(40%) of the employees acknowledge that there is resistance from employees during the implementation process, 10/30(33%) only agreed, 1/30(3%) were undecided, 5/30(17%) disagreed and 2/30(7%) strongly disagreed.

Overallly 73% agreed while 33% disagreed.

Results from interviews highlighted that 4/4(100%) of respondents agreed that there is resistance from employees when implementing SHE programmes and controls.

The mode of 73% shows that there is resistance from employees in implementing SHE programmes.

(ii)Lack of resources

Fig 4.15 also shows that 3/30(10%) strongly agreed that lack of resources is the other problem faced in implementing SHE programmes, 2/30(7%) only agreed, 13/30(43%) disagreed and 12/30(40%) strongly disagreed.

Overallly 17% agreed while 83% disagreed.

Considering the mode of 83%, this means resources are not lacking to implement SHE programmes thus they are there.

(iii)Weak network information dissemination.

Only 17/30(57%) of the respondents strongly agreed, 6/30(20%) only agreed while 7/30(23%) were undecided.

This means that only 77% agreed while 23% disagreed.

The mode of 77% shows that there is network information dissemination.

(iv)Stringent legal requirements.

Fig 4.15 also shows that 12/30(40%) of the respondents strongly agreed that stringent legal requirements maybe a problem, 5/30(17%) only agreed while 4/30(13%) were undecided, 6/30(20%) only disagreed and 3/30(10%) strongly disagreed.

This again shows that 57% agreed while 43% disagreed.

Interview findings indicated that 4/4 (100%) of the respondents agreed that there are stringent legal requirements in place that pose problems for the implementation process.

The mode of 57% show that there are stringent legal requirements that can be a problem when implementing SHE programmes.

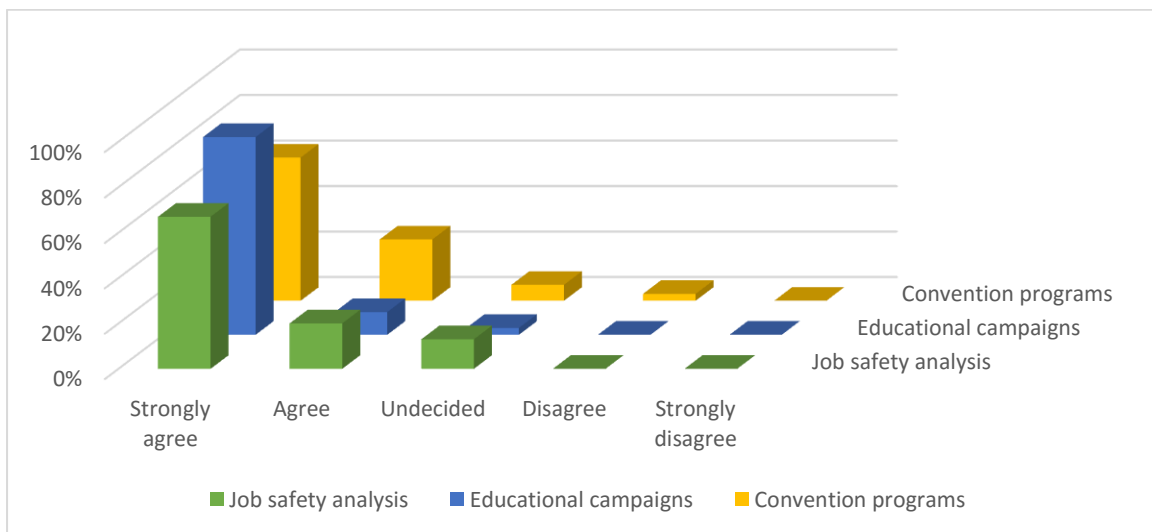
World Health Organization Geneva (2008) asserts that legal requirements posed by governments may hinder or delay progress in implementing SHE programmes.

4.3.22 Unki Mine can use the following strategies to effectively implement SHE programmes:

Table 4.24- Strategies Unki can employ

Strategies	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree	Total
(i)Job safety analysis	20	6	4	0	0	30
Percentage	67	20	13	0	0	100
(ii)Educational informative campaigns	26	3	1	0	0	30
Percentage	87	10	3	0	0	100
(iii)Convention programmes to reduce injuries	19	8	2	1	0	30
Percentage	63	27	7	3	0	100

Fig 4.16- Strategies Unki can employ



(i)Job safety analysis

As shown in Fig 4.16 above 20/30(67%) of the employees acknowledge that job safety analysis can help in the implementation of SHE programmes, 6/30(20%) only agreed and 4/30(13%) were unsure.

Overall 87% agreed and 13% disagreed.

The mode of 87% show that respondents support the use of job safety analysis in successfully implementing SHE programmes.

Wenlan (2009) highlights that to effectively implement any health and safety policy a thorough job safety analysis should be carried out.

(ii)Educational campaigns

Fig 4.16 also shows that 26/30(87%) strongly agreed that educational campaigns can help in safety and healthy operations at Unki mine, 3/30(10%) only agreed and 1/30(3%) were unsure.

Overall 97% of the respondents agreed while 3% disagreed.

Interview findings also confirmed that 4/4 (100%) strongly agreed that educational campaigns go a long way in conditioning employees for SHE policy implementation thereby reducing resistance.

The mode of 97% and interview findings shows that educational campaigns maybe used to successfully implement SHE programmes.

(iii)Convention programmes

Fig 4.16 also shows that 19/30(63%) of the respondents strongly agreed that convention programs can help minimise accidents, 8/30(27%) only agreed while 2/30(7%) were undecided, and 3%(1/30) disagreed.

Overall 90% of the respondents agreed while 10% disagreed.

The mode of 90% shows that convention programs may be used to reduce accidents.

World Health Assembly (2010) highlights that convention programs and campaigns can help counter workplace injuries and ensure effective implementation of SHE programs and policies

4.4 Summary

This chapter dealt with data presentation, analysis and interpretation of the results as given by the respondents through the administration of questionnaires and interviews conducted. The next chapter is going to cover recommendations and conclusions.

CHAPTER 5

SUMMARY CONCLUSION FROM FINDINGS AND RECOMMENDATIONS

5.0 Introduction

The chapter gives the summary, conclusions and recommendations based on of data collected presented and analysed in the previous chapter and also the researcher's knowledge of the organisation understudy.

5.1 Chapter Summaries

Chapter one introduced the problem to the research which was the unfavourable relationship between SHE costs and the benefits of the programmes. The background to the study described how Unki mine is run, why there is need for a SHE policy and gave the statistics highlighting the increase in SHE costs from 2012 to 2015. Research objectives of the study included determining the existence of a SHE policy at Unki, identifying the implementation guidelines, identifying personnel factors that affect implementation, determining the controls put in place by Unki to monitor the programme and establishing the best practises to effectively implement SHE programmes at lesser costs.

Chapter two dealt with the review and analysis of literature related to the study. Authors had different views on the extent to which SHE programmes must be implemented as Roche Group (2007) highlighted that the goal of any mine must be to totally eliminate any poses to accidents or health hazards in the workplaces whatever the costs while Wenlan (2009) highlighted that the making of profits should remain an organisation core principle whether SHE programmes are implemented or not. Other literature reviewed was on personnel factors that can affect implementation as stated by AGC (2010) that employees' commitment is one of the major factors that affect implementation thus morale should be increased through incentives and participation to ensure their commitment.

Chapter three focused on the research design used which was the descriptive research method making use of a case study which enabled the collection of both qualitative and quantitative information as asserted by Cooper and Schindler (2003). A research sample was also chosen consisting of 41 employees form the mining, finance and other departments. Convenience and

stratified sampling were employed in coming up with the sample .The research instruments used in collecting data were questionnaires and interviews

In chapter four data collected through questionnaires and interviews was presented in tables, graphs and pie charts using figures and percentages. The analysis of data collected from different respondents was done using the mode to come up with conclusions.

5.2 Major Findings

- A SHE policy exists at Unki Mine, it is communicated to management and documented.
However the general staff is not aware of its existence or documentation.
- The policy guidelines are also understandable but general staff and other employees were also not aware that the implementation guidelines are actually documented.
- A number of personnel factors affect the implementation process, their adequacy and qualifications but the organisation has trained the employees. However there still is weak information dissemination among departments and inadequate supervision of employees.
- General controls exist at Unki to ensure effective implementation of the SHE policy including elimination, administration and engineering controls. However costs reports are not prepared or reviewed regularly as a way of monitoring SHE costs. The controls are also not reviewed regularly or by an Independent committee as required by the policy.
- A number of challenges are faced in implementing the SHE programmes and these include resistance from employees, lack of resources and other stringent legal requirements.
- The organisation seems not to be adhering to some best practises in managing SHE programmes related costs.

5.3 Conclusion

The research was a success as it obtained findings which related to the costs and activities during implementation of SHE programmes. Findings show that SHE programme costs may be difficult to control when trying to successfully implement the programmes in an

environment where some financial controls are weak and costs reports are not prepared or reviewed regularly.

5.4 Recommendations

- Implementation and communication of SHE policies regularly to all workers using notices, emails and safety pamphlets to educate and or enlighten employees and other related parties on the policy and programs involved. This is supported by Drummond and Jefferson (1996) who state that management should well communicate their safety policy and programmes before, during and after implementation to encourage participation.
- Thorough induction training of new employees to ensure they know safety procedures or guidelines on SHE programmes implementation and regular training sessions to be adopted for effective implementing the policies thus ensuring safety.
- More in-house seminars and personnel training should be done by Unki to make sure personnel know the implementation guidelines of SHE policies and also to reduce costs related to training and seminars outside the organisation.
- There must be regular review of controls in place to ensure successful implementation of the SHE programmes. This review must also be done by an Independent committee to ensure objectivity as highlighted by the Victoria Workcover Authority (2001).
- A job safety analysis must be done on each specific task or job to examine and identify hazards and determine or craft the safest programmes and ways to meet the safety needs per job. Ackerman and Heizenlink (2002) also asserts that SHE programmes must also be evaluated regularly by management to make sure their implementation is cost effective.
- Educational and information campaigns maybe done in support of the effective measures and practices that ensure safety in the mine and ensure effective implementation of SHE programs and policies.

5.5 Suggestion for Further Research

This research was limited to SHE program costs on Unki mine, further research can be done on the effectiveness of SHE programmes in maintaining safety in the workplace or the impact of SHE program costs in Zimbabwe mining industry as a whole.

5.6 Chapter summary

This chapter provided conclusions based on findings obtained by the researcher and recommendations to the research. Suggestion for further research was also highlighted.

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APPENDIX A: COVER LETTER

Midlands State University

P. Bag 9055

Gweru

08 March 2016

Unki Platinum Mine

47 Broadlands Road

Emerald hill

Harare

Dear Sir/Madam

RE: Request to carry out Research

I am kindly requesting for authority to conduct research on SHE programs costs at Unki Mine through questionnaires and interviews. I am a final year student at the Midlands State University studying towards a Bachelor of Commerce Honors degree in Accounting. I am carrying out a research entitled: **An investigation of safety, health and environment (SHE) programmes costs on the performance of Unki mine.**

All information is guaranteed to remain confidential and will be used specifically for academic purposes by the researcher.

Your contribution to this research is greatly appreciated

Yours faithfully

Paidamoyo Mutero(R122971H)

APPENDIX B:

QUESTIONNAIRE TO MANAGEMENT AND STAFF

My name is Paidamoyo Mutero. I am currently studying Bachelor of commerce honours degree in Accounting and I am in my final year at Midlands State University. I am carrying out a research entitled **An investigation of safety, health and environment (SHE) programmes costs on the performance of Unki mine** as part of the fulfilment of my degree programme.

I am kindly asking for your contribution to questions listed below;

Instructions on responding to questions:

Please tick the appropriate response box

1) Gender

Male { } Female { }

2) Please state your position in Unki Mine

Top management { } Middle management { } Staff
{ }

3) Tick your highest level of qualification?

O' Level { } A' level { } Diploma { } Degree { } HND { } Masters { } Phd {
}

4) How long have you been in the Platinum mining Industry?

Less 5 years [], 5-10 years [], 10 years and above []

5) Unki Mine has a SHE policy.

Strongly Agree [] Agree [] Unsure [] Disagree [] Strongly Disagree []

6) The SHE policy is documented.

Strongly Agree [] Agree [] Unsure [] Disagree [] Strongly Disagree []

7) The SHE programmes are communicated to:

	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
(i)Management					
(ii)Subordinates					
(iii) New Personnel					

8) The policy is understandable.

Strongly Agree [] Agree [] Unsure [] Disagree [] Strongly Disagree []

9) The programmes have implementation guidelines in place.

Strongly Agree [] Agree [] Unsure [] Disagree [] Strongly Disagree []

10) Implementation guidelines are simple to apply.

Strongly Agree [] Agree [] Unsure [] Disagree [] Strongly Disagree []

11) There are financial usage guidelines in place for SHE programmes.

Strongly Agree [] Agree [] Unsure [] Disagree [] Strongly Disagree [] (12) The following personnel factors exist to effectively implement SHE programmes:

	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
(i)Adequate personnel					

(ii)Personnel training					
(iii)Qualified personnel					

12) There are senior supervisors to assist in the implementation of the SHE policy.

Strongly Agree [] Agree [] Unsure [] Disagree [] Strongly Disagree []

13) A First Aid team exists on site which is aware on attending to emergencies.

Strongly Agree [] Agree [] Unsure [] Disagree [] Strongly Disagree []

14) The following general controls are present on SHE programmes implementation:

	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
(i)Elimination controls					
(ii)Engineering controls					
(iii)Administration controls					
(iv)Personnel protective clothing and safety equipment					

15) The following financial controls are present on SHE programmes implementation:

	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
(i)Procedures' manuals					
(ii)Segregation of duties					

(iii)Approval and authorisation of costs and transactions.					
--	--	--	--	--	--

16) Budget forecasts are prepared in the prior period for SHE costs.

Strongly Agree [] Agree [] Unsure [] Disagree [] Strongly Disagree []

17) Comparisons are done of budgeted and actual SHE cost budgets for variance analysis.

Strongly Agree [] Agree [] Unsure [] Disagree [] Strongly Disagree []

18) SHE cost reports are regularly reviewed.

Strongly Agree [] Agree [] Unsure [] Disagree [] Strongly Disagree []

19) The following exists for controls:

	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
(i)Controls are reviewed regularly					
(ii)Controls are reviewed by an independent committee					
(iii) Controls are modified regularly					
(v)Feedback is given to subordinates.					
(vi) Communication is effected immediately when accident occurs.					

20) The following problems are encountered on the implementation of a SHE program:

	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
(i)Resistance from employees					
(ii)Lack of resources.					
(iii)Weak network information dissemination					
(iv) Stringent legal requirements					

21) Unki Mine can use the following strategies to effectively implement SHE programmes:

Strategies	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
(i)Job safety analysis					
(ii)Educational informative campaigns					
(iii)Convention programmes to reduce injuries					

23) Any other strategies Unki can employ (specify):

.....
.....
.....

Thank You For your co-operation

APPENDIX C

INTERVIEW GUIDE

Questions:

1. What guidelines are in place for the implementation of the SHE program at Unki mine?
2. How are personnel factors affecting the implementation of the policy?
3. What controls are in place on the SHE policy?
4. How frequent are these controls reviewed?
5. What challenges is Unki facing in implementing this policy?
6. What may be the best policies to effectively implement the programmes?

Thank You For your co-operation

my dissertation by Paidamoyo Mutero

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