

**INSTITUTIONAL FACTORS INFLUENCING IMPLEMENTATION OF
SAFETY STANDARDS IN PUBLIC SECONDARY SCHOOLS IN
YATTA SUB-COUNTY, MACHAKOS COUNTY KENYA**

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DECLARATION

This research project is my original work and has not been presented for any award of a degree in any other University.

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DEDICATION

I dedicate this work to the Almighty God, my wife, Jane Kanini, my children Florence Ngina, Felister Mutheu, Veronica Kalonde, Mary Nthemba and John Muasya.

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ABBREVIATIONS AND ACRONYMS

ASAL	Arid and Semi-Arid
IRA	Innovative and Restorative Approaches
MOEST	Ministry of Education, Science and Technology
NACOSTI	National Council for Science Technology Innovation
ROSPA	Royal Society for the Prevention of Accidents
WHO	World Health Organization

ABSTRACT

The purpose of the study was to investigate the institutional factors influencing implementation to safety standards and guidelines in public Secondary Schools in Yatta Sub-County, Machakos County, Kenya. The objectives that guided the study were to determine extend to which availability of financial resources, staff training, students' participation in maintenance of safe institutional environment and principal's strategies to issues of safety standards influenced the implementation to safety standards and guidelines in public secondary schools in Yatta Sub County. The study was guided by the systems theory. The study adopted descriptive survey design. The research target population was 55 principals' and 350 secondary school teachers. The study sample population was 55 principals and 116 teachers. The teachers and the schools were stratified per division after which simple random sampling was used to select them. The study used questionnaire for both principals and teachers. Content validity of the research instruments was ascertained by a team of experts in Educational Administration and through piloting of the test items while reliability of the questionnaires was ascertained by a test-re-test technique where a coefficient of stability of 0.92 was obtained using the Pearson's product moment formula. Data was collected by use of questionnaires for both principals and teachers. The data was analyzed by use of SPSS programme. Descriptive statistics was used to analyze teachers' demographic data and the responses on institutional influencing implementation to safety standards and guidelines. The results from the questionnaire were presented in frequency tables, pie charts and bar graphs. The study established that safety situation in secondary schools in Yatta sub county was inadequate as attested by 53.3% of the respondents. The study also found out that financial resource was an obstacle in implementation of safety guidelines as evidenced by 69 percent of the respondents. From the study findings, 49 percent of the principals had purchased adequate infrastructure to safety while 51percent of the principals which comprise majority had not been able to purchase adequate infrastructure to safety. The study also established that there was inadequate staff training though majority of teachers 69 percent were familiar with safety standards manual. Students were found not to be exposed to awareness of safety as evidenced by only 26 percent of respondents who said they had created awareness to their students. Principals' strategies on safety guidelines was a factor influencing implementation of safety standard as this was evident in 39 cases (70.9 percent) of principals who had not formed safety committees. In conclusion financial resources should be availed in schools by the ministry of education to promote safety standards implementation. School management should ensure teachers and students are trained and sensitized on issues of safety standards. Principals be adequately exposed to issues that promote safety through symposiums and safety training conferences. The study recommends that financial resources be availed, staff be trained, students' participation be increased and principals be exposed to issues of safety in secondary schools.

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Safety of individuals in the society is not only vital but central to the survival of human beings. Safety relates to the desire for a peaceful, smooth run and stable environment for individuals. Human beings need some assurance that their safety in the working environment will be met now and in future. Cooper (2000) defines safety as part of organizational culture thought to affect members' attitudes in relation to performance.

School safety refers to those measures undertaken by learners, staff, parents and other stakeholders to minimize or eliminate risky conditions or threats that may cause accidents, bodily injury as well as emotional and psychological distress (Republic of Kenya, 2009). The safety standards manual for schools states that school safety is an integral and indispensable component of the teaching and learning process and it is therefore imperative that educational stakeholders foster safe and secure environment to achieve higher performance and quality teaching (Republic of Kenya 2009)

. Without safety, the principle focus of imparting and acquiring skills and knowledge in educational institutions may be difficult. A safe environment is essential for students at all ages. Lazarus, Jimerson and Brock (2003) observe that in unsafe environment, adolescent exhibit sleeping disturbance, agitation, increased conflict and increased delinquency which inhibit learning.

In the United Kingdom (UK), the Royal Society for the Prevention of Accidents (ROSPA) trains resource people for schools which would help them address their responsibilities towards promotion of health and safety (Aucott, 1988). The education school premises regulation gives guidelines on the minimum safety standards for schools premises. It outlines provision that must be made in relation to the work environment. Provision covered by these regulation include toilet facilities, fire, staffrooms, weather protection, noise, lighting, heating, temperature, ventilation and water supply (MOE, 2012).

In Australia initiatives have been made by the state and commonwealth to address school safety issues, with a comprehensive review of school based policies to be undertaken, innovative and restorative approaches that deal with safety in school (Shaw, 2002)

In India school safety programs have been established to promote a culture of safety in schools by sensitizing children and community on issues of safety preparedness (Gol.UNDP 2006).

The education sector in many countries in the sub Saharan Africa go towards financing the huge wage bill and human resource component .This deprives many countries to invest in the requisite infrastructure required to guarantee the schools safety standards requirements are fully met(World Bank Report 2010)

In Africa, a study by Zulu (2004) investigated high schools in Northern Durban, South Africa and revealed that learners were largely unsafe in schools. Cases of violence and indiscipline were prevalent in the schools making the schools unsafe which had severely impended the culture of

teaching and learning in schools. Hirano (2009) observes that in Rwanda, the Ministry of Education developed a policy document that outlines the school infrastructure standards while the government provides security and personal safety to learners in the schools

Safety concerns were first articulated in Kenya in the Education Act (1980) which formed the foundation of safety standards and regulation. The Basic Education Act (2013), states that security of all members of an institution is of paramount importance. The Children Act (2001) lays emphasis on protection of all children. The act states that a child shall be entitled to protection from physical and psychological abuse and neglect. It further states that every child has a right to protection from any hazardous act or interference to the child's education, physical and mental health, spiritual, moral and social development. The highlights of these Acts form the basis of this study which aims at investigating the institutional factors influencing implementation to safety standards and guidelines in public secondary schools.

According to safety standards manual (Ministry of Education 2008) unprecedented insecurity from personal threats, inappropriate school facilities and infrastructure, poorly constructed classrooms and playground, insufficient and broken down facilities inadequate and inappropriate desks and other furniture can cause insecurity to learners. School safety is necessary for both students and teachers for promotion of effective teaching and learning. Threats to learners need to be addressed through mitigate strategies. Safety Manual for Education managers (2009) observes that a safe and protective school will enhance the provision of quality education which will enhance increased

attendance and reduction of truancy, promote school retention, completion and equity in sharing resources.

Ntheya (2011) investigated the participation of secondary school administrators in school safety and implementation of safety policies with regard to physical infrastructure and training of teachers on issues of safety in schools. The study found that a small percentage of schools had constituted safety committees. All respondents ranked school safety last. The study further established that principals strategies towards implementation was a factor enhancing full implementation and this necessitated the reason why the study is applicable in Yatta Sub County.

Studies by Nyakundi, Migiro, and Mburu(2012) found out that safety standards and guidelines have not fully been implemented in schools in Kenya due to inadequate financial resources ,insufficient training for teachers and students on safety standards and lack of the principals personal initiative to adhere to safety standards. Similar studies have never been carried out in Yatta Sub County and therefore this arouses the need to carry out the research in Yatta Sub County.

Wanyama (2011) and Ng'ang'a (2013) in their studies stated that the training of teachers on safety standards was paramount as teachers are the implementers of policy guidelines in schools. The studies recommended the formation of safety committees and training them to make them oversee the implementation of safety standards in schools. These highlights therefore arouse the desire to study institutional factors influencing implementation of safety standards in Yatta Sub County.

Ng'ang'a , and Muthuiya (2013) found that school administrators are not able to provide adequate finances for putting up safe buildings and a safe environment so as to adhere to safety and standards regulation. The studies further stated that the government provides inadequate financial assistance to schools. Nyeri and Tigania are endowed with conducive climate and resources can be availed from parents, Yatta an Arid and Semi-Arid Area (ASAL) may not be able to raise funds.

Kirimi (2014) in his study in Buuri district found that many schools did not have emergency exits and the few which had, had not been labeled. In this regard participation and sensitization of students was wanting, thus endangering lives of students in case of emergencies. The researcher recommended that similar studies be replicated in other counties and this is the reason why the study is being carried out in Yatta Sub County. Kirui, Mbugua and Sang (2011) in their studies established that head teachers are not versed with strategies useful in handling safety issues in schools. Their studies found out that despite the Ministry of Education (2008) safety manuals being in schools, majority of the head teachers had not been exposed to the policy guidelines and the levels of implementation were still low.

Yatta Sub County in Machakos County has had insecurity incidences in its schools. Some Secondary schools have encountered a wave of unrest threatening the safety of members of the school. In Second term 2015, ten schools were involved in unrests which in all the cases led to threat of safety of both learners and the staff of the affected schools (Yatta Sub county Education Report, August 2015). Investigations carried by the District

education office reveal that some of the incidences could have been avoided had proper safety standards and guidelines been followed by the schools (Quality assurance and Standards Report August, 2015). In view of this there has been no research undertaken in Yatta Sub County on implementation or non-implementation despite most schools being exposed to disasters, unrest and accidents .Furthermore majority of the secondary schools are upcoming new schools and hence the need to ascertain whether safety standards are considered in accessing location and in construction This prompted the researcher to seek to establish whether the schools have all implemented safety standards by investigating institutional factors influencing implementation of safety standards in secondary schools in Yatta Sub County.

1.2 Statement to the problem

School safety is an important component of the learning process according to sessional paper number14, (2012) on promotion of access equity, relevance and quality of education. The policy framework aims at achieving education for all by ensuring the rights of children to basic education as in the Children's Act (2001) and Basic Education Act (2013), have been met. Towards the legislation of the set goals, the government has developed various interventional strategies to ensure safe and secure school environments. When teaching and learning is interrupted by acts of violence among learners, performance in national examination will inevitably be compromised. Comprehensive school safety is therefore, fundamental to school success and learning achievement (Kirimi 2014). Despite the importance of school safety,

there is an upsurge of incidences in schools that arise from school environments which are not secure and safe. In some schools acts of bullying, fighting and injuries from accidents have been reported. These incidences have been reported in Yatta Sub County and hence the need for this study which aims at investigating the institutional factors influencing implementation of safety standards in secondary schools in Yatta Sub County.

1.3 Purpose of Study

The purpose of this study is to investigate institutional factors influencing implementation of safety standards in public Secondary Schools in Yatta Sub-County, Machakos County, Kenya.

1.4 Objectives of the Study

The study was guided by the following objectives.

- i. To determine the extent to which financial resources influence implementation of safety standards in public secondary schools in Yatta sub County.
- ii. To determine the extent to which staff training on issues of safety influence implementation of safety standards in public secondary schools in Yatta sub County.
- iii. To assess the extent to which students' participation in maintenance of safe institutional environment influence implementation to safety standards in public secondary schools in Yatta sub county

- iv. To determine the extent to which strategies employed by principals influence implementation of safety standards in public secondary schools in Yatta sub county.

1.5 Research Questions

The study was guided by the following research questions.

- i. To what extent do the financial resources in school influence implementation of safety standards in public secondary schools in Yatta sub county Machakos County?
- ii. To what extent does staff training on safety influence implementation of safety standards in public secondary schools in Yatta Sub County Machakos County?
- iii. To what extent does students' participation in maintenance of safe institutional environment influence implementation of safety standards in public secondary schools in Yatta sub county, Machakos County?
- iv. To what extent does strategies employed by principals influence implementation of safety standards in public secondary schools in Yatta sub county Machakos County?

1.6 Significance of the Study

The findings might provide useful information to the school management on the importance of safety standards and guidelines in Secondary schools in order to enhance school safety. It is hoped that the study should bring out the challenges faced by school management in the implementation of safety

standards and guidelines. The study sought to ascertain how far Kenyan secondary schools have implemented the established Ministry of Education Safety Standards and guidelines in readiness to handle the emerging safety concerns in Kenyan schools. This might make it possible to make learning environments safe so to promote quality teaching and achieve high performance.

1.7 Limitations

Many schools in Yatta Sub County are upcoming day schools and the infrastructure is not well developed and therefore issues of safety may be considered lesser.

Getting information rose challenges as some of the correspondents thought the information was to be used to find out weaknesses and failure of the system, hence the respondents were assured of confidentiality of the information they give out.

1.8 Delimitation

Delimitations are the boundaries of the area of study (Orodho, 2005)

The study was confined to public secondary schools in Yatta Sub County. The respondents were secondary school principals and teachers, other stakeholders such as students, parents, Board of Management and community were not included.

1.9 Basic Assumptions

The researcher assumed that:

- i. All schools had safety guidelines irrespective of the status of the school.
- ii. School authorities were aware of the Ministry of Education safety standards and guidelines.

1.10 Definition of Significant Terms

Influencing refers to factors that make learners, teachers and stakeholders behave in a particular way in secondary schools in Yatta sub-county.

Institutional factors refers to organizations environment which ensure the effective and efficient achievement of goals and objectives in secondary schools in Yatta sub-county

Participation refers to having students, teaching and non-teaching staff involvement in decision making in secondary schools in Yatta Sub-County

Public secondary school is a legally designated government owned, identifiable physical space or premises that provides conducive environment for learning to take place in secondary schools in Yatta sub-county.

Safety standards refer to maintenance of school safety to adhere to the stipulated degree of safe schools in secondary schools in Yatta Sub County.

School Safety refers to providing a conducive environment free from any danger or risks for learners and teachers in secondary schools in Yatta Sub County.

Staff Training refers to enabling students, teaching and non-teaching staff acquire skills, knowledge and competencies as a result of vocational training on safety in secondary schools in Yatta Sub County

1.11 Organization of the Study

The study was organized into five chapters. Chapter one consists of background to the study, statement of the problem, objectives of the study and research questions, limitations of the study, delimitations of the study and the outlining the assumptions of the study and the organization of the study. Chapter two consists of the review the literature with review, availability of financial resources, staff training on safety issues, students' participation in maintenance of safe institutional environment and principals' exposure to training in safety standards summary, Theoretical and conceptual framework of the study and summary of literature review. Chapter three deals with the methodology which comprise of: research design, target population, research instrument and validity and reliability of instruments data collection procedure and data analysis techniques. Chapter four dealt with data analysis, presentation and interpretation. Chapter five presented the summary of the study findings, conclusions, recommendations and suggestions for further studies.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section covers review of the literature for study under the following sub sections; financial resources, staff training, students' participation on safety guidelines and principals initiative and strategies to issues on implementation of safety standards and guidelines.

2.2 Concept of Safety in Schools

School safety is the prevention of accidents and mitigation of personal injury or property damage which may result from incidences in a school set up Redizan (1986). Due to the importance of school safety, various countries have developed strategies and put in place measures to promote and ensure student safety in their countries. In the United States of America (USA), the government has set up the United States Department of Education that indicates that school wide policies are implemented to systematically address needs of students, school personnel, community and physical plants of the school White (2011) This policies are strictly enforced in view of the threats posed by terrorism, drug related violence and natural disasters.

The problem of unsafe schools is not limited to any part of the world. It is for this reason that policy makers from various parts of the world have formulated various declaration and agreements that seek to ensure school safety ,for example the UN convention on the Rights of the Child (CRC) which

articulates the rights of children not only in the country but also in school as they interact with the environment

.A study by Hirano (2009) on safety programs in Rwanda advanced that schools should develop an emergency program to sensitize members on safety precautions.

According to the Safety Standards Manual, safe schools should have the following indicators: high retention rate of enrolled learners, strong focus on teaching and learning reflected by better academic performance and all round character development amongst its learners, high levels of interaction between school administrators, teachers, learners, sponsors ,parents and the community, low incidences of indiscipline, clearly demarcated school grounds with proper fencing and secure gates, visible strategies in promoting the rights of children as provided in the convention on the rights of the child and in children's act, adequate and well maintained facilities such as toilets ,sanitation facilities, an environment free from drug and substance abuse, trafficking and illegal hawking are good indicators of school safety (Republic of Kenya 2009).The safety standards manual (2009) states that school safety is of critical importance in the provision of quality education and therefore the Ministry of Education is committed to institutionalizing and mainstreaming school safety.

2.3 Safety Standards for Secondary Schools in Kenya

Kenyan schools have been experiencing issues of safety such as school fires, bullying, drug and substance abuse among others. Gathoni (2013) states that teachers and students have a responsibility to fulfill in ensuring that safety is

mainstreamed in order to guarantee the smooth running of the schools. The government of Kenya has committed itself to improving the standards of education at all levels as indicated in the Ministry of Education Safety Standards Manual (Republic of Kenya, 2008). Issues of safety in Kenya were developed in response to Childrens Act (2001) and after schools were affected after the post-election violence (2008) when destruction was done on infrastructure (Ministry of Education, 2008)

The safety of the learner is central to the provision of quality education in any country. On school safety Nderitu (2009) points out those schools need basic first-aid equipment. Wanyama (2011) further advances that classrooms should contain first-aid kits, a written emergency program to ensure personal and student safety during and after an emergency, an alarm system, evacuation plans and emergency drills among others. Teachers are part of safety programs in schools

School safety policies stipulate what action should be taken in order to improve the overall safety and protection of school students with emphasis on safe environment and safe buildings Donmez and Guven (2002). Depending on schools safety regulation and guidelines, the details may differ, but the basic elements of an emergency preparedness plan are the same. Rono (2009) points out that students need to be sensitized regularly on how to respond to emergencies.

The forgoing safety issues forms the basis of this study which aims at investigating institutional factors influencing implementation of safety

standards and guidelines in public secondary schools in Yatta sub county, Machakos County, Kenya.

2.4 Availability of financial resources and its effects on implementation to safety standards

In Tswane, South Africa a study on safety and security measures in secondary schools found out that funds are needed to install safety gadgets in schools, put security plan policies and procedures and follow on their adherence, Leandri (2011). Studies on implementation of safety standards and guidelines in secondary schools in Kenya have been conducted. Omollo and Simatwa (2010) in their studies established that some safety policies were implemented to a lesser extend due to inadequate funds. Other studies have been conducted by Nderitu (2009) .which states that the Ministry of Education Safety Guidelines had not been adhered to, due to lack of funds. Majority of their correspondents revealed that the funds school get are inadequate hence used to purchase a first Aid kit and few fire extinguishers which are never serviced nor replaced making them un useful.

Nyakundi and Mburu (2012) carried out studies on compliance to safety standards and found that safety standards cannot be achieved if funds are inadequate

Kirimi (2014) sought to investigate institutional factors influencing adherence to safety standards and guidelines in public secondary schools in Buuri District, Kenya. The study found out that principals normally allocate little amount of their budgets to cater for safety needs. This implies that the money

allocated is not enough and therefore safety guidelines requirement are not effectively met. The author recommends that the government looks for ways and means of financing safety in schools. Schools generally need funds to be able to purchase safety equipments, train on management of disaster and crisis, conduct fire drills and give talks and demonstrations to learners on safety management and adherence to schools.

2.5 Staff training on issues of safety and implementation to safety standards and guidelines

Teacher training is an important aspect in adhering to safety standards and guidelines. Armstrong (2006) observes that teachers in charge of school safety will be responsible for: liaising with other teachers on matters relating to school safety, identifying the potential safety hazard in the school with a view to taking corrective measures either directly or through the committee, sensitizing learners, staff, parents and community members regularly on issues related to students safety. Abaya (2011) points out that teachers also keep accurate and up to date records of incidents related to school safety; briefing the principal periodically on status of school safety and ensuring that school safety measures agreed upon are implemented

Wanyama (2011) and Mburu (2012) found out that most schools had not set up safety committees and majority of teachers had not been trained. The researchers observed that where safety standards adherence had been done the teachers had not been involved in sensitizing the students on safety standards. Consequently despite the government coming up with policy documents

aimed at compliance to safety standards results of implementation are still low in secondary schools.

Ng'ang'a (2013) on his study in Nyeri county found out that the awareness of safety standards was low among the members of staff in public secondary schools. According to the study some of the Heads of Departments indicated that they had never heard or even seen the manual. With this lack of awareness among teachers the trend is worrying because they are the personnel expected to enforce the safety standards and to create awareness among the students. This finding concurs with Muigai (2011) that the knowledge of the Ministry of Education safety guidelines among the institutional teacher was poor.

Makhamu (2009) add that firefighting equipment and other life saving devices should be displayed where they can easily be spotted. Teachers, learners and the support staff should be routinely reminded about the existence of the devices and how to use them. Construction, Installation and Maintenance of safety equipment should be done periodically to ensure safety standards are Maintained.

Teachers should form safety committees whose roles and duties should be defined and summarized, basically the role of these committees should be safety inspection, audit and prevention of accidents .School teachers play pivotal roles in the running of the school

2.6 Students participation in maintenance of safe institutional environment and its adherence to safety standards and guidelines

In 2000 an initiative by Education Department in south Africa launched a safe schools project that promotes safety at school, develops discipline and behavior codes provides learners with training and after school safety activities (Rika 2001).

Gathoni (2013) established that students are not sensitized on safety issues as teachers lack the skills on safety standards. When safety training is provided for students, indicators such as active participation of school programs, sense of ownership and low incidences of indiscipline are noted. Training such as fire drills, fire marshals , first aid and evacuation procedures in case of crisis go a long way in prevention of or lessening the effects of a disaster.

The number of students enrolled in schools influence adherence to safety standards in schools. Ng'ang'a (2013) found out that students population negatively affected compliance with safety standards in terms of poor spacing lockers in classrooms, poor spacing of beds. The researcher recommended that students should be trained to be aware of safety standards and how to prevent themselves from harm. He also recommended that Schools Board of Management should place a lot of emphasis on making school physical environment friendly to learners. Schools should design and implement a code of conduct, code of ethics, a security plan as well as emergency preparedness plans among students Lendri (2011).

According to the World Health Organization (WHO), (2000), the health of learners contributes to the maintenance and improvement of the safety of learners and school personnel. Students need to participate in maintaining safe environments because unlike adults, children respond better and positively to a good, healthy and safe environment. The students have a lot of faith in and hold in high esteem their teachers and will therefore internalize safety and standards education from teachers.

2.7 Principal's strategies employed to implement safety standards in schools

According to Gathoni (2013) the head teacher is responsible for; ensuring proper implementation of school safety policies by coordinating all phases of program implementation, coordinating the efforts of the school safety subcommittees, teachers and learners in ensuring that school is safe, secure and caring, ensuring that school resources are efficiently used in fostering a safe and secure environment in the school, ensuring that proper and up to date records relating to school safety are compiled and properly managed, coordinating the monitoring and evaluation of the school safety program, taking necessary corrective measures in accordance with the monitoring and evaluation reports.

Leandri (2011) found that the majority of principals were not familiar with the written (Ministry of Education) safety standards and guidelines and most schools did not have the appropriate emergency plans in place in their schools.

The author recommends establishment and implementation of policies and procedures that provide guidelines and procedures of how adherence should be achieved in each school.

Nyakundi (2012) recommended that principals should follow up, monitor and evaluate safety situations in all schools. The author emphasized on the adherence to safety standards and guidelines and that principal need to be fully exposed to issues related to safety preparedness.

Ngang'a (2013) concur with Mburu (2012) that awareness of principals on safety standards cannot be over emphasized because they are the persons charged with overseeing the implementation of the safety standards manual. Lack of awareness among teachers and inability to sensitize students could be a failure on the part of the principal to disseminate information on safety issues in the school.

Kirimi (2014) found out that schools should be on the fore front of ensuring that both teaching and non-teaching staff receive proper training and are exposed to practical drills to enhance preparedness. The scholar further states that principals are the immediate evaluators and monitors of whether the school safety standards and guidelines are being implemented and adhered to by all. Muigai (2011) further stated that the institution of the principal in the school is an integral and indispensable component in adherence to safety standards and guidelines. An earlier study by Muigai (2011) had found that the knowledge of Ministry of Education (2008) safety standards guidelines among the institutions principals was poor. Principals are instrumental leaders with key responsibilities such as assigning teachers duties based on capability,

delegating duties, fostering good community relations and developing a strong staff so as to promote quality teaching which will lead to high performance and safe environments, Muthuiya(2013)

2.8 Summary of Literature Review

The literature review has established that the adherence of schools safety standards is a sensitive issue all over the world. In Kenya safety issues include ; safety on school grounds, safety in physical infrastructure, health and hygiene safety, safety in school environment, fire disasters safe against drug abuse, transportation safety, safe teaching and learning environments and food safety. The literature also show that availability of funds, staff training, students participation and principals exposure on safety standards and guidelines have a role to play in promotion of school safety. Nderitu (2009), Omolo and Simatwa (2010) Lendri (2011), concur that inadequate funds were the possible constrains in the adherence to safety standards in public schools. Wanyama (2011), Mburu (2012) and Ng'ang'a (2013) established that staff training was very crucial in the adherence to safety standards and guidelines and recommended training of both teaching and non-teaching staff so as to make it easier for sensitizing the students on the safety standards.

Lendril (2011); Gathoni (2013); Ng'ang'a (2013) concur that students sensitization and participation in safety and standards issues were paramount. They recommended that schools should design and implement a code of conduct and ethics in their students to enable them view their school as part

and partial of their lives, this will inculcate a sense of belonging and ownership of the school hence adhering to safety and standards guidelines Muigai (2011); Nyakundi (2012); and Kirimi (2014) concur that principals should be exposed to training and hence have knowledge to in service the staff and the students. The foregoing studies all point to the importance of safety standards in schools. The studies were carried in diverse regions; none was carried in Yatta Sub-county. This study therefore will fill this knowledge gap of institutional factors influencing implementation of safety standards in public secondary schools in Yatta Sub County.

2.9 Theoretical Framework

The study was based on General systems theory in general ,Bertallanfy (1968). The proponent of this theory Ludwing Bertallanfy stated that any well-structured organization has an environment in which it is established and functioned. There should be direct connections between various elements so that they fit together as a whole. According to Bertallanfy an organization absorbs inputs from the environment. The organization processes the inputs into outputs and then the outputs are released into the environment. A school as an organization receives from the environment human resources, physical resources, financial resources and information. These are absorbed in the school as inputs. Through the process of utilizing these resources the organization converts the inputs into materials and services, and hence sends them back to the society as outputs. The principals, teachers, learners and resources act as inputs in adhering to safety standards and guidelines.

Activities such as selecting and appointing committees, in servicing learners, conducting fire drills, monitoring and evaluation will act as the process of implementing adherence to safety standards and guidelines.

The coordination, delegation and participation of principals, teachers and students in matters of adherence to safety standards such as creating assembly grounds, warning bells, operating fire extinguishers with ease, locating emergency exits will make the school safe to all. Safe school will produce quality teaching, increased learners' environment and high retention completion rate without difficulties. System theory looks at a school as a unique and purposeful system of interrelated parts. The principals, teachers and learners must interact in a school set up to implement the schools mission, vision and core values. This theory becomes paramount in this study because it identifies a school as a system where safety needs have to be implemented.

2.10 Conceptual Framework

A conceptual framework is a model of presentation where researchers represent the relationship between variables in a study and the relationship in a diagram. It shows the independent variables, their indicators and how they contribute to the dependent variable in order to enhance learners' safety. Figure 2.1 represents the conceptual framework.

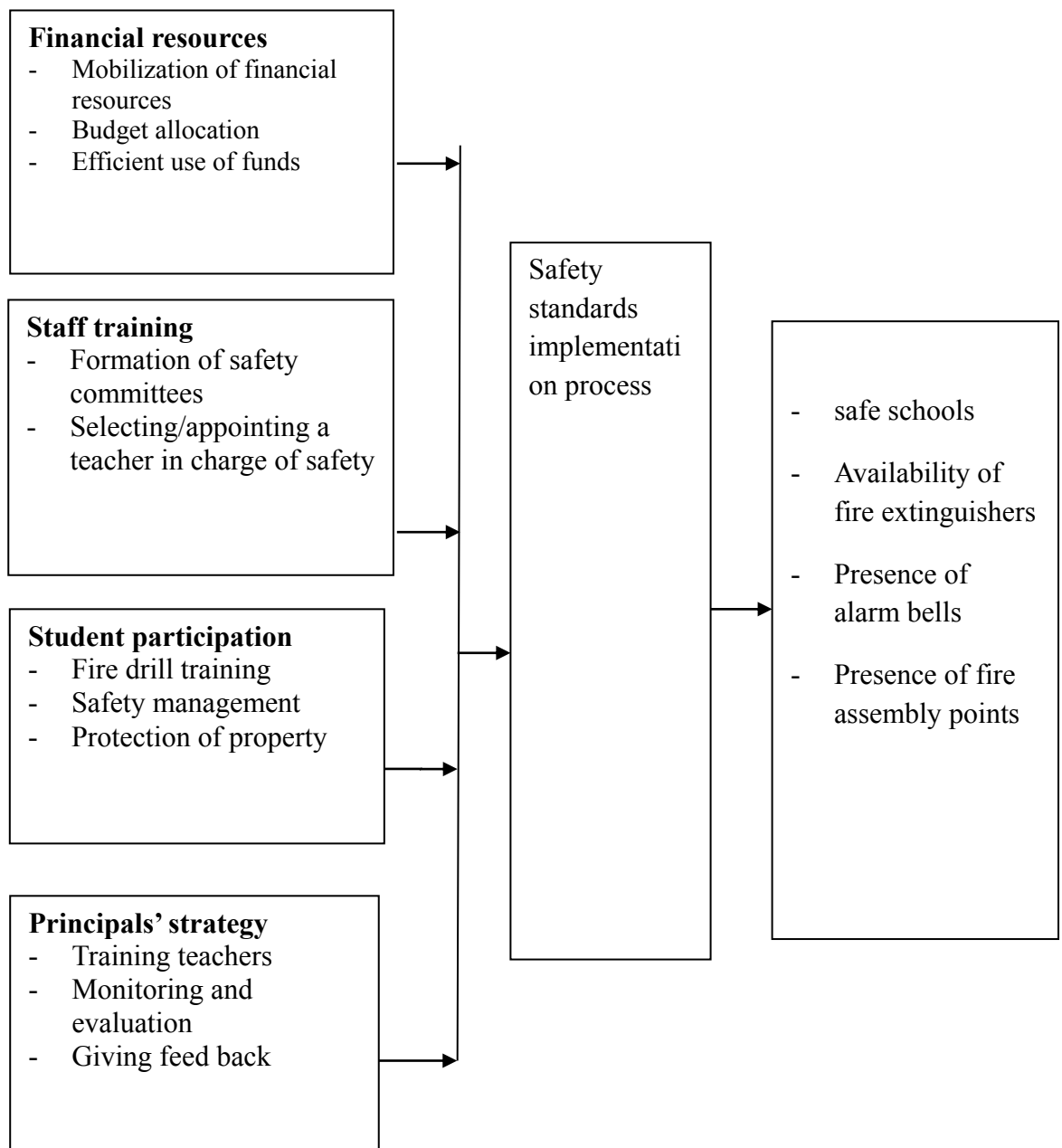


Figure 2.1 Conceptual Framework

The conceptual Frame work illustrates the dependent and Independent variables in the study. The independent variables are the financial resources which are conceptualized as mobilization of financial resource, budget allocation and efficient use of funds. Staff training is conceptualized as formation of safety committees and selecting or appointing a teacher in charge of safety issues in the school. Student participation involves in-servicing and sensitizing students and students' participation in fire drill training. Principal's role is conceptualized in terms of safety management training for teachers, monitoring and evaluation and giving feedback on issues of safety in the school.

The school administration needs to adhere to safety standards and guidelines as stipulated in the Basic Education Act (2013) and the Ministry of Education Safety and Standards Manual (2008). The dependent variables are conceptualized as safe schools and availability of fire extinguishers. It is from this conceptual frame work that the study will investigate institutional factors influencing implementation to safety standards and guidelines in public Secondary Schools in Yatta Sub-County, Machakos County, Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter focuses on the methodology used in this study. This section highlights the study design, target population, sampling size and procedure, research instruments, validity and reliability of the research instruments, data collection procedures, data analysis techniques and ethical considerations in data collection.

3.2 Study Design

The study employed descriptive survey research design to achieve its objectives. Orodho (2005) states that descriptive survey research design enables the collection of information about people's attitudes, opinions, values and behaviours on educational or social issues. It is a systematic method of studying behaviours that cannot be observed or experimented without manipulating the environment. This design is suitable in investigating and collecting information about the attitudes, opinions and experiences on institutional factors influencing adherence to safety standards and guidelines in public secondary schools in Yatta sub-County, Machakos County.

3.3 Target Population

Kothari (2004) defines a target population as a large population from which a sample population is to be selected. Yatta Sub-County has a total of 55 public secondary schools and 55 principals, 350 teachers distributed in three divisions (Yatta Sub-county annual report, 2015).

3.4 Sample Size and Sampling Technique

A sample of a third of principals, teachers and students were sampled as recommended by Mulusa (1999) who suggests that this is adequate representation of a population. All the 55 principals were sampled. The schools and teachers were stratified per division to obtain the number of schools and selected proportionately. Out of 350 teachers a sample size of 116 teachers were selected. The summary of the target population and sample size for principals and teachers in schools is shown in Table 3.1

Table 3.1: Target Population and Sample Size for secondary schools and teachers

Division	Secondary schools	No of principals	No. of teachers	1/3 of teachers
Ikombe	14	14	103	33
Yatta	30	30	160	54
Katangi	11	11	87	29
Total	55	55	350	116

Table 3.1 shows the study population and sample size for schools and corresponding number of principals and teachers. The study employed simple random sampling to select 116 teachers. Simple random sampling is a technique in which each and every Item of the population was given unequal and Independent chance of being included in the sample. In applying his technique the researcher will obtained names of all the public secondary schools in the sub-county and write them on identical slips of paper. The slips were folded and mixed in the container. A bin fold selection will be made with replacement before another unit is selected. This was done repeatedly until all teachers were selected.

3.5 Research Instruments

The study used questionnaires and observation checklist to gather information. According to Mugenda and Mugenda (2010) the questionnaires were administered to bring out the feelings, attitudes and perceptions beyond the researchers on institutional factors influencing implementation to safety standards and guidelines in public secondary schools in Yatta sub-County, Machakos County. There were two sets questionnaires: one for the principals and the other for the teachers. Both questionnaires collected demographic information in section one. In section two of both questionnaires, responses on institutional based factors influencing implementation of safety standards and guidelines in public secondary schools.

An observation checklist will be used to collect data of things an observer is going to observe. An observation checklist will be used to collect data on the

physical aspects of the school safety. This is referred for this research because the researcher is able to see what has been done therefore the data gathered is objective (Orodho 2005).

3.6 Validity of the Research Instruments

Orodho (2004) describes validity as the degree to which an instrument measures what it purports to measure. The questionnaires were piloted to principals and teachers to elicit explicit responses. The pilot study was conducted to act as a pretest of the research instruments. It will involve three principals from the three divisions and six teachers, two from each of the divisions who were selected using random sampling. Lottery method was used to pick the correspondents. The pretesting of the questionnaire was done to help determine whether there was ambiguity in any of the items, whether the instrument were able to collect the anticipated data, whether the statements in the research instruments were clear and the questions are correctly worded. Based on the analysis of the pilot study, corrections, adjustments, and additions to the questionnaire were made.

3.7 Reliability of the Research Instrument

Reliability according to Mugenda and Mugenda (2003) is a measure of the degree to which a research instrument yields consistent results of data after repeated trials. In order to enhance the reliability of the instruments, test re-test technique for the questionnaire was done. One principal and two teachers from each of the three different divisions were used for reliability testing. A

total of three principals and six teachers participated in the reliability testing. The questionnaires were administered to them and the responses then scored. The same questionnaires were administered to the same principals and teachers after a period of two weeks keeping all initial conditions constant. The responses were then scored again. The scores from both testing periods were then correlated to get the co-efficient of stability using the Pearson's Product Moment. According Orodho (2004), a co-efficient of stability of between 0.6 and 0.99 is sufficient to offer reliable results.

The Pearson's Product Moment formula used was as follows:-

$$r = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{[N\sum x^2 - (\sum X)^2][N\sum y^2 - (\sum Y)^2]}}$$

Where;

N=Number of scores

x= First set of scores

y= second set of scores

$\sum xy$ = Sum of the first product of the first and second scores

$\sum x$ = sum of first set of scores

$\sum y$ =Sum of second set of scores

$\sum x^2$ = Sum of square of the first set of scores

3.8 Data Collection Procedures

The researcher obtained a research permit from the National Council for Science Technology and Innovation (NACOSTI) before embarking on the study. The researcher paid a courtesy call to the Yatta sub County Director of

Education and explained the intention to carry out the research. The researcher booked appointments with the principals of the schools from where data on principals and teachers were collected from. On arrival at the schools on the agreed dates, the researcher created rapport with the respondents and explained to them the purpose of the study and then administered the research instruments.

3.9 Data Analysis Techniques

This was the process of summarizing the collected data and putting it together so that the researcher can meaningfully organize, categorize and synthesize information from the data collecting tools. Questionnaires were cross checked to ascertain their accuracy. The collected data was analyzed using Statistical Package for Social Sciences (SPSS Version 20). Descriptive methods such as frequency, and percentages, were used to analyze quantitative data. Qualitative data was organized into themes, categories and patterns. The results were presented by use of percentages and frequency distribution tables, pie charts and bar graphs.

3.10 Ethical Considerations

The study ensured that Informed consent and voluntary participation was upheld by creating rapport with the respondents and explaining to them the purpose of the study. Confidentiality and anonymity and were maintained by assuring the respondents that their identities would not be publicized

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter comprises of data presentation and interpretation of the findings based on the objectives of the study. The study investigated institutional factors influencing implementation to safety standards and guidelines in public secondary schools in Yatta Sub-County, Machakos County-Kenya. It was guided by the following research objectives, to determine the extent to which availability of financial resources, training of teachers, students' participation and principals strategies influence implementation of safety standards in public secondary schools. Data was collected from both secondary school principals and teachers through questionnaire and triangulated by use of observation schedule information. Descriptive method was used to analyze the quantitative data. Frequencies and percentages obtained were presented in tables and charts.

4.2 Questionnaire return rate

The study sought for information on institutional factors influencing implementation to safety standards and guidelines in public secondary schools in Yatta Sub-County, Machakos County-Kenya. Questionnaires were administered to both principals and teachers in the sampled public secondary

schools in Machakos Sub County. A total of 55 questionnaires were administered to principals and 116 questionnaires to teachers. The results are as shown in table 4.1 below.

	Teachers	Principals
Questionnaires administered	116	55
Questionnaires returned	110	55
Return rate	94.8%	100%

Table 4.1: Questionnaire return rate

It is evident from the table above that the return rate for questionnaires issued to principals was 100 percent, implying that the principals were cooperative and willing to participate in the study as a way of contributing to the body of knowledge that exists. The return rate for the questionnaires issued to the teachers was also commendable, at 94.8 percent. This high return rate is due to the ability of the researcher to visit schools. This return rate is adequate enough to provide information for this study.

4.3 Socio-demographic information

4.3.1 Gender

The figure below represents the percentage distribution of respondents in terms of gender.

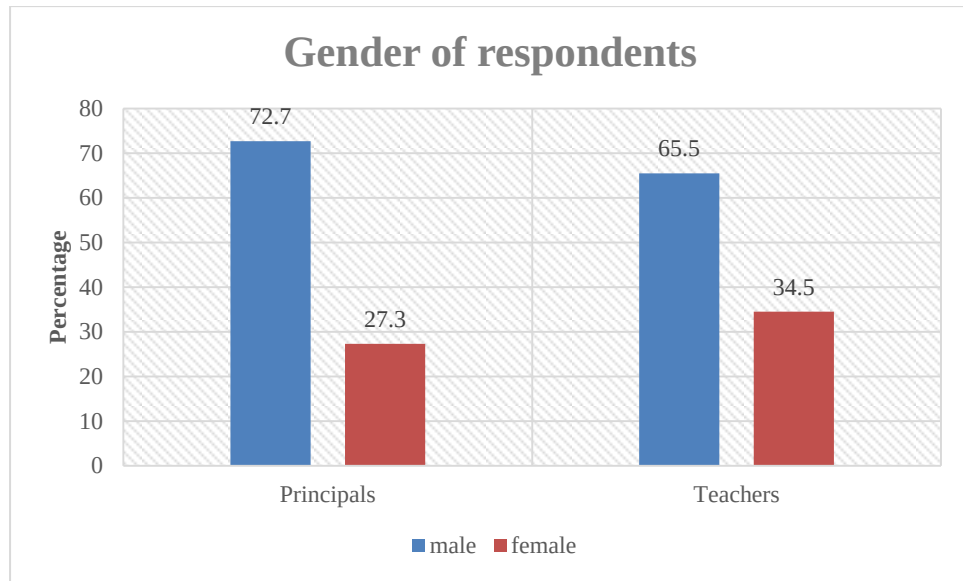


Figure 4.1: Gender of respondents

From the data analyzed, it was noted that there were more male principals than female principals. From a total sample of 55 respondents in the principals' category, 72.7 percent (40) were male while 27.3 percent (15) were female. In the category of teachers, it was noted that 65.5percent (72) were male while 34.5 percent (38) were female.

4.3.2 Level of education

The figure below is an illustration of the distribution of respondents with regard to their education levels. Most of the principals had achieved bachelors degree. This is represented by a total of 34 respondents while 21 respondents had masters level of education. No principal had diploma level as appointment of principals requires a minimum of a bachelors degree. In the teachers' category of respondents, a total of 79 respondents had achieved bachelors degree level, being the highest number while only 8 had diploma level of

education. 23 teachers had achieved masters level of education. No principal or teacher had attained PhD level of education. Figure 4.2 below illustrates further.

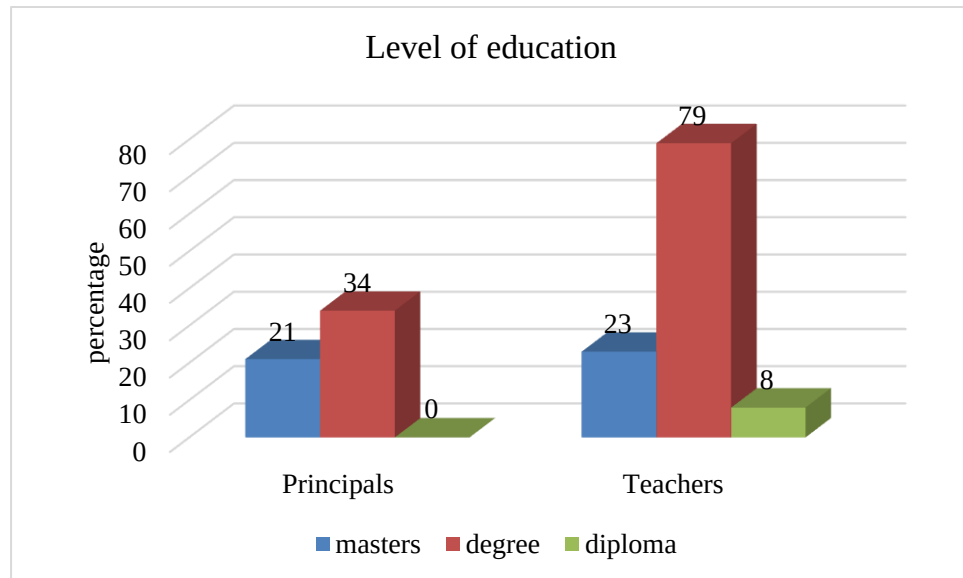


Figure 4.2: Level of education of respondents.

4.3.3 Length of service

Most of the principals 52.7 percent had served for more than 20 years while there was no principal who had served for a period of 1 to 5 years. Those who had served for 6 to 10 years were 10 (18.8 percent) , those who had served for 11 to 20 years were 16 (29.1 percent) while those who had served for 20 years and above were 29 (52.7 percent). In the category of teachers, those who had served for a period of 1 to 5 years were 31 (28.2 percent), those who had served for 6 to 10 years were 23 (20.9 percent), those who had served for 11 to 20 years were 22 (20 percent) while those who had served for 20 years and above were 34 (30.9 percent). The study found that implementation of the

safety standards was in the hands of principals of prime age. This observation is noted in the figure below.

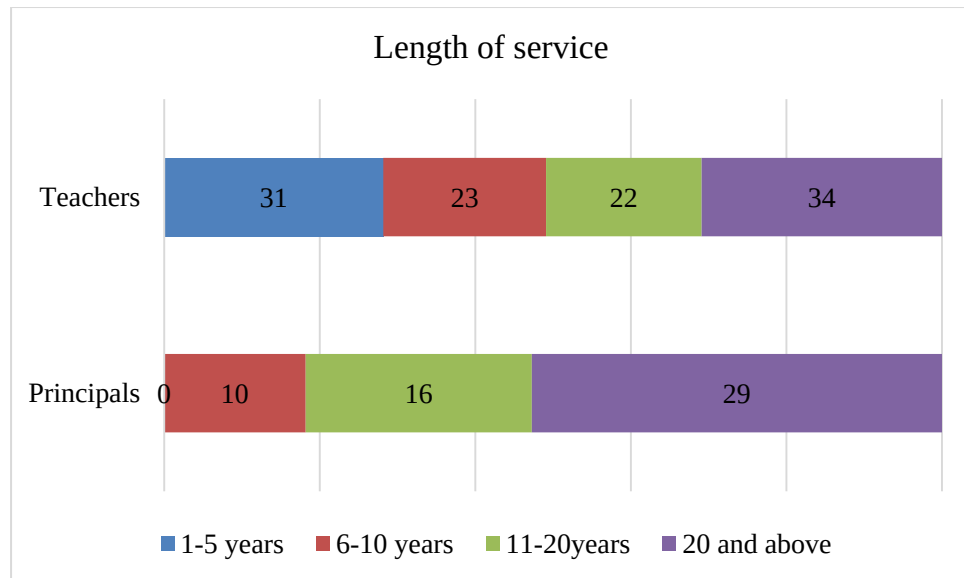


Figure 4.3: Length of service

4.3.4 Type of school

This aspect sought to categorize schools in terms of being exclusively boys school, girls school or on being a mixed school. From the data collected, it is true to say that most of the schools that were enjoined in this study were mixed schools. This proportion is represented by 43 percent while girls schools were the least, being 24 percent of the total sample size. Boys schools were 33percent representative of the total sample size, as indicated in figure 4.4.

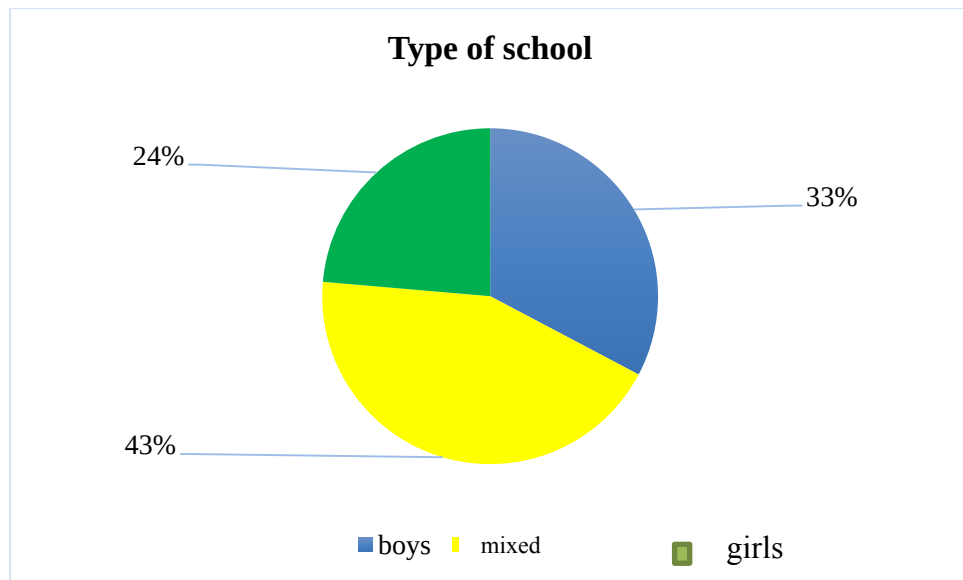


Figure 4.4: Category of schools

4.3.5 Nature of the school

The nature of schools was determined basing on whether the school was a boarding school, day school or mixed (day and boarding).

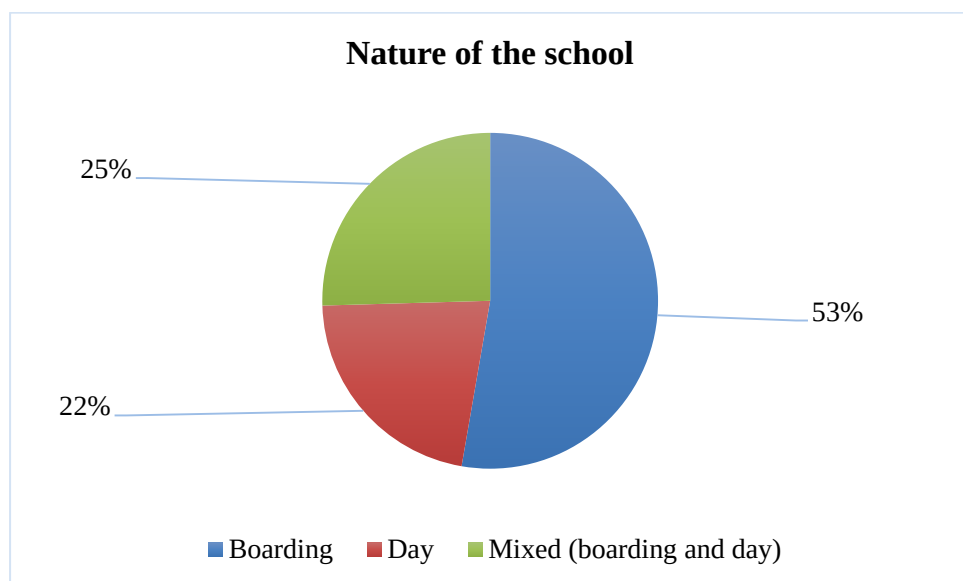


Figure 4.5: Nature of schools

Most of the schools were boarding schools. This is shown by a 53 percent representation of the total sample size. Day schools were 22 percent representative of the total sample size while mixed (day and boarding) were 25 percent of the total sample size as shown in figure 4.5.

4.4 Safety situation in schools

The figure below shows the rating of the level of implementation of ministry of education safety standards in schools. While principals rated the implementation as being high overall, teachers were of the opinion that the implementation was low. 10.9 percent of the principals rated the implementation as being very high, 45.5 percent rated the implementation as being high and 30.9 percent rated the implementation as being low while 12.7 percent rated the implementation as being very low. 12.7 percent of the teachers who participated in this study felt that the implementation was very high, 20 percent rated the implementation as being high, 60 percent rated the implementation as being low while 7.3 percent rated the implementation as being very low. The figure below shows the frequency distribution of this observation.

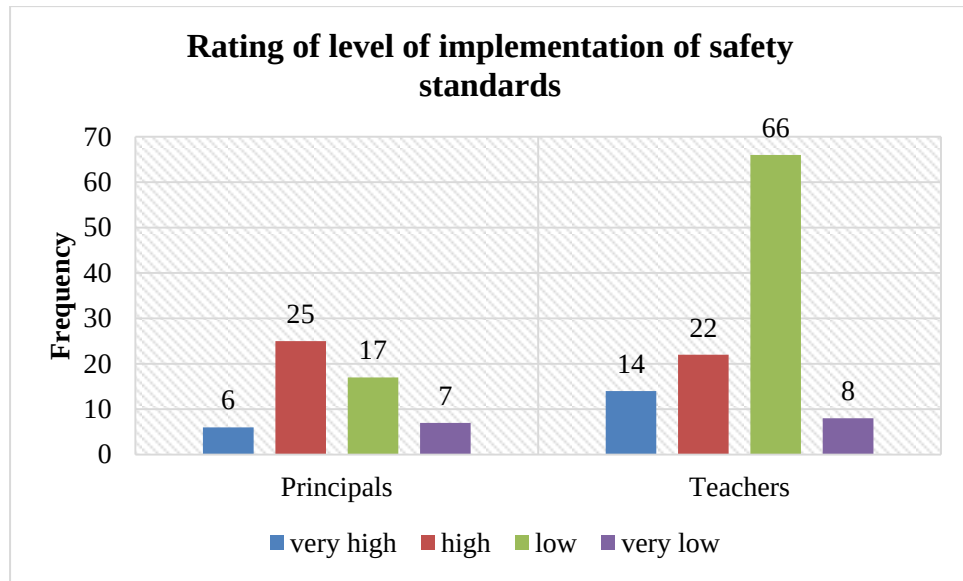


Figure 4.6: Rating of the level of implementation of safety standards.

When asked whether they are familiar with the ministry of education’s safety standards, 52.7 percent (29) of the principals responded affirmative while 47.3 percent (26) responded negative. 28.2 percent (31) of the teachers said they were familiar with the safety standards while 71.8 percent (79) were not familiar with the ministry’s safety standards. The figure below puts this observation into perspective.

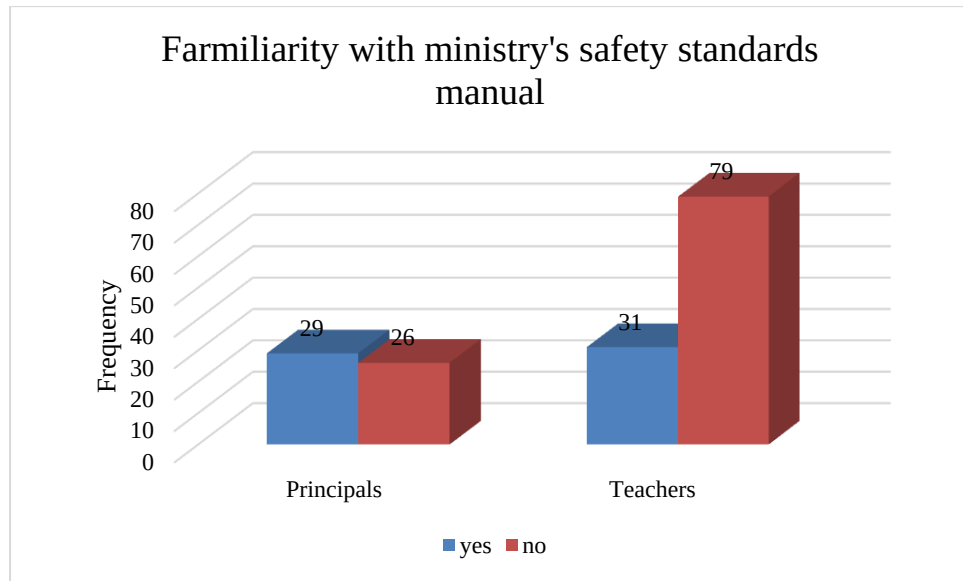


Figure 4.7: Respondents' familiarity with the ministry of education safety standards.

While a good number of the respondents were familiar with the safety standards set by the ministry of education, data collected reveals that in 64 percent of the sampled schools, copies of the safety standards manual are not available, compared to 36 percent cases where copies of the safety standards manual set by the ministry of education are available. This observations is shown in figure 4.8.

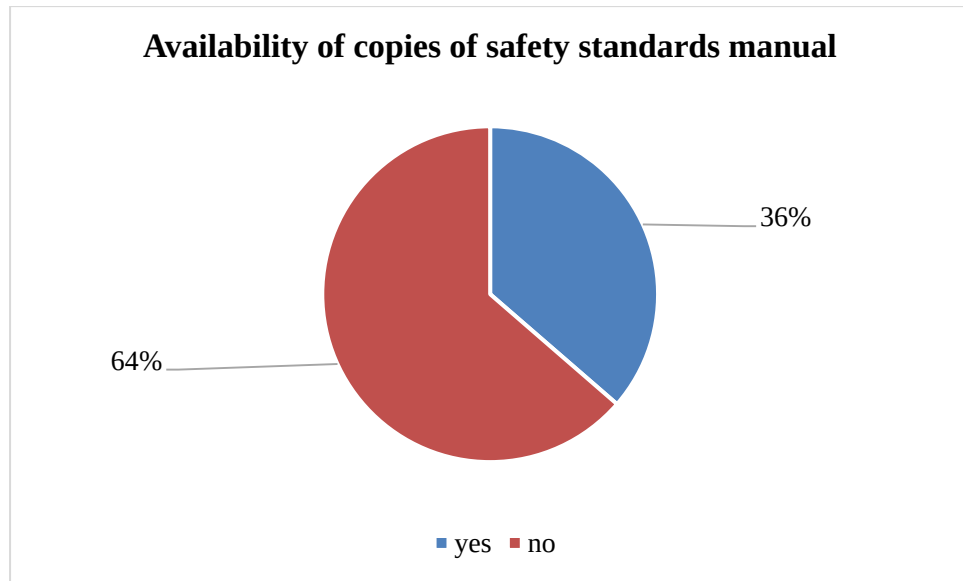


Figure 4.8: Availability of copies of safety standards manual.

The study sought to find out the safety situation in schools that were sampled.

The results of the analysis are presented in the table below.

Safety situation		YES	NO
I	The school physical infrastructure is constructed and occupied in consultation with ministry of public health department	74.5%	25.4%
Ii	The school is well fenced to deter unauthorized entry into the school with only one entry manned by a security guard	81.8%	18.2%
Iii	All visitors are screened before entry into the compound	80%	20%
Iv	There is adequate lighting in the school	67.3%	32.7%
V	All doorways and windows open from out side	76.4%	23.6%
Vi	Windows in school are not meshed and fitted with grills	78.2%	21.6%
Vii	The school has sufficient fire extinguishers	76.4%	23.6%

Table 4.2: Safety situation in schools as responded by principals.

From table 4.1, we can note that principals, up to a cumulative percentage of 534.6 percent were in agreement that safety situations within the schools were being upheld as compared to 165.1 percent who responded no. This means that in 78.88 percent of the sampled schools, safety measures were being upheld as compared to 21.12 percent cases where they were not being upheld.

Consequently, from the perspective of the teachers, in a cumulative percentage of 472.7 percent safety measures were being upheld while in 227.30 percent safety measures were not being upheld. This implies that, in 67.52 percent of the sampled cases, safety measures were being adhered to while in 32.38

percent, they were not being adhered to. The table below gives a summary of the findings.

Safety situation		YES	NO
I	The school physical infrastructure is constructed and occupied in consultation with ministry of public health department	44.5%	55.5%
Ii	The school is well fenced to deter unauthorized entry into the school with only one entry manned by a security guard	63.6%	36.4%
Iii	All visitors are screened before entry into the compound	91.8%	8.2%
Iv	There is adequate lighting in the school	90%	10%
V	All doorways and windows open from out side	36.4%	63.6%
Vi	Windows in school are not meshed and fitted with grills	87.3%	12.7%
Vii	The school has sufficient fire extinguishers	59.1%	40.9%

Table 4.3: safety situation in schools as responded by teachers

4.5 Financial resources and implementation of safety standards.

From the data collected, it is true to say that in 49 percent of the responses from principals, schools were able to purchase adequate infrastructure for safety while in 51 percent schools were not able to purchase adequate infrastructure for safety. The figure below illustrates this distribution.

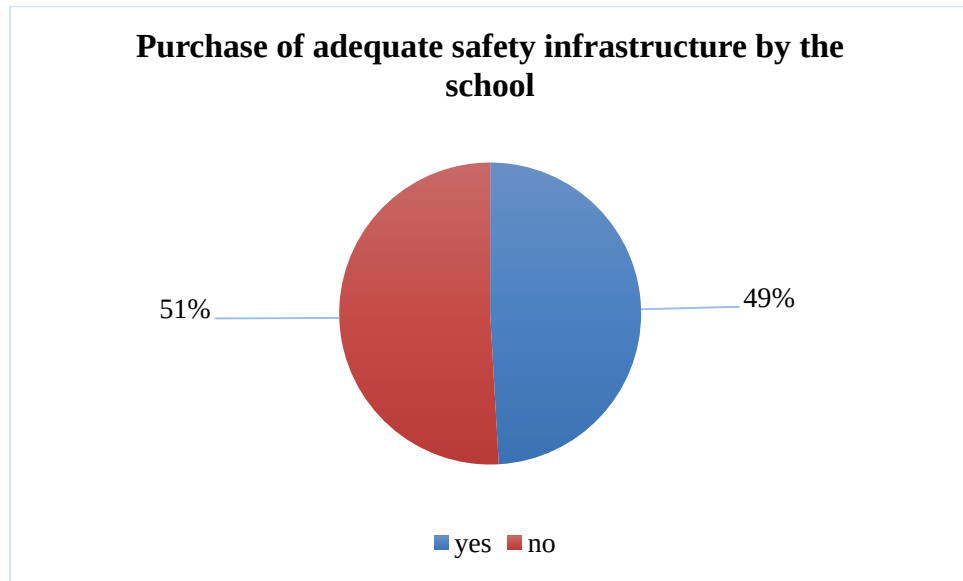


Figure 4.9: Schools being able to purchase adequate infrastructure for safety.

Furthermore, for 42 percent of the sampled principals, availability of financial resources was a factor that influenced adherence to safety standards implementation while 58 percent of the principals felt that availability of financial resources was not a factor in adherence to safety standards implementation. This is illustrated in figure 4.10

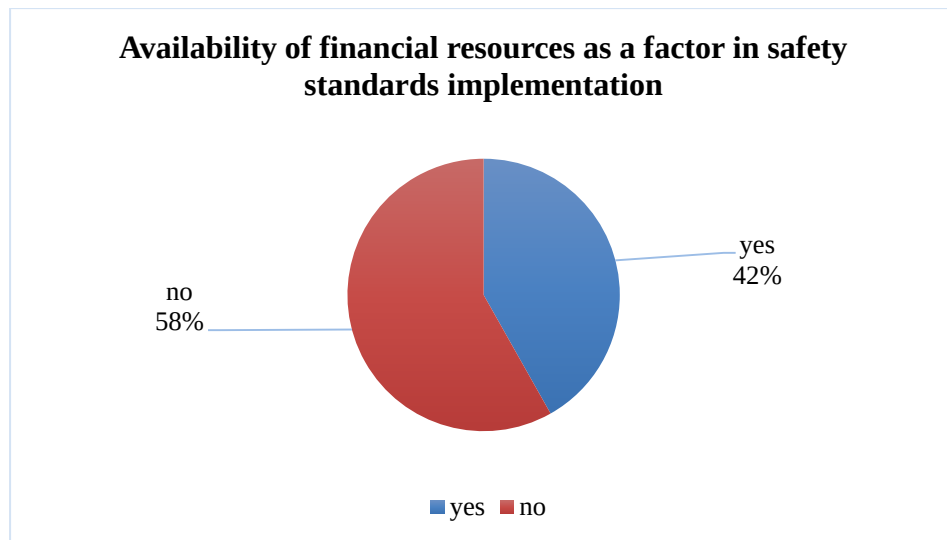


Figure 4.10: Availability of financial resources as a factor in safety standards implementation

Principals rated adequacy of financial resources as being generally adequate as compared to inadequate. From figure 4.11, we can note that 20 principals rated financial resources as being adequate, 26 principals gave a fairly adequate rating while 9 principals rated adequacy of financial resources as being inadequate. On the other hand, 35 teachers rated adequacy of resources as being adequate, 55 gave a rating of fairly adequate while 20 rated adequacy of resources as being inadequate. This difference is probably due to non-exposure to safety standards on the side of the teacher. The figure below illustrates further.

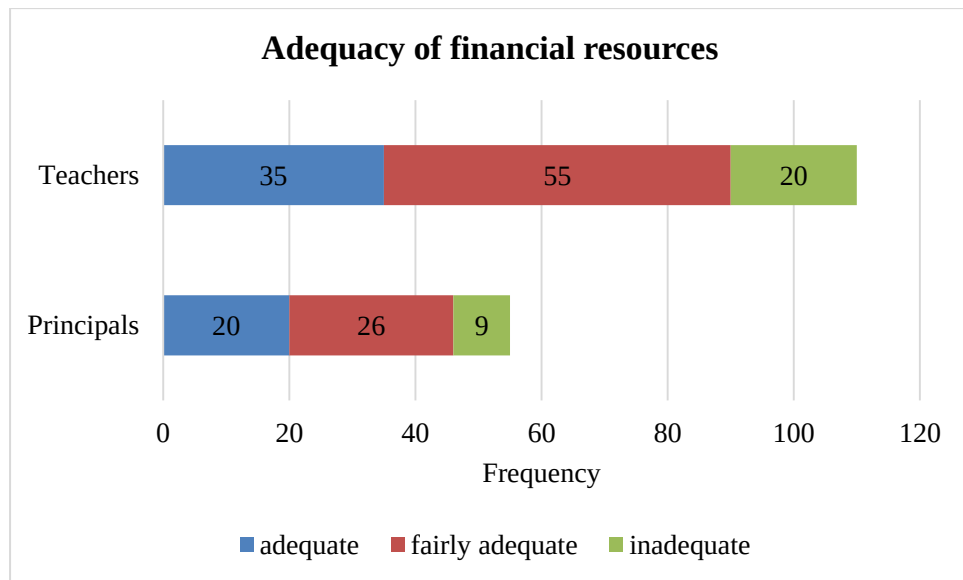


Figure 4.11: Rating of adequacy of financial resources

The rating of the level of implementation of safety standards was generally high across the two samples. In the category of principals, 26 respondents gave a rating of high, 14 rated very high, 12 rated low and 3 said there was no implementation. In the category of teachers, 46 respondents gave a rating of high, 23 rated low, 22 rated very high and 19 said there was no implementation. This observation is noted in figure 4.12 below.

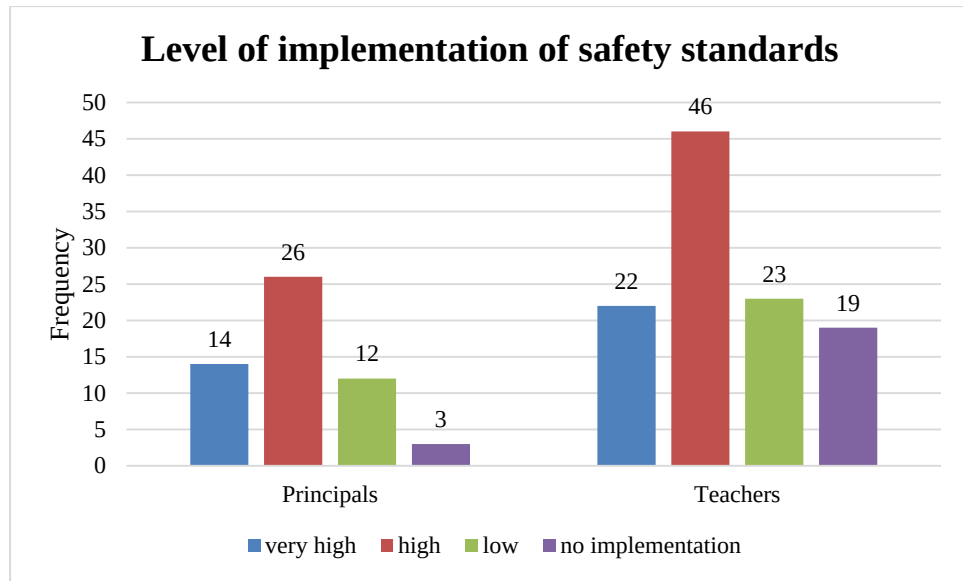


Figure 4.12: Rating of level of implementations of safety standards.

4.5.1 Challenges and constraints in implementation of safety standards.

The study also sought to establish challenges and constraints that were facing the implementation of safety standards in school. Inadequate funds featured prominently, being cited in 69 percent cases. This position is shared by Nganga (2013) who found that inadequate funds posed a challenge to compliance with safety standards in schools. Ignorance was the least, being evident in 13 percent of the cases. Inadequate safety equipment was cited in 18 percent of the cases as shown in figure 4.13

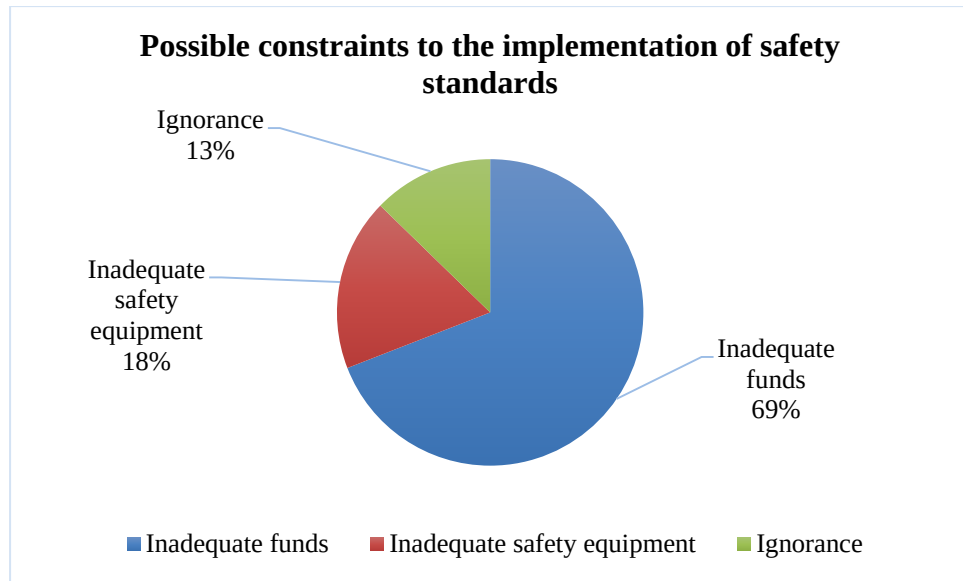


Figure 4.13: Possible constraints to the implementation of safety standards.

Furthermore, teachers were asked to rate various challenges in the implementation of safety standards. It is worth noting that removal of window grills was rated as a serious challenge by most teachers while a similar high number rated the availability of fire extinguishers not a challenge. Administrative support was rated as a serious challenge by a high number of respondents while availability of funds was rated as a serious challenge by most respondents.

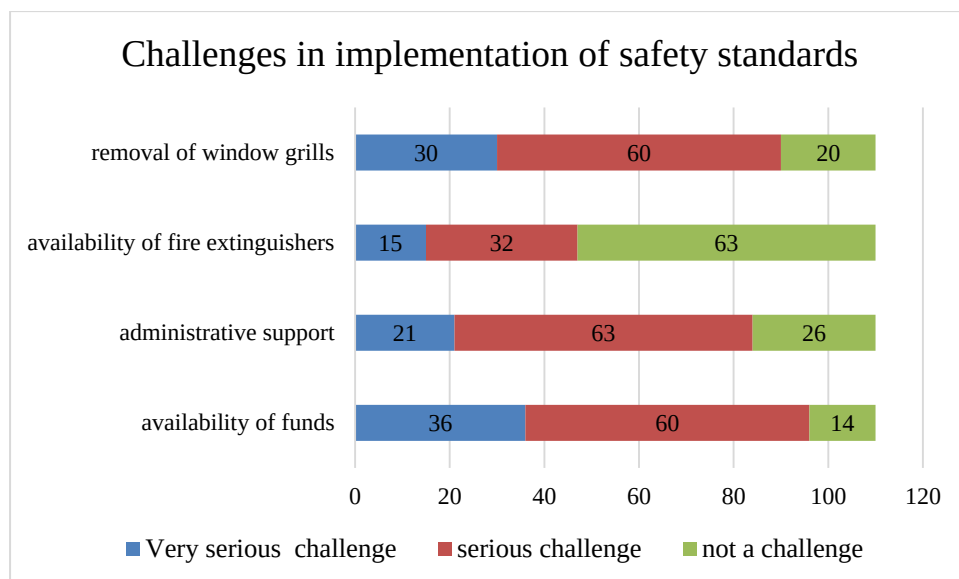


Figure 4.14: Rating of challenges in implementation of safety standards

4.6 Principal's strategies and implementation of safety standards.

Among the strategies put in place by school principals in the implementation of safety standards, teachers forming safety committees in schools was not present in 39 cases (70.9 percent) compared to only 16 cases (29.1 percent) where such committees were present. However, it is worth noting that there was training on basic security requirements of the school in most cases. This was exhibited in 39 cases (70.9 percent). The analysis concurs with studies by Leandri (2011) and Nyakundi (2012) who had observed that principals exposure to safety standards was low. The figure below gives further illustration into this observation.

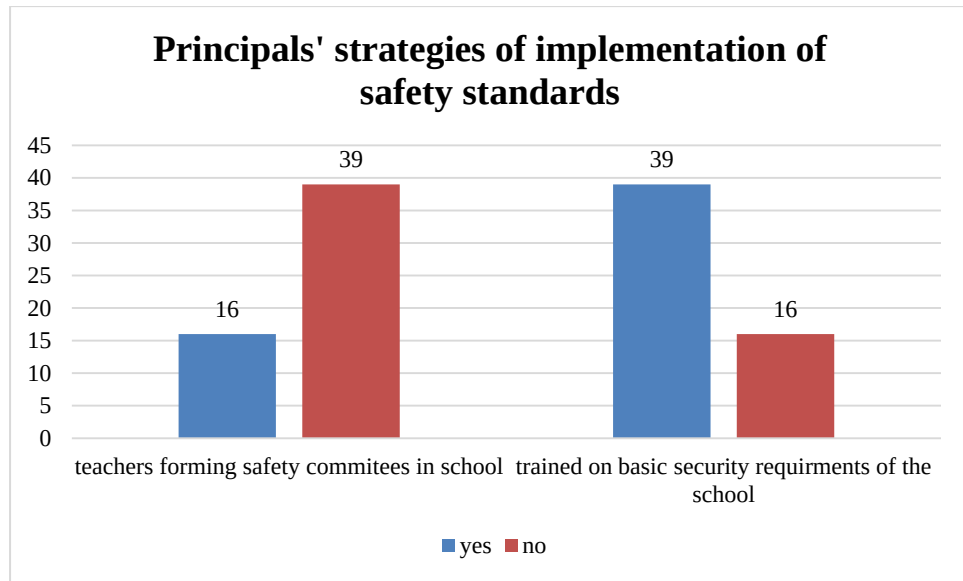


Figure 4.15: Principals' strategies of implementation of safety standards.

A rating of level of participation in safety areas was also interrogated by the study. From the data collected, it is evident that organizing and financing safety management workshops was rated low by most principals. Community sensitization was rated high by 34 respondents while 14 respondents gave a low rating. Students' sensitization was rated high by 25 respondents while 21 respondents gave a low rating. Figure 4.16 illustrates further details.

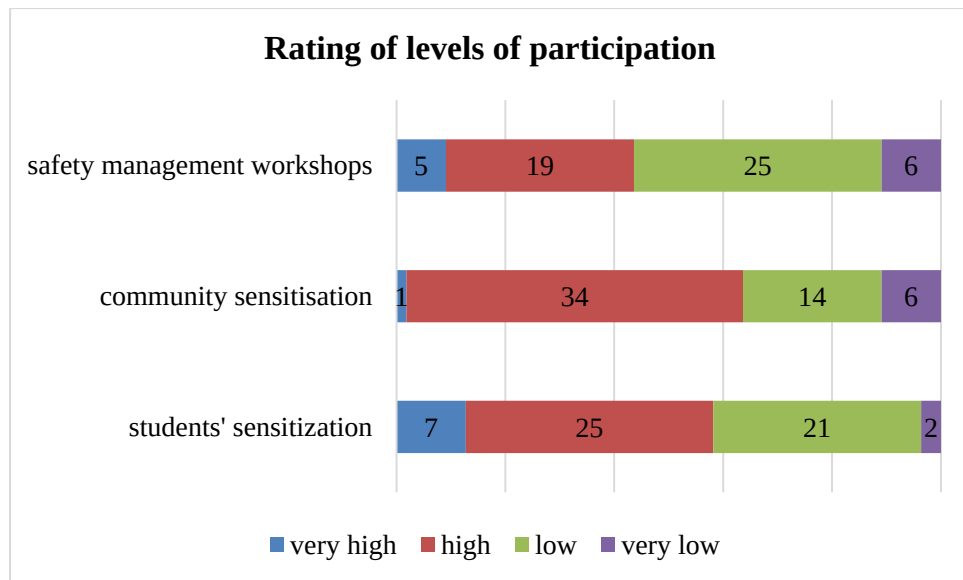


Figure 4.16: Rating of levels of participation in safety promotion activities.

When asked how frequently they invite risk and disaster professionals to talk to members of the school, 51 percent of the principals said the invites were rarely. 5 percent of the respondents further said the invites were very rare. Only 9 percent said the invites were very frequent while in 35 percent, the invites were frequent. The figure below gives the illustration for the above observation.

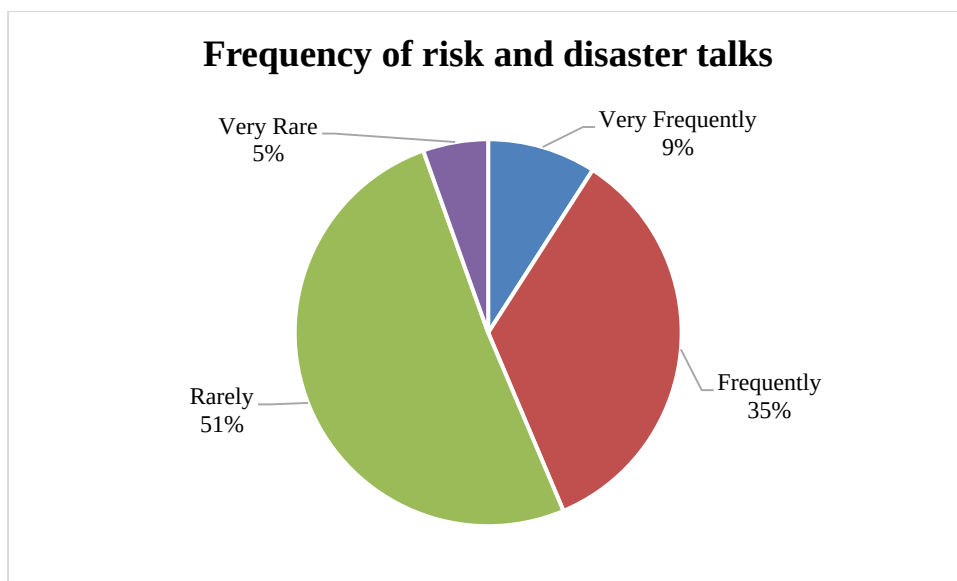


Figure 4.17: Frequency of risk and disaster talks.

On strategies of safety standards implementation, 7 principals responded affirmative on training of teachers while 48 responded negative. On holding of demonstration forums, only 5 responded affirmative while 50 responded negative. 30 principals responded affirmative on giving reminders during assemblies while 25 responded negative. 47 principals responded negative on holding motivational talks while 8 responded affirmative. The figure below illustrates further.

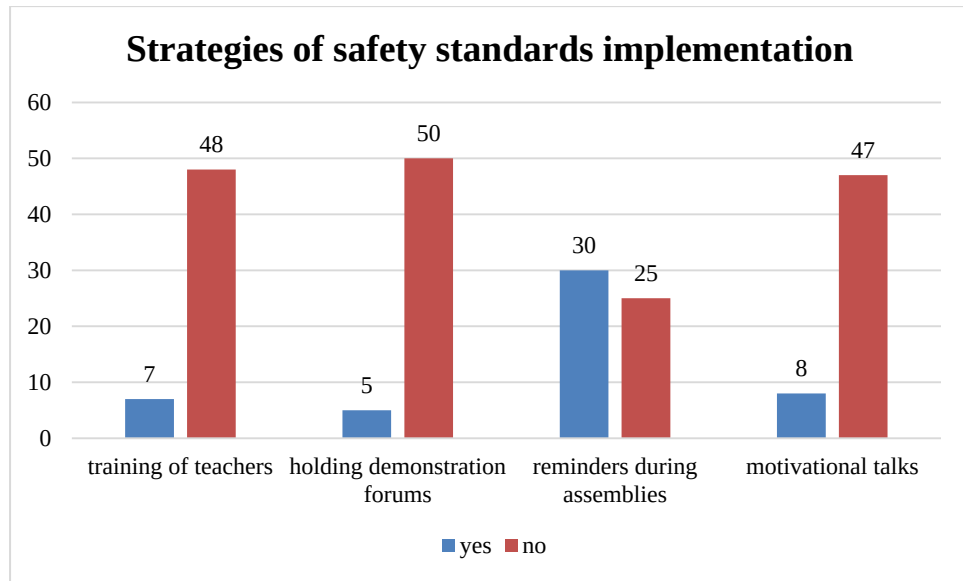


Figure 4.18: Strategies of safety standards implementation

4.7 Staff training and implementation of safety standards

In 69 percent of the sampled cases, teachers were familiar with safety standards manuals while in 31 percent, the teachers were not familiar with safety standards manuals. Figure 4.19 illustrates this observation.

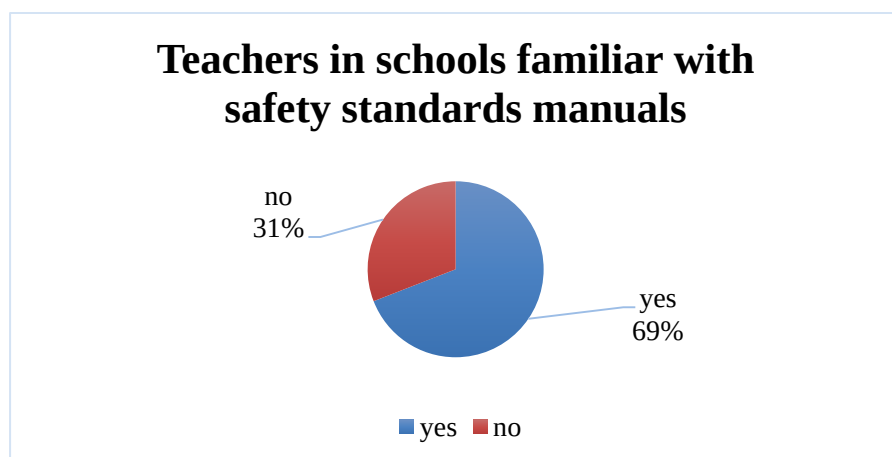


Figure 4.19: Teachers in schools being familiar with safety standards manuals.

Furthermore, the study sought to establish whether the teachers were trained in safety standards on not. The table below gives the frequency distribution of the analyzed findings

Safety standards	Trained	Not trained
Risk management	33.6%	66.4%
Participating in safety exercise	71.8%	28.2%
Evacuation of in case of disasters	35.5%	64.5%
Fire drills	42.7%	57.3%
Disasters management education	33.6%	66.4%
Disasters awareness education	30.9%	69.1%
Demonstration on risk management	24.5%	75.5%

Table 4.4: Training of teachers on safety standards

4.8 Students' participation in implementation of safety standards.

Participation of students in safety matters is an important element and thus, was interrogated by this study.

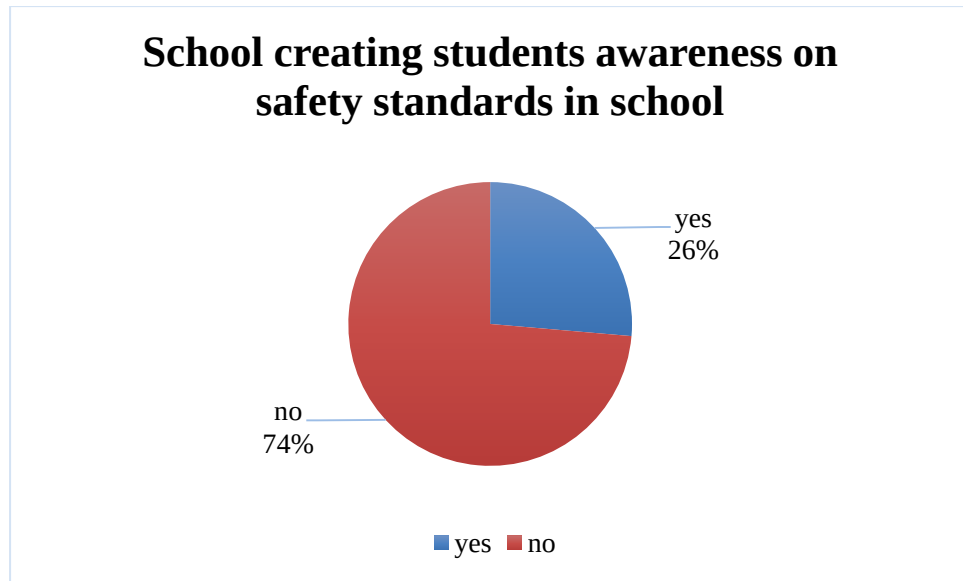


Figure 4.20: Schools creating students' awareness on safety standards

It is true to say that in only 26 percent of the sampled cases, schools were creating students awareness on safety standards while 74 percent of sampled cases indicated students were not made aware of the safety standards.

Furthermore, students' participation in safety standards activities was interrogated by the researcher. An analysis of whether the students were trained or not trained on several safety standards yields the following percentage distribution.

Safety standards	Trained	Not trained
Risk management	35.5%	64.5%
Participating in safety exercise	87.3%	12.7%
Evacuation of in case of disasters	27.3%	72.7%
Fire drills	30.9%	69.1%
Disasters management education	27.3%	72.7%
Disasters awareness education	35.5%	64.5%
Demonstration on risk management	36.4%	63.6%

Table 4.5: Students training on safety standards.

4.9 Safety equipment and infrastructure within schools.

The figure below presents percentage distribution of presence of safety equipment and infrastructure within schools. The data used to generate the frequencies was extracted from the checklists used by the researcher in every school. It is evident that safety equipment and infrastructure are present as shown by the majority cumulative percentage of 54.02 percent as compared to 45.98 percent cases where they were not present. Table 4.6 gives a detailed summary of the percentage distribution of presence of each item quoted in safety equipment and infrastructure.

Item	Presence (%)	
	Yes	No
Fire extinguisher in strategic places	65.5%	34.5%
Alarm bells	41.8%	58.2%
Fire assembly points	36.4%	63.6%
Spacing in dormitories and classes	45.5%	54.5%
Emergency doors in dorms and halls	38.2%	61.8%
Fence around the compound	67.3%	32.7%
First aid box	61.8%	38.2%
Doors opening outside	56.4%	43.6%
Windows without grills	58.2%	41.8%
‘No trespassing’ signs	32.7%	67.3%

Table 4.6: Availability of safety equipment and infrastructure within schools

Consequently, the condition of safety equipment and infrastructure in cases where they were present was interrogated by the researcher. A rating of the condition (on a scale of perfect condition, fair condition and bad condition) was drawn. The cumulative percentage for items in perfect condition was 332 percent, those in fair condition had a cumulative percentage of 509 percent while those in bad condition had a cumulative percentage of 159 percent. This means that, out of all cases where safety equipment and infrastructure was present, items in perfect condition were 33.2 percent, those in fair condition were 50.9 percent while those in bad condition were 15.9 percent.

Table 4.7 below outlines the percentage distribution of the condition in which safety equipment and infrastructure was, for the cases where the same was recorded as being present.

Item	Condition (%)		
	Perfect condition	Fair condition	Bad condition
Fire extinguisher in strategic places	30%	56%	14%
Alarm bells	13%	61%	26%
Fire assembly points	15%	50%	35%
Spacing in dormitories and classes	32%	56%	12%
Emergency doors in dorms and halls	33%	57%	10%
Fence around the compound	46%	46%	8%
First aid box	53%	47%	0%
Doors opening outside	45%	42%	13%
Windows without grills	37%	50%	13%
‘No trespassing’ signs	28%	44%	28%

Table 4.7: Condition of safety requirements and infrastructure

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the research findings, conclusions derived from the study findings, recommendations and suggestions for further research.

5.2 Summary of the study

The purpose of this study was to investigate institutional factors influencing implementation to safety standards and guidelines in public Secondary Schools in Yatta Sub-County, Machakos County, Kenya. Four research objectives guided the study namely:-

- i. To determine the extent to which availability of financial resources influence the implementation to safety standards and guidelines in public secondary schools in Yatta sub County.
- ii. To determine the extent to which staff training on issues of safety influence the implementation to safety standards and guidelines in public secondary schools in Yatta sub County.
- iii. To assess the extent to which students' participation in maintenance of safe institutional environment influence the implementation to safety standards and guidelines in public secondary schools in Yatta sub county

- iv. To determine the extent to which principals strategies to safety standards influence the implementation to safety standards and guidelines in public secondary schools in Yatta sub county.

The study employed descriptive survey design. The target population of the study was 55 Principals and 116 teachers. All the principals participated in the study while 30 percent of the 350 teachers were sampled giving a sample size of 116 teachers. The total sample size was 171 respondents .The Teachers and the schools were stratified per division and selected by simple random sampling method to participate in the study. 171 questionnaires were administered. All principals questionnaires were returned (100 percent) while 110 teachers questionnaires (94.8 percent) were returned.

Data was collected by use of questionnaires and an observation schedule was employed to record safety equipment and infrastructure within the schools. Content validity of the research instruments was ascertained by a team of experts in the field of Educational Administration and through piloting of the questionnaire. Reliability of the instruments was ascertained by a test-re-test technique and a coefficient of stability for the teachers' questionnaire found to be 0.92. Data analysis was done by use of SPSS software (Version 20) where data was coded, sorted, analyzed descriptively and presented using tables and charts. On the demography, majority of the principals 72.7 percent were male while a low percentage of 27.3 percent were females. On the other hand male teachers comprised of 65.5 percent while 34.5 percent were females. Majority of principals (52.7 percent) had a teaching service of more than 20 years this implies that principals were familiar with schools practices for a

long time. Permission to collect data in Yatta Sub County was granted by NACOSTI.

The major findings of the study based on the research objectives were to establish whether financial resources in schools influence implementation of safety standards in public secondary schools in Yatta sub county Machakos County?. The findings from the study suggest that availability of financial resources played a major role in determining the implementation of safety standards and guidelines in secondary schools. The study found out that financial resources was a major factor influencing implementation of safety standards in secondary schools by making sure that safety equipment and infrastructure are made available adequately as indicated by majority of principals (57 percent) who stated that they were not able to purchase adequate infrastructure as evident in figure 4.9. Similarly 69 percent of principals stated that inadequate financial resources were a challenge in their schools as evident in figure 4.13. With inadequate financials resources safety standards levels will definitely go low. Therefore, the relationship between adequacy of financial resources and levels of safety standards is positive or parallel.

To establish the extend to which staff training on safety influence implementation of safety standards in public secondary schools in Yatta Sub County Machakos County? The findings of the study were that staff training played a major role in determining the implementation of safety standards and guidelines in secondary schools. The study found out that majority of staff members in secondary schools were not trained on matters safety. Even in

cases where they were trained, the training was not adequate enough to guarantee their full participation in promotion and implementation of safety standards. This is evident by 60 percent of teachers who indicated they were not familiar with safety standards manual as evident in figure 4.19. while on average 61.06 percent said they had not been trained as compared to only 38.94 percent on average who said they had been trained as evident in table 4.4.

To establish the extent to which students' participation in maintenance of safe institutional environment influence implementation of safety standards in public secondary schools in Yatta sub county, Machakos County?. The findings of the study suggest that students' participation in maintaining institutional environment for implementation of safety standards and guidelines in secondary schools was poor. This can be associated with the fact that only a cumulative percentage of 280.20 percent (40.03 percent) were trained on various safety standards and measures as evident in table 4.5. A larger cumulative percentage of 419.80 percent (59.97 percent) were not trained and therefore, can be presumed to lack knowledge on creating a safe institutional environment for the implementation of safety standards in their schools. The researcher also found that 74 percent of the students were not aware of the safety standards issues as evident in figure 4.20. Therefore, it is true to say that there is need to foster adequate training among students as it influences their participation in the implementation of safety standards in their schools.

To establish the extend to which strategies employed by principals influence implementation of safety standards in public secondary schools in Yatta sub county Machakos County? With regard to the findings of this study, it is evident that strategies employed by principals are crucial in making sure that the implementation of safety standards in secondary schools is smooth.

From figure 4.15, we can note that principals have been trained to a good extend on basic safety requirements within their schools (70.9 percent). However, they have failed to marshal teachers into forming safety committees which are an easier way of approaching safety standards implementation. Additionally, the rating of their participation in student activities that relate to safety standards implementation is wanting, as evidenced in figure 4.16.

Most principals rarely invite professionals to give talks on matters safety and risk management (51 percent) as evidenced in figure 4.17. This can be termed as a failure on their part since professionals have the expertise and skill that principals lack with regard to safety standards and risk management and therefore, should be involved in talks and demonstrations. However, it worth noting that principals have done well in ensuring that teachers are made aware of safety standards manuals within the school. This is supported by the 69 percent response as shown in figure 4.19.

5.3 Conclusions

Based on the study findings the researcher came out with the following conclusions;

School administrators are not able to provide financial resources and funds allocated are usually not enough to cater for the implementation of safety standards in schools. The study also illustrates that adequacy of financial resources in schools influence implementation of safety standards. When funds are made available implementation is high and also when funds are inadequate then the implementation level is low.

Teacher training on safety is not undertaken in all schools. Likewise formation of committees has not been done adequately and therefore teachers seem to be insensitive and ignorant to issues of safety standards in schools.

Principals and teachers do not expose learners to safety standards requirement. Majority sensitize learners on safety, however they do not emphasize on practice that would create awareness to safety standards in schools.

Principals have not been able to attend safety management workshops. They rarely invite professionals to talk on safety standards and carry out drills to teachers and students. They rarely hold demonstrations forums to show learners how to practically use fire extinguishers and locate fire assembly points.

5.4 Recommendations

Based on the findings and conclusions of the study the researcher made the following recommendation;

- (i) Financial resources should be availed to schools in good time by the Ministry of Education to promote safety improvement activities and buying of equipment to provide adequate safety in secondary schools

- (ii) Members of staff should be trained on issues of safety in secondary schools. Such initiatives should be undertaken collaboratively between the school management, the community and other players in the safety and security department in the private and public sector.
- (iii) Students should be involved and encouraged to participate in maintaining institutional activities which promote school safety.
- (iv) Principals should adequately be exposed to issues that promote safety in schools through symposiums and training conferences.

5.5 Suggestions for future studies

The researcher suggests that;

- (i) Further studies should be done on the influence of school community on implementation of safety standards and guidelines in schools.
- (ii) A similar study to be replicated in other sub-county in the country to compare the findings

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APPENDICES

APPENDIX I: LETTER OF INTRODUCTION

University of Nairobi

Department of Educational Administration and Planning

P.O BOX 30197

NAIROBI

To The principal

----- Secondary School

Dear Sir/Madam,

REQUEST TO COLLECT DATA

I am a Master of Education student from the University of Nairobi specializing in Administration. I am currently carrying out a research on institutional factors influencing adherence to safety standards in public schools in Yatta Sub-County, Kenya. I kindly request for your permission and support, to fill in the questionnaire in your school. The information gathered will only be used for academic purpose and the identity of the respondent will remain confidential.

Yours faithfully,

KithekaMakau Richard

APPENDIX II: QUESTIONNAIRE FOR PRINCIPALS

This questionnaire is seeking information concerning implementation of safety standards in secondary schools. The findings of this study will be used to meet the requirements for MED course. No need to write your name or the name of your institution. The identity will be treated confidentially and will be used strictly for the purpose of the research

Instructions: Please answer by putting a tick (✓) or provide information as required

Section A: Background information

1. Kindly indicate your gender? Male () Female ()
2. Kindly indicate your level of education? PhD () Masters Degree ()
Bachelor () degree () Diploma () others (specify) _____
3. For how long have you served as a principal? 1 – 5 years ()
6 – 10 years () 11 – 15 years () 20 years and above ()
4. Kindly indicate the type of your school? Boys () Girls () Mixed ()
5. Kindly indicate the status of your school Boarding () Day ()
Mixed (boarding an day)

Section B: Safety situation

(a) Safety situation in the schools

1. To what level has your school implemented the Ministry of Education safety standards measures? Very high () High () Low () Very low ()
2. Are you familiar with ministry's safety standards manual? Yes () No ()

3. Are copies available for teachers in the school? Yes () No ()
4. Please indicate your degree of agreement with the following statements regarding the safety situation in your school by indicating YES or NO

	Safety situation	YES	NO
I	The school physical infrastructure is constructed and occupied in consultation with ministry of public health department		
Ii	The school is well fenced to deter unauthorized entry into the school with only one entry manned by a security guard		
Iii	All visitors are screened before entry into the compound		
Iv	There is adequate lighting in the school		
V	All doorways and windows open from out side		
Vi	Windows in school are not meshed and fitted with grills		
Vii	The school has sufficient fire extinguishers		

(b) Financial resources and implementation to safety standards

1. Has the school been able to purchase adequate infrastructure for safety?
Yes () NO ()
2. Is availability of financial resources a factor in adherence to safety standards implementation? Yes () NO ()
3. If yes to the above, state in what ways.....

4. Please indicate the level of agreement

Adequacy of financial resources		Principals				
		Level of implementation of safety standards				
		Very high	High	Low	Not implemented	Total
1	adequate					
2.	Fairly adequate					
4	Inadequate					

5. The following are possible constraints in the implementation of safety standards and guidelines. Put a tick (✓) to the option you feel is most appropriate.

- (i) Inadequate funds
- (ii) Inadequate safety equipment
- (iii) Ignorance

(c) Principal's strategies and implementation to safety standards

6. Have teachers formed safety committees in the school? Yes () NO ()

7. Have you been trained on basic safety requirements of the school?

Yes () NO ()

8. To what level have you participated in the following safety areas?

i) Students' sensitization Very high () High () Low () Very low ()

ii) Community sensitization? Very high () High () Low () Very low ()

iii) Organizing and financing safety management workshops? Very high () High () Low () Very low ()

9. How often do you invite risk and disaster professionals to talk to members of the school?

Very Frequently () Frequently (), Rarely (), Very Rarely ()

10. Please indicate the level of implementation

Statement		Level of implementation				
		Yes	No	High	Fairly high	Low
1	Training of teachers					
2	Holding demonstration forums					
3	Reminders during assemblies					
4	Motivational talks					

Thank You

APPENDIX III: QUESTIONNAIRE FOR TEACHERS

TEACHERS QUESTIONNAIRE

This questionnaire is seeking information concerning implementation of safety standards in secondary schools. The findings of this study will be used to meet the requirements for MED course. No need to write your name or the name of your institution. The identity will be treated confidentially and will be used strictly for the purpose of the research

Instructions: Please answer by putting a tick (✓) or provide information as required Section A: Background information

1. Kindly indicate your gender? Male () Female ()
2. Kindly indicate your level of education? PhD () Masters Degree ()
Bachelor's degree () Diploma () others (specify) _____
3. For how long have you served as a teacher? 1 – 5 years () 6 – 10 years ()
11 – 15 years () 20 years and above ()
4. Kindly indicate the type of your school? Boys () Girls () Mixed ()
5. Kindly indicate the status of your school Boarding () Day ()
Mixed boarding and day()

Section B

(a) Safety situation in the schools

6. To what level has your school implemented the Ministry of Education safety standards measures? Very high () High () Low () Very low ()
7. Are you familiar with ministry's safety standards manual? Yes () No ()
8. Are copies available for teachers in the school? Yes () No ()

9. Please indicate your degree of agreement with the following statements regarding the safety situation in your school by indicating YES or NO.

	Safety situation	YES	NO
I	The school physical infrastructure is constructed and occupied in consultation with ministry of public health department		
Ii	The school is well fenced to deter unauthorized entry into the school with only one entry manned by a security guard		
Iii	All visitors are screened before entry into the compound		
Iv	There is adequate lighting in the school		
V	All doorways and windows open from out side		
Vi	Windows in school are not meshed and fitted with grills		
Vii	The school has sufficient fire extinguishers		

b. Financial resources and implementation to safety standards

1. Please indicate the levels of agreement

Adequacy of financial resources		Teachers				
		Level of implementation of safety standards				
		Very high	High	Low	Not implemented	Total
1	adequate					
2.	Fairly adequate					
3	Inadequate					

2. The following are possible constraints in the implementation of safety standards. Put a tick (✓) to the option you feel is most appropriate.

Challenges in implementation of safety standards.

		Very serious challenge	Serious challenge	Not a challenge
i.	Availability of Funds			
ii.	Administrative support			
iii.	Availability of fire extinguishers.			
iv.	Removal of window grills.			

(c) Staff training and implementation to safety standards

3. Are teachers in the school familiar with safety standards manuals?

Yes () No ()

4. Below are areas of security management. In which area have the teachers been trained in?

Safety standards	Trained	Not trained
Risk management		
Participating in safety exercise		
Evacuation of in case of disasters		
Fire drills		
Disasters management education		
Disasters awareness education		
Demonstration on risk management		

(d) Student's participation and implementation to safety standards

14. Has the school created students awareness on safety standards?

Yes () No ()

15. In which of the following areas of training have the students been trained in?

Safety standards	Trained	Not trained
Risk management		
Participating in safety exercise		
Evacuation of in case of disasters		
Fire drills		
Disasters management education		
Disasters awareness education		
Demonstration on risk management		

Thank You

APPENDIX IV: OBSERVATION CHECKLIST

Item	Presence		Remarks		
	Yes %	No %	Perfect condition %	Fair condition %	Bad condition %
Fire extinguisher in strategic places					
Alarm bells					
Fire assembly points					
Spacing in dormitory and classless					
Emergence doors in dorms and halls					
Fence around the compound					
First aid box					
Doors opening outside					
Windows without grills					
No trespassing signs					

APPENDIX V: RECOMMENDATION LETTER



UNIVERSITY OF NAIROBI
COLLEGE OF EDUCATION AND EXTERNAL STUDIES
SCHOOL OF EDUCATION
DEPARTMENT OF EDUCATIONAL ADMINISTRATION AND PLANNING

Telegram: "CEES"
Telephone: 020-2701902
dept-edadmin@uonbi.ac.ke

P.O. BOX 30197
OR P.O. BOX 92 -00902
KIKUYU

April 27, 2016

OUR REF: UON/CEES/SOE/A&P/1/4

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

RE: KITHEKA RICHARD MAKAU – REG NO. E55/70536/2013

This is to certify that **Kitheka Richard Makau** is a Master of Education student in the department of Educational Administration and Planning of the University of Nairobi. He is currently working on his research proposal entitled *"Institutional Factors Influencing Implementation of Sfety Standards in Public Secondary Schools in Yatta Sub-County, Machakos County-Kenya"*.

Any assistance accorded to him will be highly appreciated.

DR. JEREMIAH M. KALAI
CHAIRMAN

DEPARTMENT OF EDUCATIONAL ADMINISTRATION AND PLANNING



APPENDIX VI: RESEARCH AUTHORIZATION LETTER



**NATIONAL COMMISSION FOR SCIENCE,
TECHNOLOGY AND INNOVATION**

Telephone: +254-20-2213471,
2241349,3310571,2219420
Fax: +254-20-318245,318249
Email: dg@nacosti.go.ke
Website: www.nacosti.go.ke
when replying please quote

9th Floor, Utalii House
Uhuru Highway
P.O. Box 30623-00100
NAIROBI-KENYA

Ref. No: **NACOSTI/P/16/92516/10993**

Date: **11th May, 2016**

Richard Makau Kitheka
University of Nairobi
P.O. Box 30197-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on
*“Institutional factors influencing implementation of safety standards in
public secondary schools in Yatta Sub-County, Machakos County-Kenya,”* I
am pleased to inform you that you have been authorized to undertake research
in **Machakos County** for the period ending **10th May, 2017**.

You are advised to report to **the County Commissioner and the County
Director of Education, Machakos County** before embarking on the research
project.

On completion of the research, you are expected to submit **two hard copies
and one soft copy in pdf** of the research report/thesis to our office.


BONIFACE WANYAMA
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Machakos County.

The County Director of Education
Machakos County.

National Commission for Science, Technology and Innovation is ISO 9001:2008 Certified

APPENDIX VII: RESEARCH PERMIT

THIS IS TO CERTIFY THAT:
MR. RICHARD MAKAU KITHEKA
of UNIVERSITY OF NAIROBI, 164-90124
kithimani, has been permitted to
conduct research in **Machakos County**

**on the topic: INSTITUTIONAL FACTORS
INFLUENCING IMPLEMENTATION OF
SAFETY STANDARDS IN PUBLIC
SECONDARY SCHOOLS IN YATTA
SUB-COUNTY, MACHAKOS
COUNTY-KENYA**

**for the period ending:
10th May, 2017**

[Signature]
**Applicant's
Signature**

Permit No : NACOSTI/P/16/92516/10993
Date Of Issue : 11th May, 2016
Fee Received :Ksh 1000

[Signature]
**Director General
National Commission for Science,
Technology & Innovation**

CONDITIONS

- You must report to the County Commissioner and the County Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit.**
- Government Officers will not be interviewed without prior appointment.**
- No questionnaire will be used unless it has been approved.**
- Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.**
- You are required to submit at least two(2) hard copies and one(1) soft copy of your final report.**
- The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice.**

REPUBLIC OF KENYA

NACOSTI

**National Commission for Science,
Technology and Innovation**

**RESEARCH CLEARANCE
PERMIT**

Serial No. A 9153

CONDITIONS: see back page

APPENDIX VIII: MAP OF THE STUDY LOCATION

