SCHOOL-BASED FACTORS INFLUENCING IMPLEMENTATION OF SAFETY STANDARDS IN PUBLIC SECONDARY SCHOOLS IN MATUNGULU SUB-COUNTY, MACHAKOS COUNTY - KENYA

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DECLARATION

I understand that plagiarism is an offence and I therefore declare that this research project is my original work and has not been presented to any other institution for any other award.

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DEDICATION

I dedicate this work to my late father William Nzilili, my husband Benson Mutiso, and our lovely children Rhoda and Ivy, for their motivation, understanding and most needed moral and technological support. May the Lord God Almighty abundantly bless them all.

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ABBREVIATIONS AND ACRONYMS

ANOVA	Analysis of Variance
CERNET	China Education and Research Network
DQASO	Directorate of Quality Assurance and Standards Office
DRR	Disaster Risk Reduction
EPDS	Earthquake Preparation Demonstration Schools
FSTP	Free Secondary Tuition Program
KENPRO	Kenya Projects Organization
MoE	Ministry of Education
MoEST	Ministry of Education, Science and Technology
NCES	National Centre for Education Statistics
NGO	Non-Governmental Organization
NJSBA	New Jersey School Boards Association
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations International Children's Educational Fund
UNISDR	United Nation Strategy Disaster Reduction
UPE	Universal Primary Education
US	United States
USAID	United States Assistance in International Development
USDE	United States Department of Education
SCQASO	Sub-County Quality Assurance and Standards Officer
SPSS	Statistical Package for Social Sciences
SSC	Safe Schools Contract
SRO	School Resource Officers
NACOSTI	National Commission for Science and Technology Innovation

ABSTRACT

Despite existence of safety policies in secondary schools in Kenya, student mortality rates attributed to physical accidents in the country are estimated to be on the rise from 3% to 7% annually. This study investigated school-based factors influencing implementation of safety standards in public secondary schools in Matungulu Sub-County, Machakos County. Guided by Abraham Maslow's Hierarchy of Needs Theory, this study investigated the extent to which: safety awareness among teachers and students; availability of financial resources; students' enrolment and school management practices influence implementation of safety standards in public secondary schools in Matungulu Sub-County. Descriptive survey research design was used to collect data from a target population of 35 public secondary schools in Matungulu Sub-County. The target population for this study comprised of 35 school heads, 389 teachers and 2608 form three students. The study adopted purposive, stratified and simple random sampling techniques where a sample size of 11 school heads, 44 teachers and 264 students was drawn from the 35 public secondary schools. Questionnaire and observation checklist were used to collect data. Validity of research instruments was ascertained through piloting by a research expert from school of education while, reliability of the research instruments was determined using the test-re-test method. Quantitative data was analyzed using descriptive statistics such as mean scores, percentages, frequency distribution tables and standard deviations and presented in tables, charts and narratives. Further, correlation and regression analysis methods were used to determine the statistical effect of individual predictor variable on the dependent variable. Qualitative data obtained from open-ended questions was analyzed thematically and presented using descriptive statistics. Overall the study revealed that there is a statistical significant relationship between school-based factors and implementation of safety standards. This is because the p-value as measured between each school-based factor and implementation of safety standards in schools, was less than (≤).05, the acceptable significance level. This study concludes that despite existence of safety manuals and policies in secondary schools in schools, lack of awareness, inadequate funds, increased number of student enrolment and negligence of school management on safety measures were major hindrances to implementation of safety standards. This study recommends among others that, for effective implementation of safety standards in public secondary schools in Matungulu Sub-County, the Government of Kenya through the Ministry of Education should allocate funds to facilitate training of teachers and students on safety measures and purchase of safety equipment such as fire extinguishers. Further, the Ministry should set safety policies to regulate student number constraints based on infrastructural facilities. The findings of this study are considered to be of value to school management, policy makers, researches and scholars when making decisions related to safety in school.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Effective learning process is conceptualized to be a function of student safety in the school context (Sekiwu & Kabanda, 2014). As opined in Abraham Maslow's Hierarchy of Needs theory, safety is considered to be the basic fundamental need for any effective learning process. Learners in any learning system are expected to concentrate and perform effectively in academic and co-curriculum activities if the environment in which they engage in is safe and secure (Maslow, 1943). Effective implementation of safety standards in learning institutions is viewed to be the critical factor that facilitates effective teaching and learning (Omolo & Simatwa, 2010). Squelch (2001) defines a safe school as one that is free from danger and possible harm, where non educators, educators and learners can work, teach and learn without fear or ridicule, intimidation, harassment, humiliation or violence. Similarly, Oguye (2012) further asserts that students learn best and achieve to their fullest potential when they are taught in a safe environment. Therefore, a school should provide a safe environment to foster learning.

Even though learning institutions are attributed to security, it is indicated by a United Nations Educational, Scientific and Cultural Organization report that learning institutions around the world are experiencing potential threats to security (UNESCO, 2018). Action Aid International (2004) affirms that issues of terrorism, suicide and school fires are on the rise thus the need to investigate how to curb insecurity cases in learning institutions. In Russia, it is reported by Cavanagh (2004) that due to weaknesses of school administration and security agencies, 320 students, teachers and parents were massacred due to failure of government security agencies to provide security to learning institutions and to implement security standards.

China Education and Research Network report indicates that due to lack of school inspection and selection implementation of safety policies in the country, more than 75% of the learners have lost their lives to issues related to school fires, suicide, terrorism and natural calamities such as floods, earthquakes and lightening (CERNET, 2004). In this regard, new policies have been developed relating to protection of

minors, compulsory education among teachers and learners. It is observed by Reuters (2004) that schools in India have been experiencing challenges of implementing safety standards thus resulting to a school fire that broke out in India in July 2004 killing 90 students. Based on the fact that the school building was overcrowded and there were no alternative emergency exit doors or fire extinguishers, all the students involved in the tragedy were unable to escape to safety during the incident. Similarly, Simatwa and Omolo (2010) ascertain that based on the laxity of the school administration on safety measures in India, 400 students were victims of fire tragedy that broke out in 1995.

Considering the fact that safety of learners is a global concern, learning in 67% of the primary and secondary schools in African countries such as Nigeria has been greatly affected by terrorism activities. Organized militia groups such as Boko Haram have not only affected smooth learning in schools but also the National security operations. The Human Rights Watch (2018) reported that issues of kidnapping of teachers and school going children are increasing on a daily basis in Nigeria. Similarly, the Human Rights Watch (2018) has reported that issues of school insecurity in Nigeria have not only violated human rights and freedom but also contributed to forced marriages and intentional murder for non-adherence to ideological beliefs of the militia groups. Abduction of 276 secondary school girls in 2017 from Chibok, Borno State by Boko Haram militia is a reflection of how the government security agencies have failed to provide security in learning institutions as well as inability of the school to develop and implement safety measures. As a result, the Nigerian Army has beefed up security in Boko Haram prone schools. In Uganda, Sekiwu and Kabanda (2014) assert that several hazards in schools are attributed to failure to implement safety policies. In 2009, 20 students and two unidentified adults perished in the fire at Buddo Primary School. Addressing the parliament on this matter, the then Minister for Education and Sports reported that the Inspector General of police had identified lack of safety provisions as being the main contributing factor to this disaster.

Action Aid International (2004) survey conducted in Uganda established that 84% and 76% of girls and boys respectively were reported to have observed or experienced violence. Teachers were identified as perpetrators by 17% of pupils. Cognizant of the magnitude of pupils experiencing violence in schools exposed by the Action Aid

International (2004) survey, USAID-funded project that works in 34 districts of Uganda, has supported the Ministry of Education and Sports since 2005 to introduce Safe School Contracts (SSCs) to more than 200 primary schools (UPHOLD, n.d).Teachers and pupils sign the SSC where teachers agree to protect pupils from abuse while pupils identify three or four safety friends.

Kenya has a history of tragic school safety incidences blamed on failure to implement safety policies. The 1991 raid by boys on the girls' dormitory at St. Kizito Secondary School in Meru County resulted in the death of 19 girls (Simatwa, 2007). The school had no fence and this made it easier for the boys to access the school. Similarly, the tragedy in which 68 students died at Kyanguli Secondary School in Machakos County dormitory fire in 2001 was blamed on overcrowding, existence of grilled windows, lack of emergency doors and fire extinguishers (Nthenya, 2011). Further, in 2017, eight girls of Moi Girls' High School died in a dormitory fire (Achuka, 2017). It was reported that the hostel was overcrowded and this made it difficult for the students to escape. On the same note, in 2018 as reported by Cherono (2018), seven students at Jamhuri High School in Nairobi were injured due to a religious related confrontation which broke out among the students. All these incidents indicate that student safety is a thorny issue in Kenyan schools.

To safeguard safety of learners in school, the Ministry of Education developed the Safety Standards Manual for use in all Kenyan schools, (Ministry of Education, 2008). This manual addresses thirteen safety standards and guidelines of the learner while in and out of school. The areas addressed include; safety on school grounds and in physical infrastructure, health, hygiene and food safety; safety against drugs and substance abuse, social-cultural environment, safety of children with special needs, safety against child abuse, transportation safety, disaster risk reduction and school-community relations.

In Kenya, threats to school safety include; accidents, school violence, lack of adequate healthcare and nutrition, lack of sensitivity to sexual maturation challenges for boys and girls, armed conflicts and insecurity and hostile school environment (Republic of Kenya, 2008). It can therefore be concluded that schools around the world Kenya included are exposed to safety concerns and thus they are not secure

havens as they are supposed to. The Ministry of Education in Kenya is striving to implement the safety standards in learning institutions including public secondary schools. It is however noted that although these safety standards were developed about ten years ago, more than 50% of the schools have not fully complied with the safety standards (MoE, 2018).

It is generally accepted that different countries face unique school safety challenges. School violence is a serious safety challenge affecting schools in US (Shaw, 2002). A US national survey on indicators of school crime and safety confirmed that there are increasing cases of school violence in US schools. Due to its seismic location, China is prone to severe floods and earthquakes which cause high fatalities when they occur. Van Jaaveld (2011) opines that there is a deep-rooted culture of violence in South African schools that has made schools unsafe and insecure. In response to school safety concerns, countries have developed safety measures and policies to be implemented by schools to improve school safety.

A report by the Ministry of Education (2016) indicates that despite existence of Safety Standards Manual in public secondary schools in Kenya for the past 10 years, various factors have been identified to hinder schools from implementing the requirements of the Safety Manual such as; negative attitude of head teachers, staff training, financial resources, safety awareness, school culture, management practices, students' enrolment, the physical environment and students' discipline. However, this study will only focus on contribution of four school based factors that include: safety awareness, availability of financial resources, students' enrolment and schools' management practices.

Shaw (2002) argues that the level of awareness on school safety among the key stakeholders may enable them to leverage on the implementation of comprehensive school safety program. Gatua (2013) carried out a descriptive study in Nairobi West to investigate factors affecting the implementation of the safety standards. The study found out that low awareness on safety standards had negative effect on the implementation of safety guidelines in schools. However, it is noted that the study sampled fewer teachers and students and that there was no observation checklist. In contrast, this study included more respondents and an observation checklist to collect adequate data from teachers and students.

The Government of Kenya does not provide schools with adequate financial resources to meet the tuition needs, leave alone funds to cater for implementing security measures (Ng'ang'a, 2013). On the same note, Kirimi (2014) in a descriptive study in Buuri, Meru County, established that despite existence of safety manuals in public secondary schools, implementation of the safety guidelines was hindered by lack of funds and good will of the school management to utilize the limited resource to promote safety awareness.

A United Nations report indicates that the primary school net enrolment rate in the developing countries has reached an estimated 91% in 2015, up from 83% in 2000 (UN, 2015). With increased transition rates, secondary schools are also experiencing an influx of students. Frederiksen (2011) maintains that the physical infrastructure in Kenyan schools has been over-stretched to the point of compromising safety standards. Lyons (2002) maintains that students in overcrowded schools are exposed to more risks than students in underutilized schools. Wahura (2013) conducted a descriptive study to investigate factors influencing compliance to safety standards in Nyeri Central. The study revealed that non-compliance to safety standards among public secondary schools was as a result of the increased number of student enrolment which made it difficult to implement safety policies as required by the MoE in Kenya.

Management of schools is viewed as a process where school managers or administrators can plan, communicate, evaluate and control safety regulations to achieve the intended objective (Wahura, 2013). Makau (2016) argues that security management are efforts made to protect the environment where students learn and teachers teach in a warm and welcoming environment, free from intimidation and fear of violence. Additionally, Earthman (2002) asserts that school management practices can also include monitoring, identifying damages and repairing of safety system, installation of guide signage at the gate, patrol by the school personnel and provision of armed security guards in the schools.

Cosmas and Kuttickatta (2011) conducted a research in South Africa to establish the most prevalent form of indiscipline among the learners and how it affects their safety and security. The study disclosed that schools management were doing nothing to contain truancy, fighting, theft, bullying, vandalism, gunshot and other threatening

behaviours. Furthermore, Muthiani (2016) established that implementation of safety standards was not only influenced by one factor but also a combination of factors such as training, budget allocation, monitoring, management knowledge and good will to embrace policies by leaders.

1.2 Statement of the Problem

Extensive studies which have been conducted by Ministry of Education (2018), Makau (2016) and Muthiani (2016) vividly indicate that there is no clear understanding on the relationship between school-based factors and implementation of safety standards in public secondary schools. Further, the Ministry of Education (2018) indicates that despite existence of safety standard manuals in public secondary schools in Kenya, cases of insecurity and student safety were on the rise by 7% annually. Physical infrastructural challenges and awareness on safety were issues of concern. Makau (2016) revealed that a number of challenges such as funds and training attributed to failure in implementation of safety regulations in public secondary schools. However, it is noted that the study examined variables of this study in isolation and was confined to public secondary schools in Yatta Sub-County in Machakos County, which is considered a different context from that of this study.

Reports obtained from Matungulu Sub-County Education Office (2018) indicate evidence of students' safety concerns in a few of the public secondary schools namely; overcrowded dormitories and classrooms, porous perimeter fence, existence of grilled windows, lack of emergency doors in the dormitories and classrooms, inadequate fire extinguishers, and nonexistent repairs of physical infrastructure. On this premise, there was need to carry out an empirical study to establish the influence of school based factors on the implementation of safety standards in public secondary schools in Matungulu Sub-County.

Muthiani (2016) established that there is a correlation between awareness and implementation of safety standards. However, the study used a smaller sample size and non-probability sampling technique as compared to this study. Based on the deficiencies in evidence from the findings of the studies by Ministry of Education (2018), Makau (2016), Muthiani (2016), Obiamaka (2015) and Nthenya (2011), and on the fact that there was no single empirical study conducted in public secondary

schools in Matungulu Sub-County, this study sought to investigate school-based factors influencing implementation of safety standards in public secondary schools in Matungulu Sub-County, Machakos County, Kenya.

1.3. General Objective of the Study

The general objective of this study was to investigate school-based factors influencing implementation of safety standards in public secondary schools in Matungulu Sub-County.

1.3.1 Specific Study Objectives

The specific objectives of the study were to:

i. Establish the influence of safety awareness among teachers and students on implementation of safety standards in public secondary schools in Matungulu Sub-County.
ii. Determine the extent to which availability of financial resources influence implementation of safety standards in public secondary schools in Matungulu Sub-County.
iii. Establish the extent to which students' enrolment influences the implementation of safety standards in public secondary schools in Matungulu Sub-County.
iv. Determine the influence of school management practices on implementation of safety standards in public secondary schools in Matungulu Sub-County.

1.4 Research Questions

The study was guided by the following questions:

i. How does safety awareness among teachers and students influence implementation of safety standards in public secondary schools in Matungulu Sub-County?
ii. To what extent do financial resources influence implementation of safety standards in public secondary schools in Matungulu Sub-County?
iii. How does student enrolment influence implementation of safety standards in public secondary schools in Matungulu Sub-County?
iv. To what extent do school management practices influence implementation of safety standards in public secondary schools in Matungulu Sub-County?

1.5 Significance of the Study

The findings of this study may help management of public secondary schools to develop interventions that will curb the increased rate of student mortality rates and loss of property attributed to inability to implement safety standards. School head teachers, teachers and school Boards of Management may use the findings of this study to make informed decisions that will result to minimal cases of physical accidents associated with electrical faults, natural calamities, terrorism and external attacks among others. The findings of the study might also be useful to students to enhance their personal safety and create awareness among their peers.

The study findings may help policy makers such as the Ministry of Education through quality assurance authorities to formulate new policies that will curb increased cases of student mortality rates, physical injuries and loss of property attributed to non-adherence to safety regulations. Researchers and scholars in the field of education administration may use this information to enrich their knowledge and existing theories and thus identify existing research gaps to be addressed.

1.6 Limitations of the Study

Limitations such as non-cooperation by some of the school heads and teaching staff were overcome by the researcher by clearly highlighting the academic purpose and objectives of the study to respondents. In cases where the head teachers would have withheld some information for fear of reprimand by their seniors, the researcher overcame the challenge by triangulating and asking the same questions to the teachers. A combination of research instruments such as questionnaires and observation checklist were used to collect adequate data from teachers and students rather than using a single instrument which might have resulted to collection of biased information..

1.7 Delimitations of the Study

This study was delimited to public secondary schools in Matungulu Sub-County in Machakos County to investigate the influence of school-based factors on the implementation of safety standards. Variables such as safety awareness among teachers, availability of financial resources, students' enrolment and school management practices were considered appropriate in this study to influence implementation of safety standards in public secondary schools in Kenya. Further, the

study was delimited to school heads, teachers and students as they were considered to have adequate knowledge concerning the problem under investigation.

1.8 Assumptions of the Study

This study assumed that:

i. Safety Standard Manual would be available in the selected secondary schools of this study.
ii. Respondents who comprised of school heads and teachers would have full knowledge about Ministry of Education safety standards and guidelines.
iii. Respondents would be willing to give correct and truthful information concerning the problem under investigation.

1.9 Operational Definition of Terms

Financial resources: These are funds which may be allocated to train staff or purchase safety equipment such as fire-extinguishers, fire blankets, install surveillance cameras and install alternative exit doors in dormitories and classrooms in public secondary schools.

Implementation: It is the ability of transforming Ministry of Education Safety Standards Manual guidelines into action to minimize students mortality rates, injuries and loss of property attributed to non-adherence to safety standards.

Public secondary schools: These are fully registered learning institutions by the Ministry of Education and funded by the government to provide secondary level education services to students after successfully completing their Kenya Certificate of Primary Education.

School Safety: Is the extent to which schools engage in activities that focus on protecting students against any harm such as physical accidents or injury, sexual assault, violence, bullying, exposure to weapons or illegal substances.

Safety awareness: It entails the ability of school stakeholders such as teachers, students, management boards to have full information about safety measures or guidelines as stipulated in the Ministry of Education Safety Standards Manual.

School management practices: These are activities such as planning, budgeting, communication, and training, monitoring and controlling which may be embraced by school administrators or managers to ensure safety measures are implemented as stipulated in the Ministry of Education Safety Standards Manuals

Safety Standards: These are rules that articulate how school stakeholders are expected to conduct themselves to minimize mortality or injury rates in case of any accident or natural calamity that threatens human life as stipulated in the Ministry of Education Safety Standards Manual (2008).

Student enrolment: It is the number of students registered in a public secondary school in Kenya.

1.10 Organization of the Study

Chapter one of this study presents background to the study, statement of the problem, general objective of the study, specific study objectives, research questions of the study. Further, it outlines significance of the study, limitations and delimitations, assumptions of the study and operational definition of significant terms. Chapter two discusses the subthemes derived from the study objectives. Further, it gives the summary of the literature review, theoretical and conceptual frameworks. Chapter three outlines the research methodology which discusses the research design, target population, sample size and sampling techniques, data collection research instruments, validity and reliability of the research instruments, data collection procedures, data analysis techniques and finally ethical consideration. Chapter four discusses research results which are illustrated using tables and figures. The results are presented according to research objectives. Chapter five presents a discussion and interpretation of research findings. Finally chapter six presents conclusions, recommendations and suggestions for further studies.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter discusses the literature review which includes: safety awareness among teachers, availability of financial resources, students' enrolment and school management practices in relation to implementation of safety standards in public secondary schools. Further, it discusses the summary of literature review; describes and illustrates theoretical framework and the conceptual framework.

2.2 Safety Awareness and Implementation of Safety Standards in Schools

Omolo and Simatwa (2010) opine that knowledge on safety practices in schools is considered to be a critical factor of effective learning. Learning institutions that do not embrace safety measures may not only experience social costs but also legal costs. Shaw (2002) contends that existence of safety manuals, guides and training materials in learning institutions can be attributed to implementation of safety standards. It is however generally accepted that different countries face unique school safety challenges and have thus developed responsive safety policies (Song, 2014).

A US national survey on indicators of school crime and safety prepared by Rober, Kemp, Rathbun and Morgan (2014) for National Center for Education Statistics (NCES) reveals that, in 2012 there were about 1,364,900 non-fatal school accidents. Rapp (n.d) on the same note has documented 11 school mass shooting incidences for the period 1966 – 2018 that have led to 167 deaths and 172 injuries in the US. Creation of safety awareness by the majority (79%) of the schools in the United States has been accelerated by increased cases of natural and social emergencies (Song, 2014). Similarly, increased safety awareness has resulted to more schools implementing safety measures as indicated by Rober et al (2014) survey which confirmed that 77% of US schools had implemented safety measures.

Due to its seismic location, UNICEF (2009) ascertains that China has experienced frequent and high magnitude earthquakes that have resulted to high fatalities including students. Lack of safety preparedness in China has resulted to increased

death rates of the Chinese citizens that need to rethink on ways of curbing emergency cases at home and in learning institutions. Natural calamities such as floods and earthquakes have not only caused trauma among the Chinese people but also to a larger number of school going children (UNICEF, 2009). Song (2014) argues that despite safety drills conducted by disaster preparedness organizations, 89% of the Chinese were ignorant of safety measures indicating that school safety is an area of concern globally.

Masitsa (2011) found out that there exists a deep-rooted culture of violence in South African schools that has been cultivated in different ways over many years, thus making schools unsafe and insecure. As a consequence, South Africa has developed safety policies to curb the culture of violence. It was pointed by Prinsloo (2005) that despite existence of safety guidelines in South African schools, documented safety policies were not embraced in practices. The study revealed that cases of racial attacks were on the rise despite formulation of some Acts to curb the vice in public and private schools in South Africa.

Further, it was revealed by Van (2011) in South Africa that written security plans to a larger extent were not implemented in organizations. As a result, it was noted that majority of the public schools in South Africa did not have emergency plans despite increased cases of student attacks due to racial discrimination. Action Aid International (2004) study conducted in Uganda found that 84% and 76% of pupils reported to have observed or experienced violence against girls and boys respectively where teachers were identified as perpetrators by 17% of the respondents. Uganda has published safe schools handbook, implemented Safe School Contracts (SSCs) and is offering safe-school training to school inspectors and tutors who train teachers. UNICEF (2013) in Uganda revealed that safety awareness was one of the challenges that contributed to high mortality rates in Ugandan learning institutions. The Ministry of Education (2008) acknowledged that lack of safety awareness is one of the challenges that have contributed to a larger number of student mortality rates in public secondary schools in Kenya. Similarly, Makau pointed out that majority, 90% of secondary schools teachers and students in Yatta Sub-County were not trained on First Aid measures meaning that student safety is not guaranteed in the schools.

Generally, the Ministry of Education (2008) noted that most of the secondary schools rarely provided training on disaster preparedness to students and teachers. Emergency cases of natural calamities such as lightening, floods and earthquakes were not anticipated and therefore none of the teachers and students had knowledge on how to behave in case of such emergencies. Kemunto, Role and Balyage (2017) studied safety policy implementation framework for secondary schools in Kenya. The findings revealed that there were very few copies of Safety Standards Manual in public secondary schools, and their implementation was unlikely due to lack of the necessary support from the government. Therefore, this study sought to establish the influence of safety awareness on implementation of safety standards in public secondary schools in Matungulu Sub-County.

2.3 Availability of Financial Resources and Implementation of Safety Standards in Schools

Kirimi (2014) ascertains that despite several strives by public secondary schools in Kenya to implement safety standards; inadequacy of funds has greatly hindered success of the initiative in most of the schools. Even at the school level, implementing safety measures such as training to create awareness, installing safety gadgets such as fire extinguishers, hiring security guards, retrofitting an existing building to be disaster resilient and installing security cameras may be affected by the availability of funds (NJSBA, 2014). A survey carried out by New Jersey School Boards Association (NJSBA) School Security Taskforce (2014), established that schools in New Jersey were unable to implement recommended safety measures due to lack of funding. The survey further reported that one-quarter of the respondents identified the high-cost enhancements of surveillance cameras and the employment of School Resource Officers (SROs) as some of the security measures affected by limited funding.

In China, Song (2014) studied policy development of disaster management and education. The study pointed out that disaster preparedness among the schools in China was not given the maximum attention it deserved. The study noted that for effective response to natural calamities such as floods and earthquakes, more funds were required to implement a few disaster preparedness programs in schools and purchase particular drilling equipment. The study concluded that poorer and more vulnerable schools were not able to implement the programs. Similarly, Xaba (2014)

in South Africa established that school heads were unable to facilitate staff training on weapon detection while First Aid and mouth-to-mouth resuscitation were safety practices that were not embraced by majority of the students. This therefore means that inability of the schools to train students and staff on First Aid was hampered by inadequacy of funds.

UNISDR (2016) discloses that Uganda has not been able to integrate Disaster Risk Reduction into the curriculum. This is particularly because funding remains a challenge, limiting the massive roll-out of the curriculum plan. The report further reveals that the country requires funds to train teachers and reproduce learners' materials on safety. This is in line with Makau (2016) who ascertains that lack of financial resources has greatly affected effective implementation of safety standards in public secondary schools in Yatta Sub-County. The study further reveals that majority of the public secondary schools were unable to purchase adequate security infrastructure due to unavailability of funds. The current study therefore sought to determine whether availability of financial resources affects implementation of safety standards in public secondary schools in Matungulu Sub-County.

2.4 Student Enrolment and Implementation of Safety Standards in Schools

Enrolment has become a challenge in Kenyan secondary schools. In recent years, Kenya has experienced continued student population growth in secondary schools (Wahura, 2013). KENPRO (2010) asserts that education quality in Kenya has not kept pace with quantity and the dramatic rise in student population. Further, Frederiksen (2011) writing on the challenges facing the Kenya education system concur that Kenya education is fundamentally flawed because there are inadequate spaces in secondary schools. As a result, the physical infrastructure has been over-stretched to the point of compromising safety standards in schools.

According to Obiamaka (2015), increased number of student enrolment in public schools in Kenya is not only a threat to safety but also one of the factors that has contributed to increased number of student mortality rates by an estimate of up to 44% annually. Congested dormitories and classrooms are attributed or viewed to be a high risk in case of an emergency. Chumba (2006) suggests that lack of water,

awareness, surveillance cameras and fire extinguishers have not only undermined the integrity of safety in public secondary schools but also affected effective learning process.

Lyons (2002) showed that students in overcrowded schools were exposed to more risks than students in underutilized schools. For example, the tragedy in which 68 students died at Kyanguli Secondary School dormitory fire in 2001 was blamed on overcrowding, existence of grilled windows, lack of emergency doors and fire extinguishers among others (Nthenya, 2011). According to Nthenya (2011), violation of safety regulations by school management has resulted to increased rate of student mortality rates by 9% annually. In addition, admitting students past the recommended number by the Ministry of Education has resulted to overstretching of the available resources thus posing inability for schools to install adequate security equipment in dormitories and classrooms.

Wahura (2013) found out that increased student population was not correlated to implementation of safety standards in public secondary schools. It was further noted that despite the larger number of students admitted, schools can manage to train teachers and students on safety measures if there is a clear framework. This means that disaster preparedness mechanisms adopted can be instituted among teachers and students if the ministry officials have a clear framework of formulating, implementing and controlling safety regulations. Non-compliance of schools to safety regulations not only undermines human rights and freedom but also hinders the global goal of quality education as stipulated by UNSECO (2018). However, the current study sought to examine how student enrolment can affect implementation of safety standards in public secondary schools in Matungulu Sub-County.

2.5 School Management Practices and Implementation of Safety Standards

Obegbulem (2011) affirms that, to overcome or minimize student mortality and injury rates in public secondary schools, it is the responsibility of school heads to plan, organize, facilitate communication, train and lead the system on safety measures where school heads can be involved in school security management. Dimsey (2008) defines security management as a process of creating conducive and proper internal

environment in the school. This is in line with Henry (2000) who argues that security management are efforts made to protect the environment where students learn and teachers teach in a warm and welcoming environment, free from intimidation and fear of violence. School heads management practices on school safety therefore may include monitoring, identifying damages and repairing of safety system, for example; alarm systems, drainage system, sanitation, electrical and securing fire systems in proper locations (Van, 2011). School heads are therefore required to coordinate security programs in their schools.

Oguye (2012) contends that installation of surveillance cameras in public secondary schools boosts the level of security among teachers and students from one school to another if there is management support. This means that failure to have clear security plans and communication mechanisms, organizations are at high risk of being attacked by terrorists. Inability to construct perimeter walls around schools and admission of students without considering the available capacities not only undermines safety measures but also affects the overall learning process. This aruement concurs with that by Smith (2010) who studied the role of school discipline in combating violence in public schools in East London region. The study revealed that inability to implement security policies was undermined by poor planning and communication.

Cosmas and Kuttickatta (2011) in South Africa established that cases of fighting, student bullying, theft, suicide and threatening behaviors were on the rise in South African schools due to negligence of school management to implement safety regulations. It was also noted that despite existence of documented policies, leaders had no good will to implement the policies. The study further revealed that inability to implement safety policies was hampered by poor planning and communication techniques used by school administrators. Similarly, Obiamaka (2015) in Nigeria studied security management situations in public secondary schools in North Central Zone and results demonstrated that failure of the National government to partner with other security agencies was one of the factors that led to student mortality rates. Makau (2016) on the other hand, pointed out that student mortality rates were largely attributed to failure of the school management to create maximum awareness among teachers and students about safety measures. This study sought to establish the

influence of school practices on implementation of MoE safety standards in public secondary schools in Matungulu Sub-County.

2.6 Summary of Literature Review

From existing literature, it was concluded that implementation of safety standards in organizations and more specifically in public secondary schools in Kenya, was attributed to a myriad of challenges. Despite existence of documented Safety Standards Manuals in public secondary schools in Kenya, it was noted that implementation was an uphill task that needs combination of interventions in order to be actualized. It was also noted that implementation of safety standards in public secondary schools was hindered by issues of capacity development, financial constraints, technological challenges and inadequate management support.

Despite the extensive literature which has been document on safety standards in learning institutions, it can be concluded that there is no clear understanding on the relationship between safety awareness among teachers, availability of financial resources, students' enrolment and school management practices on implementation of safety standards in public secondary schools in Matungulu Sub-County. It is on this basis that this study sought to investigate the problem in these areas in order to bridge the existing knowledge gaps.

2.7 Theoretical Framework

This study was anchored on Abraham Maslow's Hierarchy of Needs Theory (1943). The theory argues that human beings are driven by five basic needs which include; physiological, safety, social, esteem and self-actualization. Physiological needs that drive human behavior are oxygen, food, and water. Safety needs involve; physical security, financial security and health. Social needs are; affection and group acceptance. Esteem needs entail; self-concept and respect to other while self-actualization is the ability of the individual to become what he or she wants on earth. Safety of learners and teachers in public secondary schools is considered to be a near basic need and one of the factors that will stimulate learners to seek education services thus leading to effective performance.

Effective implementation of safety standards in public secondary schools as stipulated by the Ministry of Education Safety Standards Manual (2008) will motivate learners and promote a conducive learning environment. It has been established that ensuring appropriate measures of safety are put in place will drive learners to perform effectively in class. In addition, installation of surveillance cameras, construction of modern dormitories and classrooms equipped with safety facilities will not only encourage learners to work hard but also promote their social well-being. Cases of sexual harassment, bullying, physical violence and verbal abuse are likely to be minimized if management of public secondary schools can embrace safety standards as stipulated in the Safety Standards Manual (2008) of the Ministry of Education.

Even though the theory has been extensively applied in literature by researchers such as Subedi and Redmond (2016), Obiamaka (2015), Omolo and Simatwa (2010) and Prinsloo (2005), it is noted that there exist operational and universality constraints. For instance, the constructs of the theory have been operationalized differently by researchers from one context to another thus the need to retest how the theory can be operationalized in the school context. Further, it is noted the constructs of this theory are interpreted differently from one context to another by researchers thus the need for this study to retest it to measure how the safety construct is interpreted in the school context. Based on conflicting views on the interpretation or definition of the term 'safety' among the researchers, it is against this background that this theory was retested in this study in public secondary schools in Matungulu Sub – County.

This theory was retested in this study based on the assumption that public secondary schools in Kenya are likely to avoid safety related incidences such as school fires, sexual assault, physical abuse, bullying and verbal abuse if they are; sensitized about safety standards and the school administration is willing to provide necessary support in implementing Safety Standards Manual (2008) of the Ministry of Education in schools. Consequently, learners, teachers and school administrators can move on to address other needs in the hierarchy that improve academic performance such as social esteem and self-actualization.

2.8 Conceptual Framework

The conceptual framework in Figure 2.1 depicts the interrelationship between school based factors and implementation of safety standards.

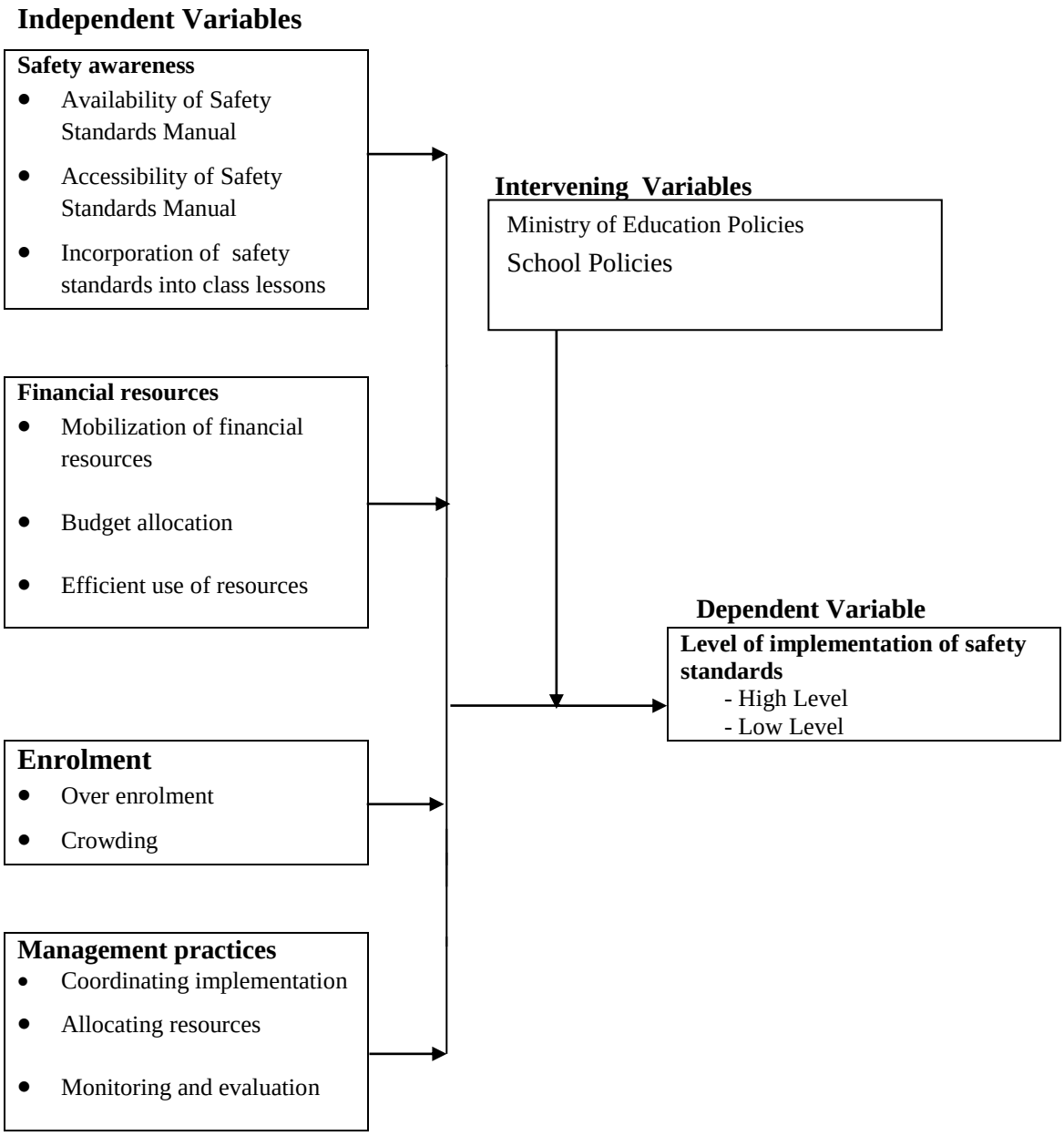

Figure: 2.1: Conceptual Framework showing the interrelationship between the study variables

The conceptual framework demonstrates that implementation of safety standards in public secondary schools in Kenya which is influenced by a sub-set of four variables which included: safety awareness among teachers and students, availability of financial resources, students' enrolment and school management practices. Selected indicators that were conceptualized to measure safety awareness among teachers and students were; availability, accessibility and mainstreaming of safety standards into class lessons.

The selected financial resources indicators were; mobilization of financial resources, budget allocation and efficient use of resources in implementation of safety standards. Student enrollment indicators were; over enrolment and crowding and that of school management practices included: coordination of safety activities, resource allocation, monitoring and evaluation of safety procedures. The School and the Government policies were the intervening variables that influenced the relationship between school-based factors and implementation of safety standards in public secondary schools in Matungulu Subcounty, Machakos.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research design, target population, sample size and sampling technique, research instruments, validity and reliability of research instruments, data collection procedures, data analysis techniques and finally ethical considerations are described.

3.2 Research Design

Fisher (2010) defines the research design as an arrangement of conditions for collection and analysis of data in a manner that aims to discover new knowledge. The study adopted descriptive research design to investigate school-based factors influencing implementation of safety standards in public secondary schools in Matungulu Sub-County in Machakos County. The descriptive research design was considered appropriate because it explores and describes the relationship between variables in their natural setting without manipulating them. Further, it facilitated discovery of new knowledge. Data was collected from a sizeable population with homogenous features. Further, it facilitated testing hypotheses based on the laws of cause and effect. Moreover, it helped in verifying the findings of the study based on the principles of existing theories thus improvement of the theory and prediction and control of the problem under investigation.

3.3 Target Population

Target population is defined as the totality of units or individuals with homogenous features which the researcher may focus to obtain information about a problem under investigation (Fisher, 2010). According to the Matungulu Sub-County Education Office (2018), there are 35 public secondary schools with a population of 35 school heads, 389 teachers and 2608 form three students. This study targeted all school heads, all teachers and all current form three students in the Sub-County making a total target population of 3,032. The units of analysis were teachers and students of 35 public secondary schools while unit of observation was public secondary schools in Matungulu Sub-County in Machakos County.

3.4 Sample Size and Sampling Techniques

A sample is regarded as a representative of the whole (Cresswell, 2013). Matungulu Sub-County has 35 public secondary schools. In this population, there were 5 girls' schools, 3 boys' schools and 27 mixed schools. Due to the population characteristics, the study used stratified sampling technique to stratify the population into three strata as follows; girls' schools, boys' schools and mixed gender schools. Mugenda and Mugenda (2003) justify that sample populations of at least 10% of a larger population or at least 30% of smaller population is representative. Therefore, 11 public secondary schools which constituted 30% of 35 public secondary schools in Matungulu Sub-County in Machakos County were used. Schools were stratified and simple random technique was used to select a sample size of 11 secondary schools.

Names of the schools from the three stratas were written on pieces of paper and folded and shuffled in 3 separate plates as per the strata. 2 girls' schools were picked from the girls' schools strata, 1 from the boys' schools strata and 8 from the mixed gender schools strata. The researcher employed purposive sampling technique to sample all the 11 school heads of the participating schools. Their inclusion was predetermined by the selection of their schools. The researcher desired to purposively sample 4 teachers from each of the 11 participating schools making a sample of 44 teachers. In Matungulu Sub-County, there were several new schools with an average of 4 teachers thus justifying the decision to sample 4 teachers per school. 4 teachers were picked randomly from each of the selected schools. 24 students were picked from each of the 11 public schools selected.

Form three students were considered to be the appropriate respondents of this study based on the fact that they were deemed to have adequate knowledge in relation to safety in public secondary schools. Therefore, purposive sampling was used to pick form three students from the 11 public secondary schools. The sample size drawn was 264 students. In the mixed gender schools, students were picked through stratified random sampling making a total of 12 girls and 11 boys as shown in Table 3.1. This sample size was considered appropriate in this study as it was consistent with Fisher (2010) who recommends that 10% of the total population is justifiable in any scientific inquiry.

Table 3.1: Sample size

Category	Sample Sizes				
	Schools	**School Heads**	**Teachers**	**Students**	**Total %**
Girls' Only	5	2	8	48	58
%	14.3	18.2	18.2	18.2	18.2
Boys' Only	3	1	4	24	29
%	8.6	9.1	9.1	9.1	9.1
Mixed	27	8	32	192	232
%	77.1	72.7	72.7	72.7	72.7
Total	**35**	**11**	**44**	**264**	**319**
%	**100**	**100**	**100**	**100**	**100**

Source: Matungulu Sub-County Education Office, 2018

3.5 Research Instruments

The study collected primary data using structured questionnaires with open and closed-ended questions. Questionnaires were administered to teachers and students of public secondary schools. The questionnaires were considered appropriate based on the fact that they provided an opportunity to collect data systematically and analyze it for strategic decision making. It also provided the opportunity of anonymity which encouraged frankness from the respondents especially in sensitive issues.

3.5.1 Structure of Questionnaire

A questionnaire is an instrument with open or closed ended questions used to collect both qualitative and quantitative data, Creswell (2000). The study used three sets of questionnaires to collect data. They were administered to the Headteachers, Teachers and Students.

Teachers' Questionaire

The questionnaire for Headteachers was similar to that of the teachers. The questionnaire was divided into five sections; Section A sought demographic information from respondents, Section B sought information relating to safety awareness and implementation of safety standards, Section C sought information relating to financial resources and implementation of safety standards, Section D sought information relating to enrolment and implementation of safety standards and

Section E sought information relating to management practices and implementation of safety standards.

Students' Questionnaire

This questionnaire consisted of two sections; Section A collected demographic data from the respondents, Section B collected general data on school based factors influencing implementation of safety standards in public secondary schools in Matungulu Sub county. Respondents were required to measure items of the questionnaires using a Likert point scale where; 5 denoted Strongly Agree (SA), 4 Agree(A), 3 Neutral (N), 2 Disagree (D) and 1 Strongly Disagree (SD).

3.5.2 Observation Checklist

The observation checklist sheet was used to collect data from the school as per the study objectives. The data collected was in relation to physical infrastructures in the school such as: perimeter fence, sign posts, play grounds, toilets, ramps, path ways, doorways, dormitories, furniture, railings, windows, gates, fire extinguishers, grills and emergency exit doors.

3.5.3 Validity of Research Instruments

Validity is regarded as the extent to which the research instrument collects the intended information (Fisher, 2010). Content validity was measured using university lecturers and education experts. Construct validity is a measure of the degree to which data obtained from an instrument meaningfully and accurately reflects a theoretical concept, while content validity is a measure of the degree to which data collected using a particular instrument represents a specific domain of indicators or content of a particular concept (Novikov and Novikov, 2013).The researcher discussed the questionnaire items with the supervisors at South Eastern Kenya University to enhance their construct and content validity. The counsel by these experts helped the researcher perk up the validity of the research instrument. To ascertain the validity of the content of the research instruments items, the researcher's supervisor assisted in guaranteeing that the research instruments are related to the content area under study and the set objectives.

3.5.4 Reliability of Research Instruments

Novikov and Novikov (2013) define reliability as the degree to which an instrument can yield consistent results after repeated trial. A single test was administered to 8 school head teachers, 6 teachers and 12 students who did not take part of the final research process, were used by the researcher to examine the reliability of the measuring instruments. The single test administration technique of estimating data reliability engrosses administering the instrument once to the group of subjects. The reliability coefficient that is obtained is referred to as the coefficient of internal consistency of the items and is measured by Cronbach alpha technique. Each of the instruments' section were subjected to the internal consistency technique and the variables had the following reliability coefficients as shown in table 3.2

Table 3.2: Reliability Statistics

Variables	No. of items	Cronbach Alpha (HT & T)	Cronbach Alpha (TQ)	Comments
School Heads	8	0.942	.912	Reliable
Teachers	6	0.824	.861	Reliable
Students	12	0.818	.832	Reliable
Overall index	**26**	**0.821**	**0.841**	**Reliable**

Note: HT&T stands for Head Teachers and Teachers' Questionnaire and S stands for Student Questionnaire

The results in Table 3.2 indicate that the reliability coefficient of the three independent variables is more than the 0.7 for both head teachers and teachers' questionnaires. Equally the overall reliability coefficients for the head teachers and teachers' questionnaires were respectively 0.821 and 0.841 reflecting that the variables of the study were reliable and met the threshold proposed by Novikov and Novikov (2013).

3.6 Data Collection Procedures

Before data collection, the researcher presented an introductory letter from South Eastern Kenya University and a permit from National Commission for Science, Technology and Innovation (NACOSTI). The selected schools were visited by the researcher and introduction was made. The questionnaires were self-administered and

during normal class sessions and the help of a teacher was sought to facilitate collection of secondary data using observation checklist form.

3.7 Data Analysis Techniques

The Statistical Packages for Social Sciences (SPSS) version 24 was used to analyze collected data by applying both descriptive in addition to inferential statistical techniques. Descriptive statistics was used in describing the data sample in such a way as to depict the typical respondent and to divulge the general response pattern. Analyzed data was presented in form of percentages and frequencies, and inferences and conclusions were made. Inferential statistics that was used to determine the statistical effect of individual predictors (safety awareness, financial resources, enrolment and management practices) on the dependent variable (implementation of safety standards in public secondary schools in Matungulu Sub-County) was the Pearson's product moment statistics (r) because the variables were numerical in nature. Inferential statistics was conducted at 5% significance level and 95% confidence level to establish the relationship between variables of this study.

3.8 Ethical Considerations

The ethical considerations for this research comprised of the following, the researcher obtained an introductory letter from the Department of Education of South Eastern University and proceeded to NACOSTI to acquire a research permit which allowed the researcher to proceed to the County and Sub-county offices to seek for authority to carry out the research in the selected schools within the Matungulu Sub-county. At the school level, permission to administer the questionnaires was sought from the school heads. The researcher debriefed the study respondents who included school heads, teachers and students in advance. The researcher also protected the physical and psychological welfare of the respondents by ensuring confidentiality of the information they provided. The researcher was responsible throughout the study and accepted individual responsibility as far as the consequences of the research and finally the researcher also obtained informed consent prior to the commencement of the study from all respondents.

CHAPTER FOUR

RESEARCH RESULTS

4.1 Introduction

This chapter presents the results of the analyzed data that was obtained after administering questionnaires to the three groups of respondents namely; head teachers, teachers and students. In this respect, the chapter presents findings in view of the response rates from the respondents, demographic characteristics and finally results are presented in line with the objectives of the study.

4.2 Questionnaire Response Rate

This study administered a total of 11 questionnaires to head teachers, 44 questionnaires to teachers and 264 to students. From the data collected, 9 questionnaires were returned by the head teachers, 41 questionnaires were returned by teachers while 256 questionnaires were returned by the students. This represented questionnaire response rates of 82%, 94% and 97% for school heads, teachers and students respectively. These response rates were considered satisfactory to make conclusions for the study. Mugenda and Mugenda (2003) observed that a 50% response rate is adequate, 60% good and above, while 70% rated very well. This implies that based on this assertion, the response rates in this case of 82%, 94% and 97% was therefore considered to be very good. The response rate is represented in Table 4.1.

Table 4.1: Response Rate

Respondents	No of questionnaires administered	No of questionnaires returned	Response (%)
School Heads	11	9	82
Teachers	44	41	94
Students	264	256	97

4.3 Demographic Characteristics of Respondents

The study sought to establish the demographic data of the respondents'. The researcher begun by the general analysis on the demographic data obtained from the respondents which included; gender, age category, length of service as a teacher/school head, duration in the current school and level of professional

qualification. The results are as presented in sections 4.2.1 through 4.2.5.

4.3.1 Gender Distribution

Respondents' gender was analyzed on the basis of being either male or female and results are as shown in Table 4.2.

Table 4.2: Gender of Respondents

	School Heads (N=9)		Teachers (N=41)		Students (N=256)	
Gender	Frequency	Percent	Frequency	Percent	Frequency	Percent
Male	5	55.6	13	31.7	115	44.9
Female	4	44.4	28	68.3	141	55.1
Total	9	100.0	41	100.0	256	100.0

Table 4.2 shows that majority (56%) of the school heads were male while about 44 percent of the school heads were female. On the other hand, majority (68%) of the teachers were female while about 32% of the teachers were male. Similarly, majority (55%) of the students were female while about 50% of the students were male. This implies that both genders were well represented in the study.

4.3.2 Age Category of Respondents

Age of teachers and school heads was categorized as below 25 years, 25-34 years, 35-44 years, 45-54 years 55 years and above. The analyzed results are as shown in Table 4.3.

Table 4.3: Age Category of School Heads and Teachers

	School Heads (N=9)		Teachers (N=41)	
	Frequency	Percent	Frequency	Percent
Below 25 years	0	0.00	6	14.6
25-34 years	1	11.1	19	46.3
35-44 years	2	22.2	8	19.5
45-54 years	4	44.4	6	14.6
55 years & above	2	22.2	2	4.9
Total	9	100.0	41	100.0

Results in Table 4.3 show that majority of school heads were between the age ranges of 45-54 years (44%). Followed by, school heads in the age brackets of more than 55 years and 35-44 years who were 22% each. Those about 11% were in the age bracket

of 25-34 years while none of the school heads was below 25 years. On the other hand, majority of teachers were between the age ranges of 25-34 years (46%) and 35-44 years (20%). There was a similar number (15%) between the age ranges of below 25 years and between 45-54 years. Those teachers 55 years and above comprised of only 5%. The students were also asked to indicate there age and the results are as shown in Table 4.4.

Table 4.4: Average age of Students

	N	Minimum	Maximum	Mean	Std. Deviation
Age	256	15	21	17.16	1.231

From the results in Table 4.4, it was noted that majority of the students were aged 17 years. Among the students who responded to the questionnaires the youngest one was aged 15 years while the oldest was aged 21 years an indicator that they were mature enough to respond to the questions.

4.3.3 Respondents Length of Service

The length of service as measured in terms of the number of years a respondent had stayed in the teaching profession and also the number of years a respondent has been a school head was established in this study. In this regard, the years a respondent had taught and the years one had been a school head were categorically measured as being less than 5 years, 6 to 10 years, 11 to 15 years and more than 16 years as descriptively presented in Table 4.5.

Table 4.5: Length of Services of School Heads and Teachers

	School Heads (N=9)		Teachers (N=41)	
	Frequency	Percent	Frequency	Percent
5 years and below	3	33.3	22	53.6
6-10 years	2	22.2	10	24.4
11-15 years	1	11.4	2	4.9
16 years & above	3	33.3	7	17.1
Total	9	100.0	41	100.0

As can be observed in Table 4.5, (33%) of the school heads had been in the leadership position for over 16 years and above and another similar number have been in the

position of school head for less than 5 years. About 22% of them had been in the position of school head for 6-10 years while, about 11% had been in that position for a period between 11-15 years. This means 66% of school heads had been serving for more than 5 years, hence qualified to respond to safety issues in schools.

It is easy to notice from Table 4.5 that majority (53%) of the teachers had a teaching experience of below 5 years; about 24% had a teaching experience of 6-10 years while 17% had over 16 years of teaching experience. Out of the 41 teachers who responded, only 2 who represented about 5% had a teaching experience of between 11-15 years.

4.3.4 Duration of Service in Current School

Like the length of service in teaching experience and in leadership position for school heads, duration of service in the current school was established for both the school heads and teachers. The years of service in the current school were determined in years and categorized as being less than 5 years, 6 to 10 years, 11 to 15 years and more than 16 years. The data in view of this aspect was analyzed and presented in Tables 4.6.

Table 4.6: Length of Stay in Current School by School Heads and Teachers

	School Heads (N=9)		Teachers (N=41)	
	Frequency	Percent	Frequency	Percent
5 years and below	5	55.6	31	75.5
6-10 years	3	33.3	8	19.5
11-15 years	1	11.1	0	0
16 years & above	0	0	2	4.9
Total	9	100.0	41	100.0

It can be observed from Table 4.6 that majority (56%) of the school heads reported that they had stayed in the current school for a period of 5 years and below while about 33% of them had stayed for a period of 6-10 years. About 11% of the school heads had stayed in the school for a period of between 11-15 years while none of the school heads had stayed in the current school for over 16 years.

Just like the school heads, it can be seen from Table 4.6 that majority (76%) of the teachers had stayed in the respective schools for a period of 5 years and below while about 20% of them had stayed for a period of between 6 to 10 years. None of the

teachers had stayed in the respective schools for a period of between 11-15 years while only 5% had stayed in the current school for over 16 years.

4.3.5 Professional Qualification of Respondents

The study sought to determine the professional qualification of the school heads and teachers. Qualification for school heads and teachers in the profession of teaching was measured based on the following academic credentials; diploma, degree, masters or PhD. Results for this parameter were reported together in Table 4.7.

Table 4.7: Professional Qualification of School Heads and Teachers

	School Heads (N=9)		Teachers (N=41)	
	Frequency	Percent	Frequency	Percent
Diploma (D.Ed)	1	11.1	7	17.1
Degree (B.Ed)	4	44.4	31	75.6
Masters (M.Ed)	4	44.4	3	7.3
PhD	0	0.00	0.00	0.00
Total	9	100.0	41	100.0

From Table 4.7, it can be seen that majority (44%) of the school heads had a bachelor's degree in education as professional qualification. In addition, it is worth noting that about 44% of the heads of department had Master of Education degree qualification. While 11% of the school heads had Diploma in Education as a professional qualification, none of them had attained a Doctorate (PhD) qualification. The findings imply that 88% of the respondents were degree holders, and hence understood their profession well.

Similarly, it can be observed from Table 4.7 that majority (76%) of the teachers had a Bachelor of Education degree level of qualification. About 17% had a Diploma in Education qualification while 7% had Master in Education qualification. Just like the school heads, none of the teachers had a Doctorate (PhD) qualification. These results indicate that 83% of the respondents were knowledgeable on matters of safety in the education sector.

4.4 Analysis in Relation to Research Objectives

This study sought to investigate four objectives: To establish the influence of safety awareness among teachers and head teachers on implementation of safety standards in

public secondary schools in Matungulu Sub-County; To determine the extent to which availability of financial resources influence implementation of safety standards in public secondary schools in Matungulu Sub-County; To eestablish the extent to which students' enrolment influences the implementation of safety standards in public secondary schools in Matungulu Sub-County and; To determine the influence of school management practices on implementation of safety standards in public secondary schools in Matungulu Sub-County. Analysis of the objectives including implementation of safety standards in public secondary schools as well as correlation analysis and regression analysis of each objective are presented in sections 4.3.1 through 4.3.5.

4.4.1 Safety Awareness and Implementation of Safety Standards

The first objective for this study sought to establish the influence of safety awareness among teachers and school heads on implementation of safety standards in public secondary schools in Matungulu Sub-County. Firstly, questions were posed to the respondents regarding the availability and accessibility of safety manual in schools, extent of implementation of safety standards and whether schools actually do discuss and implement the safety standards as recommended. Secondly, the level of awareness as measured through Likert scale items was determined as a prelude to establishing the influence of awareness levels on implementation of safety standards. Finally, influence of awareness on implementation was established using correlation and regression analysis by way of testing hypothesis at .05 level of significance. Analysis of this parameter is as presented in sections 4.3.1.1. through 4.3.1.8.

4.4.1.1 Safety Standards Manual for Schools in Kenya

School heads and teachers were asked if their schools had a copy of Safety Standards Manual for Schools in which they were required to respond by either a yes or no answer. The responses from these respondents were analyzed and results presented as shown in Table 4.8.

Table 4.8: Views of School heads and teachers on having a copy of Safety Standards Manual for Schools in Kenya

	School Heads (N=9)		Teachers (N=41)	
	Frequency	Percent	Frequency	Percent
Yes	9	100.0	28	68.3
No	0	0.00	13	31.7
Total	9	100.0	41	100.0

Table 4.8 shows that all the head teachers affirmed that the schools had a copy of the Safety Standards Manual for Schools in Kenya. 68% of the teachers confirmed that schools had a copy of the Safety Standards Manual for Schools in Kenya while, 32 % said that there were no copies of the Manual. The respondents who confirmed the availability of the Safety Standards Manual in their schools were further asked about the ease of accessibility of the Safety Standards Manual in their schools. With regard to ease of accessibility of the Safety Standards Manual to all the members of the school fraternity, respondents' views were as shown in table 4.9.

Table 4.9: Accessibility of Copies of Safety Standards Manual for Schools in Kenya by School Heads and Teachers

	School Heads (N=9)		Teachers (N=41)	
	Frequency	Percent	Frequency	Percent
Yes	9	100	24	85.7
No	0	0.00	4	14.3
Total	9	100	28	100

The results in table 4.9 shows that among the school heads who agreed that there were copies of Safety Standards Manual for Schools in Kenya in their schools, all of them agreed that the copies of the Manual were easily accessible. On the other hand, among the teachers who agreed that there were copies of Safety Standards Manual in their schools, about 86% of them agreed that the copies of the Manual were easily accessible while, 14% said that the copies of the Safety Standards Manual for Schools in Kenya were not easily accessible. While explaining their positions regarding ease of accessibility of the manuals, majority of the school heads qualified their response based on an open ended question, by saying that the manuals were easily accessible claiming that apart from the copies of the Safety Standards Manual being kept in the school heads' office, schools had made copies that were being kept at the school

library. They further reported that the manuals were available to administrators, Board of Management and teachers. However, teachers felt that these manuals were kept exclusively at the school head's office thus making them difficult to access.

4.4.1.2 Extent schools have implemented the Ministry of Education Safety Standards

In line with achieving the first objective, this study further sought to find the extent to which the schools had implemented the Ministry of Education safety standards in schools. In this case, a common question was asked to both the school heads and teachers to rate their views on an ordinal scale with regard to the extent of implementation. The measure of extent was ranked on a continuum and numerical figures were assigned to give an interpretation as follows: 4 = To a very large extent; 3 = To a large extent; 2 = To a moderate extent; 1 = To a small extent.

In light of the foregoing data with regard to the extent to which schools have implemented the Ministry of Education safety standards was analyzed collectively for both school heads and teachers and presented in Table 4.10.

Table 4.10: Extent the School Has Implemented the Ministry of Education Safety Standards

	School Heads (N=9)		Teachers (N=41)	
	Frequency	Percent	Frequency	Percent
To a small extent	0	0.00	4	9.8
To a moderate extent	2	22.2	24	58.5
To a large extent	6	66.7	11	26.8
To a very large extent	1	11.1	2	4.9
Mean	**2.89**		**1.68**	

As noted from Table 4.10, majority of the school heads (about 67%) were of the view that to a large extent the school had implemented the Ministry of Education safety standards. About 11% of the school heads concurred that their schools had implemented the Ministry of Education safety standards to a very great extent. However, about 22% of the school heads opined that schools had implemented the Ministry of Education safety standards to a moderate extent. Similarly, about 59% of the teachers were of the view that schools had implemented the Ministry of Education safety standards to a moderate extent while about 27% of them agreed that schools had implemented the Ministry of Education safety standards to a large extent.

Overall and in line with the interpretation schema presented at the beginning of this section where 4 represents to a very great extent and 1 representing to a small extent, it can be seen that the mean value depicting extent to which the schools have implemented the Ministry of Education safety standards by school heads was found to be 2.89 while, that of the teachers was 1.68. This implies that school heads were in agreement that the schools had implemented the Ministry of Education safety standards to a large extent while teachers on the other hand were of the view that implementation had been done to a moderate extent.

4.4.1.3 Discussions of Safety Standards Manuals for Schools

Both school heads and teachers were asked if they do discuss Safety Standards Manual for Schools in Kenya with other stakeholders in the school. The responses from school heads and teachers were analyzed and results presented as shown in Table 4.11.

Table 4.11: Views of School Heads and Teachers on Discussions of Safety Standards Manuals for School

	School Heads (N=9)		Teachers (N=41)	
	Frequency	Percent	Frequency	Percent
Yes	7	77.8	19	46.3
No	2	22.2	22	53.7
Total	9	100.0	41	100.0

Table 4.11 shows that about 78% of the school heads were in agreement that they do discuss the Safety Standards Manual for Schools while, 22% of the school heads were of the opinion that they do not discuss Safety Standards Manual for Schools. 54% of the teachers were of the opinion that they do discuss Safety Standards Manual for Schools, while 46% reported that they discussed Safety Standards Manual for Schools. An open ended question was put to both the school heads and teachers to explain reasons for their responses in view of the foregoing question. From the responses, it emerged that school heads had discussed Safety Standards Manual for Schools with teachers, support staff and students.

Notably, they argued that they had held discussions with students during assemblies

while they discussed with teachers during staff meetings and with the BOM during board meetings where they sensitized all stakeholders on how to handle themselves in case of an emergency within the school. This was not however the case with teacher respondents. According to the teachers they categorically affirmed that there has never been a forum organized by the school to discuss safety issues although, they hold conversations as colleagues rather informally but have never been involved by the school administration.

4.4.1.4 Practicing of the Requirements of Safety Standards Manual for Schools

The question asked in view of this parameter sought to establish whether the schools were practicing the safety requirements as set in Safety Standards Manual for Schools in Kenya. School heads and teachers were asked whether they practiced the requirements of Safety Standards Manual for Schools in Kenya. These responses from school heads and teachers were analyzed and results presented as shown in Table 4.12.

Table 4.12: Views of School Heads and Teachers on Practicing of the Requirements of Safety Standards Manual

	School Heads (N=9)		Teachers (N=41)	
	Frequency	Percent	Frequency	Percent
Yes	9	100.0	28	68.3
No	0	0.00	13	31.7
Total	9	100.0	41	100.0

Table 4.12 shows that all school heads practice the requirements of the Safety Standards Manual for Schools. 68 % of the teachers were of the opinion that they practice the requirements of Safety Standards Manual for Schools in Kenya while about 32% of them were of contrary opinion. This implies that they do not practice the requirements of Safety Standards Manual for Schools in Kenya. While qualifying their responses in an open ended question, school heads asserted that one of the ways in which they do demonstrate adherence to safety standards as stipulated in the Manual was through inviting experts periodically to train students on safety procedures. They also affirmed that their members of staff have had to be trained on how to use the fire extinguisher and availability of fire extinguisher in designated areas of the school. Teachers on their part said that quite often, they sandwich issues of safety when teaching in their lessons.

4.4.1.5 Implementation of the Government Policy of Safety Standards and Guidelines

An open ended question was put forth to the respondents with the aim of seeking to establish their opinion regarding the implementation of government policy on safety standards and guidelines. In this regard, the school heads were of the opinion that implementation of safety guidelines has financial implications hence they suggested that the government should factor safety vote head when disbursing Free Secondary Education (FSE) funds. They also observed that safety matters are given more prominence through government interventions only when there are tragedies e.g. fire in a school, a factor which contributes to -implementation of safety standards and guidelines in schools.

Overall, most school heads agreed that the implementation of safety standards and guidelines has been aptly done in most schools. They however suggested that there should be regular follow ups in order to upscale the implementation process for the benefit of the school community. The teachers on the other hand were of the opinion that implementation of the Government Policy on Safety Standards and Guidelines is a good initiative because it enhances safety of both teachers and students. According to the teachers, even though schools have tried to implement the Government Policy of Safety Standards and Guidelines, there is more that can be done to enhance its implementation in totality for the overall benefit of teachers, students and entire school fraternity.

4.4.1.6 Influence of Safety Awareness on Implementation of Safety Standards

The study sought to establish the influence of safety awareness among teachers and school heads on implementation of safety standards in public secondary schools. To achieve this objective, respondents were asked to respond to statements describing the extent to which they were aware of the stipulated safety standards for schools in Kenya. A five point Likert type of scale was used to rate responses of this variable in which the numerical values were verbalized as follows; 1 = Strongly Disagree, 2= Disagree, 3 Moderately Agree, 4 = Agree and 5 = Strongly Agree. The findings in view of this parameter are presented in Tables 4.13 and 4.14 which show the views of the school heads and teachers respectively.

Table 4.13: School Heads Views on Safety Awareness and Implementation of Safety Standards

N=9 Statement	SA %	A %	M.A %	D %	S.D %	Mean
The students and staff are fully aware of the safety standards manual	0	33.3	66.7	0	0	3.33
The awareness to safety standards manual is usually incorporated into class lessons	0	0	55.6	33.3	11.1	2.44
The efforts to create awareness is supported by the teachers	0	55.6	44.4	0	0	3.56
Awareness creation is successful and faces no major barriers	11.1	33.3	33.3	22.2	0	3.33

Results in Table 4.13 indicated that majority (67%) of the respondents moderately agreed that the students and staff are fully aware of the Safety Standards Manual for Schools in Kenya.Similarly 33% of the respondents agreed with the statement. The mean of 3.33 for this line statement implies that respondents had an average level of moderate agreement to the statement. Similarly, about 56% of the respondents agreed that the awareness to the Safety Standards Manual for Schools in Kenya is usually incorporated into class lessons while; about 33% disagreed with the statement. The mean level of agreement to the statement was 2.44, implying that most respondents expressed disagreement with the statement. This means that safety awareness is not incorporated in class lessons within the school syllabus.

Further, as cited by majority (56%) of the participants, it was noted that the efforts to create awareness was supported by the teachers while about 44% of the respondents to some extent agreed that the efforts to create awareness was supported by the teachers. The mean of 3.56 regarding this line statement implies that majority of the school heads agreed with the statement. This implies that teachers are key in promotion of awareness of safety standards in schools and are therefore integral in the process of safety awareness creation. Regarding whether awareness creation is successful and faces no major barriers, about 44% of the respondents agreed with the statement, nearly 33% to some extent agreed while about 22% disagreed. Overall, this line statement had a mean of 3.33 implying that, there was a moderate level of agreement to the statement.

Table 4.14: Teachers Views on Safety Awareness and Implementation of Safety Standards

N=41 Statement	SA %	A %	M.A %	D %	S.D %	Mean
The students and staff are fully aware of the safety standards manual	7.3	31.7	36.6	14.6	9.8	3.12
The awareness to safety standards manual is usually incorporated into class lessons	4.9	22.0	31.7	26.8	14.6	2.76
The efforts to create awareness is supported by the teachers	9.8	41.5	31.7	7.3	9.8	3.34
Awareness creation is successful and faces no major barriers	0	24.4	34.1	19.5	22.0	2.61

From Table 4.14, it can be noticed that most (39%) of the respondents either agreed or strongly agreed that the students and staff are fully aware of the Safety Standards Manual. Similarly, about 37% to some extent agreed, while 15% disagreed and about 10% strongly disagreed with the statement. Overall, the mean level of 3.12 indicates that majority of the respondents moderately agreed with the statement. This means that more effort needs to be channeled to promote awareness among teachers and students.

On the line statement that awareness to Safety Standards Manual is usually incorporated into class lessons, 41.4% of the respondents collectively disagreed with the statement. However, about 32% and 22% of the respondents moderately agreed and agreed respectively with the statement. The overall mean for this line statement was 2.76 implying that majority of the respondents were in moderate agreement that safety standards are incorporated in class lessons. This view tends to corroborate well with that of the school heads who generally disagreed with this statement.

As to whether effort to create awareness is supported by the teachers, about 51% of the respondents agreed to the statement, about 32% of them to some extent agreed with the statement while about 10% disagreed with the statement. The overall mean level of agreement regarding this statement was 3.34 implying that most of the respondents tended to moderately agree that awareness creation is supported by teachers further confirming the school heads view on the importance of engaging teachers in safety awareness process in schools.

Finally, in the line statement as to whether awareness creation is successful and faces no major barriers the study established that 41.5% of the respondents disagreed with the statement. About 34% to some extent agreed with the statement while about 24% agreed with the statement. Overall, the mean level of agreement to this statement was 2.61 implying that most of the respondents disagreed with the statement. This implies that more efforts are needed to make safety awareness and creation to surmount some challenges being faced and to make it successful.

4.4.1.7 Correlation Analysis on Safety Awareness and Implementation of Safety Standards

Correlation analysis was used to determine the relationship between safety awareness and implementation of safety standards in public secondary schools. The result of the correlation analysis is summarized in Table 4.15.

Table 4.15: Correlation Analysis between Safety Awareness and Implementation of Safety Standards

		Safety Awareness	Implementation of Safety Standards
Safety Awareness	Pearson Correlation	1	.399**
	Sig. (2-tailed)		.010
	N	41	41
Implementation of Safety Standards	Pearson Correlation	.399**	.01
	Sig. (2-tailed)	.010	
	N	41	41

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

It can be depicted from Table 4.15 that there is a weak but significant positive relationship between safety awareness and implementation of safety standards as indicated by correlation of .399. Since the p-value of .010 as measured in this relationship is less than the acceptable significance level ($p \leq .05$), it can be concluded that there is a statistically significant relationship between safety awareness and implementation of safety standards in schools.

4.4.1.8 Regression Analysis of Safety Awareness and Implementation of Safety Standards

Further to the correlation analysis, regression analysis was conducted to empirically determine whether safety awareness could predict implementation of safety standards in public secondary schools analyzed in table 4.16 through 4.18.

Table 4.16: Model Summary-Safety Awareness and Implementation of Safety Standards

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.399[a]	.159	.137	.58146

a. Predictors: (Constant), Safety Awareness

The regression results in Table 4.16 confirm that the model's correlation coefficient is .399 as earlier shown from the results of correlation analysis. It further indicates that the coefficient of determination (R square) is .159, implying that safety awareness as a predictor variable can be able to account for about 16% of the total variance on implementation of safety awareness standards in schools. Further, to determine whether this model was a good fit to enable predict the outcome of safety awareness on the implementation of safety standards, the results are as shown in table 4.17.

Table 4.17: ANOVA on Safety Awareness and Implementation of Safety Standards

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.493	1	2.493	7.375	.010[b]
	Residual	13.186	39	.338		
	Total	15.679	40			

a. Dependent Variable: Implementation of Safety Standards
b. Predictors: (Constant), Safety Awareness

Table 4.17 shows that safety awareness is the only predictor variable in the model and the implementation of safety standards is shown as the outcome variable. The ANOVA table shows that the model containing the two variables is a statistically significant model that can enable the independent variable predict the outcome variable; $F(1, 39) = 7.375$; $P = .01$).

In order to ascertain the unique contribution of the independent variable in the model to dependent variable so as to be able to answer the first research question for this study which stated as: "How does safety awareness among teachers and students influence implementation of safety standards in public secondary schools in Matungulu Sub-County?"; a table of coefficients was generated and is presented in table 4.18.

Table 4.18: Regression Coefficient-Safety Awareness and Implementation of Safety Standards

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	2.838	.307		9.250	.000
	Safety Awareness	.267	.098	.399	2.716	.010
a. Dependent Variable: Implementation of Safety Standards						

Table 4.18 displays the regression coefficients of the independent variable (Safety Awareness). The results reveal that safety awareness is statistically significant in explaining implementation of safety standards in public secondary schools in Matungulu Sub-County; $t(40) = 2.716$; $p \leq .05$; $\beta = .399$. From the analysis, it means that a one-unit increase in safety awareness level could influence increase in the level of implementation of safety standards in schools of about .399. This therefore implies that safety awareness among teachers and school heads has a significant influence on implementation of safety standards in public secondary schools in Matungulu Sub-County.

4.4.2 Financial Resources and Implementation of Safety Standards

This was the second objective the researcher analyzed to determine the extent to which availability of financial resources influence implementation of safety standards in public secondary schools in Matungulu Sub-County. The researcher presented the results based on the views of both school heads and teachers as shown in sections 4.3.2.1 through 4.3.2.2.

4.4.2.1 Adequacy of Infrastructure for Safety

The study sought to establish if the schools had been able to purchase adequate infrastructure for safety. These responses from school heads and teachers were analyzed and results presented as shown in Table 4.19.

Table 4.19: Views of head teachers and teachers on Adequacy of Infrastructure for Safety

	School Heads (N=9)		Teachers (N=41)	
	Frequency	Percent	Frequency	Percent
Yes	6	66.7	20	48.8
No	3	33.3	21	51.2
Total	**9**	**100.0**	**41**	**100.0**

Table 4.19 shows that about 67% of the school heads confirmed that they had bought adequate infrastructure for safety while about 33% responded in the negative. Further, 49% of the teachers affirmed that their schools had been able to purchase adequate infrastructure for safety while 51% replied by negating the statement. In contrast to this view, the researcher conducted an observation to help establish whether the infrastructural facilities were available to support implementation of safety standards in schools. An observation checklist was used in the survey of 11 schools in which case presence or absence of a facility was recorded and coded as; Yes=1 and No=2. The results of this observation as recorded in the observation checklist as shown in table 4.20.

Table 4.20: Observation Checklist on Adequacy of Infrastructure

Item (N =11)	Yes (%)	No (%)
Perimeter fence	100	0.00
Sign posts	73	27
Play grounds	100	0.00
Toilets	100	0.00
Ramps	73	27
Path ways	100	0.00
Door ways	100	0.00
Dormitories	36	64
Furniture	100	0.00
Railings	45	55
Windows	91	9
Gates	100	0.00
Fire extinguishers	91	9
Grills	9	91
Emergency doors	55	45

Looking at the findings of the observation checklist, it can be seen most of the schools' infrastructure facilities were available in most schools apart from a few

schools that did not have dormitories (64%), railings (55%), grills (91%) and emergency doors (45%). Despite the existence of these infrastructural facilities, it was observed that the perimeter fence was porous, the playgrounds were not very safe since they had potholes, the toilets were not insufficient, the path ways were not demarcated, the doorways were not up to standard, there was congestion of students in the dormitories, the furniture was not well arranged, a couple of windows in class and in the dormitories were broken, the school gates were not manned during day time and there were no entry books for visitors, some of the window grills were broken and emergency doors were closed from outside which was dangerous in case of night fire in dormitories.

4.4.2.2 Availability of Financial Resources in Adherence to Safety Standards Implementation

The study further sought to establish from school heads and teachers, whether availability of financial resources was a factor to be considered in adherence to safety standards implementation. The responses from these respondents were analyzed and results presented as shown in Table 4.21.

Table 4.21: Views of Head teachers and Teachers Financial Resources factor in Adherence to Safety Standards Implementation

	School Heads (N=9)		Teachers (N=41)	
	Frequency	Percent	Frequency	Percent
Yes	6	66.7	20	48.8
No	3	33.3	21	51.2
Total	**9**	**100.0**	**41**	**100.0**

Table 4.21 shows that about 67% of the school heads confirmed that availability of financial resources was a factor in adherence to safety standards implementation in schools while 33% of the school heads were of a contrary view. On the other hand, a slight majority (51%) of the teachers were against the statement that availability of financial resources was a factor in adherence to safety standards implementation while about 49% were in support of the statement. Further to this, an open ended question was put forth to the respondents to explain in what ways availability of financial resources was a factor in adherence to safety standards implementation in public secondary schools. In view of this, both school heads and teachers affirmed

that availability of financial resources was a critical factor in enabling in the acquisition of equipment, sponsoring teachers for training and enabling the school to acquire fire extinguishers and fire blankets and other safety infrastructural facilities.

4.4.2.3 Constraints on the Implementation of Safety Standards and Guidelines

This study also sought to find out the possible constraints which could affect the implementation of safety standards in schools. On this aspect, respondents were required to choose from the choices given depicting the possible constraints as; inadequate funds, inadequate safety equipment and ignorance. The respondents were to choose what they felt was a constraint on the implementation of safety standards and guidelines. The results of the findings are as shown in Table 4.22.

Table 4.22: Views of School Heads and Teachers on Possible Constraints on the Implementation of Safety Standards and Guidelines

	School Heads (N=9)		Teachers (N=41)	
	Frequency	Percent	Frequency	Percent
Inadequate funds	7	77.8	29	70.7
Inadequate safety equipment	2	22.2	8	19.5
Ignorance	0	0	4	9.8

Table 4.22 shows that the school heads were of the opinion that the most possible constraint on the implementation of safety standards and guidelines based on rank was inadequate funds with about 78% followed by inadequate safety equipment at 22%. Ignorance according to the school heads was not a constraint on the implementation of safety standards and guidelines. Just like the school heads, the teachers were also of the opinion that the most possible constraint on the implementation of safety standards and guidelines was inadequate funds at about 71%, followed by inadequate safety equipment at 20%. The least possible constraint on the implementation of safety standards and guidelines was ignorance as depicted by about 10% of teachers.

4.4.2.4 Influence of Financial Resource Provision on Implementation of Safety Standards

The study sought to establish the level of agreement with respect to some statements on financial resource provisions. To achieve this objective, respondents were asked to respond to various statements describing the extent of financial resource provisions. A 5 point Likert scale was used to rate responses of this variable which ranged from; 1 = Strongly Disagree to 5 = Strongly Agree. The findings depicting the school heads responses and those of teachers are presented in Table 4.23 and Table 4.24 respectively.

Table 4.23: Head teachers Views on Financial Resource Provisions

N=9 Statement	SA %	A %	M.A %	D %	S.D %	Mean
There are budgetary provisions for purchase of safety equipment every financial year	11.1	44.4	11.1	22.2	11.1	3.22
Whenever safety equipment gets obsolete, the school replaces them as quick as possible because there are financial provision	0	55.6	11.1	11.1	22.2	3.00
Our school has adequate finances for maintaining safety	0	33.3	22.2	22.2	22.2	2.67
Parents do provide funds for purchasing of safety equipment	0	22.2	11.1	22.2	44.4	2.11
The government releases funds for the purchase and maintenance of safety equipment.	11.1	55.6	11.1	11.1	11.1	3.44
Funds are major problem to maintenance of safety standards	44.4	11.1	0	44.4	0	3.56

About 56% of the school heads agreed that there are budgetary provisions for purchase of safety equipment every financial year while, one third of them disagreed to the statement. The mean of 3.22 for this parameter implies that most school heads were in a moderate level of agreement with the statement. This signifies that financial resources could be posing a challenge to implementation of safety standards in the schools as availability of funds towards the safety vote head was moderate.

Similarly, about 56% of the school heads agreed that whenever safety equipment becomes obsolete, the school replaces them as quickly as possible because there are

financial provisions however 22% of the respondents strongly disagreed to the statement. However, with a mean level of agreement of 3.00 with respect to this statement, it can be argued from the school heads' perspective that replacement of the obsolete items was being done moderately.

This finding implies that the schools had adequate funds for maintaining safety. Slightly more than one third (33%) of the school heads agreed with the statement while about 44% disagreed with the same statement that their schools had adequate finances for maintaining safety. Overall, the mean index for this parameter of 2.67 depicts that most respondents agreed moderately to the statement. This implies that even though funds were available, they were not adequate to support safety implementation. With regard to whether parents do provide funds for purchasing of safety equipment, about 67% of the school heads disagreed that parents provide funds for purchasing of safety equipment and only about 33% of them agreed to the statement. The mean level of 2.11 implies that majority of school heads were of the view that parents do not support by way of finances the purchasing of safety equipment in schools.

It was also evidenced that the government releases funds for the purchase and maintenance of safety equipment as agreed by about 67% of the school heads while about 22% of them disagreed. Those who agreed moderately to the statement were about 11%. The average level of agreement for this statement showed a mean of 3.44 implying that school heads agreed by majority that the government plays a critical role in the purchase and maintenance of safety equipment in schools. Finally, the majority (56%) of the school heads agreed that funds are a major problem to maintenance of safety while 44% disagreed with the statement. The mean factor of 3.56 for this variable implies that majority of the school heads were in agreement that finances were a major challenge facing implementation of safety and standards guidelines in most schools. In line with this, responses from teachers regarding the parameter on financial provisions are presented in table 4.4.

Table 4.24: Teachers Views on Financial Resource Provisions

N=41 Statement	SA %	A %	M.A %	D %	S.D %	Mean
There are budgetary provisions for purchase of safety equipment every financial year	14.6	17.1	34.1	22.0	12.2	3.00
Whenever safety equipment gets obsolete, the school replaces them as quick as possible because there are financial provision	7.3	29.3	31.7	22.0	9.8	3.02
Our school has adequate finances for maintaining safety	4.9	29.3	34.1	29.3	2.4	3.05
Parents do provide funds for purchasing of safety equipment	2.4	19.5	26.8	31.7	19.5	2.54
The government releases funds for the purchase and maintenance of safety equipment.	14.6	17.1	36.6	26.8	4.9	3.10
Funds are major problem to maintenance of safety standards	24.4	24.4	31.7	14.6	4.9	3.49

About 34% of the teachers moderately agreed that there was a budgetary provision for purchase of safety equipment every financial year while another 34% disagreed and about 32% agreed to the statement. The mean of 3.00 implies that most teachers agreed moderately that there were budgetary provisions for purchase of safety equipment. Similarly, 36% of the teachers agreed that whenever safety equipment gets obsolete, the school replaces them as quick as possible because there are financial provisions. About 32% to some extent agreed while about 32% disagreed to the statement. Overall the mean index of 3.02 in respect to this parameter shows that most teachers agreed moderately to the statement.

Some (34%) of the teachers to some extent agreed that their schools have adequate finances for maintaining safety while another 34% agreed to the statement and about 31% disagreed. The mean level of 3.05 implies that most teachers expressed a moderate level of agreement that schools have adequate level of funds to maintaining safety standards in schools. About 51% of the teachers disagreed that parents do provide funds for purchasing of safety equipment. However, about 27% to some extent agreed and about 20% of them agreed that parents provide funds for purchasing of safety equipment. In general, the mean index of 2.54 depicts that majority of the teachers disagreed with the statement that parents provide funds for purchasing safety equipment.

When asked whether the government releases funds for the purchase and maintenance of safety equipment, about 37% of the teachers to some extent agreed with the statement, nearly 27% of them disagreed to the statement, and 32% agreed giving a mean index of 3.10. This implies that most teachers to some extent agreed with the statement. With regard as to whether funds are major problem to maintenance of safety standards, majority (about 49%) of the teachers agreed that indeed, funds are a major problem to maintenance of safety standards while about 32% to some extent agreed to the statement and about 19% disagreed. The mean index for this parameter was 3.49 implying that majority of the teachers agreed to the statement that funds were a major challenge affecting implementation of safety standards in schools.

4.4.2.5 Correlation Analysis on Financial Resources and Implementation of Safety Standards

Correlation analysis was used to determine the relationship between provision of financial resources and implementation of safety standards in public secondary schools. The result of the correlation analysis is summarized in Table 4.25.

Table 4.25: Correlation Analysis between Financial Resources and Implementation of Safety Standards

		Financial Resources	Implementation of Safety Standards
Financial Resources	Pearson Correlation	1	.443**
	Sig. (2-tailed)		.004
	N	41	41
Implementation of Safety Standards	Pearson Correlation	.443**	1
	Sig. (2-tailed)	.004	
	N	41	41

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

The correlation analysis to determine the relationship between availability of financial resources and implementation of safety standards in public secondary schools (Table 4.25) shows there is a moderate positive relationship between availability of financial resources and implementation of safety standards, r (40) = .443, p =.004. Hence it can

be concluded that there exists a statistically significant and positive relationship between availability of financial resources and implementation of safety standards.

4.4.2.6 Regression Analysis-Financial Resources and Implementation of Safety Standards

Further to the correlation analysis, regression analysis was conducted to empirically determine whether financial resources could predict implementation of safety standards in public secondary schools as analyzed in table 4.26 through 4.28.

Table 4.26: Model Summary-Financial Resources and Implementation of Safety Standards

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.443[a]	.196	.176	.56841

a. Predictors: (Constant), Financial Resources

The regression results in Table 4.26 confirm that the model's correlation coefficient is .443 as earlier shown from the results of correlation analysis. It further indicates that the coefficient of determination (R square) is .196, implying that financial resources as a predictor variable can be able to account for about 20% of the total variance on implementation of safety awareness standards in schools. As to whether this model was a good fit to enable financial provision to predict implementation of safety in schools, the results are as shown in the ANOVA table 4.27.

Table 4.27: ANOVA-Financial Resources and Implementation of Safety Standards

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	3.078	1	3.078	9.527	.004[b]
	Residual	12.601	39	.323		
	Total	15.679	40			

a. Dependent Variable: Implementation of Safety Standards
b. Predictors: (Constant), Financial Resources

Table 4.27 shows that financial resource is the only predictor variable in the model and the implementation of safety standards is shown as the outcome variable. The ANOVA table shows that the model containing the two variables is a statistically significant model that can enable the independent variable predict the outcome variable; F (1, 39) = 9.527; P = .004).

In order to ascertain the unique contribution of the independent variable in the model towards prediction of the dependent variable so as to be able to answer the second research question for this study which stated as: "To what extent do financial resources influence implementation of safety standards in public secondary schools in Matungulu Sub-County?", a table of coefficients was generated and is presented in table 4.28.

Table 4.28: Regression Coefficient-Financial Resources and Implementation of Safety Standards

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.325	.433		5.364	.000
	Financial Resources	.419	.136	.443	3.087	.004
a. Dependent Variable: Implementation of Safety Standards						

Table 4.28 displays the regression coefficients of the independent variable (financial resources) and its unique contribution to the overall model as measured by the un standardized and standardized coefficient, Beta. The results reveal that provision of financial resources is statistically significant in explaining implementation of safety standards in public secondary schools in Matungulu Sub-County; t (40) = 3.087; p $\leq$.05; β = 443. From the analysis, it means that a one-unit increase in provision of financial resources level could influence an increase of about .443 in the level of implementation of safety standards in schools. This therefore implies that provision of financial resources has a significant influence on implementation of safety standards in public secondary schools in Matungulu Sub-County.

4.4.3 Student Enrolment and Implementation of Safety Standards

The third objective sought to establish the extent to which students' enrolment influences the implementation of safety standards in public secondary schools in Matungulu Sub-County. Views from teachers, school head teachers and students are presented in subsections 4.3.3.1 through 4.3.3.5 as follows:

4.4.3.1 School Students Population

In an attempt to ascertain school student's enrolment, respondents (school heads and

teachers) were requested to state whether the student population in their school was high, moderate or low for enrolments of above 600, between 200 and 600 and less than 200 respectively. The results are shown in Table 4.29.

Table 4.29: Views of School Heads and Teachers on Students Population

	School Heads (N=9)		Teachers (N=41)	
	Frequency	Percent	Frequency	Percent
High (Above 600)	1	11.2	5	12.2
Moderate (200-600)	4	44.4	22	53.7
Low (Less than 200)	4	44.4	14	34.1

Result of Table 4.29 showed that majority of the school students' population was moderate thus ranging between 200 and 600 as cited by 44% of the school heads and about 54% of the teachers. About 44% of the school heads affirmed that their schools had low enrollment of less than 200 students. This position is affirmed by about 34% of the teachers. It is only one school in the study location that was found to have high enrolment of more than 600 students as indicated by about 11% and 12% of school heads and teachers respectively.

Using a 5-point Likert scale where 1=Strongly Disagree, 2=Disagree, 3=Moderately Agree, 4=Agree and 5=Strongly Agree, the students were asked to indicate the level of agreement with regard to the statement whether the school is congested in terms of students' population. Table 4.30 shows a summary of the findings.

Table 4.30: Views of Students on Students Population

	Frequency	Percent
Strongly Disagree	59	23
Disagree	60	23.4
Moderately Agree	103	40.2
Agree	27	10.5
Strongly Agree	7	2.7
Total	**256**	**100**

The results in Table 4.30 showed that majority of the students (40%) moderately agreed that the school is congested in terms of students' population, 23% of the students disagreed while another 23% of the students strongly disagreed to the statement. About 10% of the students agreed that the school is congested in terms of students' population while about 3% strongly agreed to the statement.

4.4.3.2 Safety of Students in School

Using a 5-point Likert scale where 1=Very low, 2=Low, 3=Average, 4=High, 5=Very High, the respondents (teachers, students and head teachers) were asked to rate the level of safety of students in schools. Results of this analysis are presented in Table 4.31.

Table 4.31: Views of School Heads, Teachers and Students on Rate of Safety of Students in Schools

	School Heads (N=9)		Teachers (N=41)		Student (N=256)	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Very Low	0	0	0	0	5	2.0
Low	0	0	4	9.8	18	7.0
Average	5	55.6	25	61.0	139	54.3
High	4	44.4	11	26.8	44	17.2
Very High	0	0	1	2.4	50	19.5

Results in Table 4.31 shows that majority (about 56%) of the school heads were of the opinion that the safety levels were average while 44% of them indicated that the levels of safety were high. Just like the school heads, 61% of the teachers opined that levels of safety in schools were generally average. About 27% of the teachers were of the view that the safety standard levels were high while 10% and about 2% said the safety levels were low and high respectively. Students on the other hand agreed that safety standards ranged between average and high as opined by majority (91%). Only 7% rated safety levels as low and 2% rated them as very low. Generally, from the findings and based on the rating of all the three categories of respondents, it can be concluded that schools within the study location have maintained high levels of safety in schools.

4.4.3.3 Influence of Students Enrolment on Implementation of Safety Standards

The study further sought to establish the level of agreement with respect to the statements relating to students enrolment. A 5 point Likert scale was used to rate responses of this variable and it ranged from; 1 = Strongly Disagree to 5 = Strongly Agree. The findings from school heads and teachers are respectively presented in Tables 4.32 and Table 4.33.

Table 4.32: School Heads Views on Students Enrolment

N=9 Statement	SA %	A %	M.A %	D %	S.D %	Mean
The safety measures put in our school correspond with the enrolment levels of student	0	77.8	11.1	11.1	0	3.67
The safety infrastructure in our school is constrained owing to high students numbers	0	11.1	55.6	33.3	0	2.78
It is difficult to maintain safety standards in our school due to congestion	0	11.1	22.2	55.6	11.1	2.33
We have adequate safety equipment that resonates well with levels of student enrolment	0	55.6	11.1	22.2	11.1	3.11
We consider safety before we enroll students in our school	0	22.2	44.4	22.2	11.1	2.78
Our school safety policies are tied to the levels of student enrolment	11.1	11.1	55.6	11.1	11.1	3.00

Results in Table 4.32 reveals that about 78% of the school heads agreed that the safety measures put in schools corresponds with the enrolment levels of students while 11% of them disagreed to the statement. The mean level of agreement for this parameter was 3.67 signifying a high level of agreement. As to whether the safety infrastructure in school is constrained owing to high students' numbers, about 56% of the school heads to some extent agreed to the statement while a third of them were against the statement. There was a generally moderate agreement that high enrolment levels constrain the safety infrastructure (mean = 2.78).

Majority of the school heads (about 56%) disagreed to the statement that it is difficult to maintain safety standards in our school due to congestion. 22% of the school heads however to some extent agreed while 11% agreed to the statement. The mean index of 2.33 implies that most teachers disagreed that congestion was a factor that can prevent them from maintaining safety. With regard to whether schools have adequate safety equipment that resonates well with levels of student enrolment, about 56% of the school heads agreed to the statement while about one third of them disagreed with the statement. The mean index of 3.11 indicates that most head teachers moderately agreed to the statement.

It was also evident that most school heads (44%) to some extent tent agreed that they considered safety before enrolling students in schools. A third of them strongly disagreed with the statement while 22% to some extent agreed with the statement. The

mean index of 2.78 shows that majority of the school heads considered safety as a prerequisite to enrolling students in schools. Similarly, the majority (about 56%) of the respondents strongly agreed that school safety policies are tied to the levels of student enrolment, 11% of the respondents disagreed with the statement while another 11% agreed to the statement. The mean index of 3.00 indicates that most of the school heads to some extent agreed that safety policies were tied to levels of enrolment.

Table 4.33: Teachers Views on Students Enrolment

N=41 Statement	SA %	A %	M.A %	D %	S.D %	Mean
The safety measures put in our school correspond with the enrolment levels of students	4.9	43.9	39.0	12.2	0	3.41
The safety infrastructure in our school is constrained owing to high students numbers	0	34.1	17.1	41.5	7.3	2.78
It is difficult to maintain safety standards in our school due to congestion	0	22.0	7.3	53.7	17.1	2.34
We have adequate safety equipment that resonates well with levels of student enrolment	4.9	26.8	36.6	24.4	7.3	2.98
We consider safety before we enroll students in our school	4.9	29.3	29.3	29.3	7.3	2.95
Our school safety policies are tied to the levels of student enrolment	0	29.3	34.1	26.8	9.8	2.83

About 48% of the teachers agreed that the safety measures put in school correspond with the enrolment levels of students while 39% of them to some extent agreed to the statement. However, about 12% of them disagreed to the statement. The mean level of 3.41 implies that majority of the school heads generally agreed to the statement. As to whether the safety infrastructure in school is constrained owing to high students' numbers, about 49% of the teachers disagreed to the statement while about 34% of them supported the statement and nearly 17% to some extent supported the statement. With a mean index of 2.78, it can be said that most teachers moderately agreed to the statement.

About 71% of the teachers disagreed with the statement that said, "It is difficult to maintain safety standards in schools due to congestion". However, 22% of the teachers agreed that it is indeed difficult to maintain safety standards in school due to

congestion with a mean index of 2.34 implying levels of disagreement. With regard to whether schools have adequate safety equipment that resonates well with levels of student enrolment, about 37% of the teachers to some extent agreed to the statement while a third of them agreed to the statement and another a third disagreed with the statement. The mean index measure for this parameter was 2.98 implying moderate agreement.

It is also evident from the table that levels of safety were not considered before enrolling students in schools as indicated by 37% of the teachers who disagreed with the statement, 34% agreed and the rest were to some extent in agreement. Thus resulting to a mean index of 2.95 indicating that majority of teachers moderately agreed to the statements. Lastly, a close look at the results in the Table showed that about 34% of the respondents to some extent agreed that school safety policies are tied to the levels of student enrolment, about 29% of the teachers agreed to the statement while about 27% disagreed with the statement. The mean of 2.83 shows that most teachers, to some extent, agreed with the statement.

4.4.3.4 Correlation Analysis on Students Enrolment and Implementation of Safety Standards

Correlation analysis was used to determine the relationship between students' enrolment and implementation of safety standards in public secondary schools. The result of the correlation analysis is summarized in Table 4.34.

Table 4.34: Correlation Analysis between Student Enrolment and Implementation of Safety Standards

		Student Enrolment	Implementation of Safety Standards
Student Enrolment	Pearson Correlation	1	.495**
	Sig. (2-tailed)		.001
	N	41	41
Implementation of Safety Standards	Pearson Correlation	.495**	1
	Sig. (2-tailed)	.001	
	N	41	41

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

The correlation analysis to determine the relationship between students enrollment and implementation of safety standards in public secondary schools shows there is a moderate positive relationship; r (40) = .495, p =.001. Hence it can be concluded that there exists a statistically significant and a positive relationship exists between students' enrollment and implementation of safety standards.

4.4.3.5 Regression Analysis-Student Enrolment and Implementation of Safety Standards

Further to the correlation analysis, regression analysis was conducted to empirically determine whether students' enrollment could predict implementation of safety standards in public secondary schools as analyzed in Tables 4.35 through 4.37.

Table 4.35: Model Summary- Student Enrolment and Implementation of Safety Standards

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.495[a]	.245	.226	.55098

a. Predictors: (Constant), Student enrolment

The regression results in Table 4.35 confirm that the model's correlation coefficient is .495 as earlier shown from the results of correlation analysis. It further indicates that the coefficient of determination (R square) is .245. This implies that student enrolment as a predictor variable can be able to explain about 25% of the total variance on implementation of safety awareness standards in schools.

As to whether this model was a good fit to enable enrolment to predict implementation of safety in schools, the results are as shown in the ANOVA table 4.36.

Table 4.36: ANOVA on Student Enrolment and Implementation of Safety Standards

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	3.840	1	3.840	12.651	.001[b]
	Residual	11.839	39	.304		
	Total	15.679	40			

a. Dependent Variable: Implementation of Safety Standards

b. Predictors: (Constant), Student enrolment

Table 4.36 shows that student enrolment is the only predictor variable in the model and the implementation of safety standards is shown as the outcome variable. The

ANOVA Table shows that the model containing the two variables is a statistically significant model that can enable the independent variable predict the outcome variable; F (1, 39) = 12.651; P = .001. In order to ascertain the unique contribution of the independent variable in the model towards prediction of the dependent variable so as to be able to answer the third research question for this study which is stated as: "How does student enrolment influence implementation of safety standards in public secondary schools in Matungulu Sub-County?", a Table of coefficients was generated and is presented in table 4.37.

Table 4.37: Regression Coefficient-Student Enrolment and Implementation of Safety Standards

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	2.019	.462		4.367	.000
	Student Enrolment	.562	.158	.495	3.557	.001

a. Dependent Variable: Implementation of Safety Standards

Table 4.37 displays the regression coefficients of the independent variable (student enrolment) and its unique contribution to the overall model as measured by the un standardized and standardized coefficient, Beta. The results reveal that student enrolment is statistically significant in explaining implementation of safety standards in public secondary schools in Matungulu Sub-County; t (40) = 3.557; $p \leq .05$; $\beta = .495$. From the analysis, it means that a one-unit increase in student enrolment level could influence an increase of about .495 in the level of implementation of safety standards in schools. This therefore implies that student enrolment has a significant influence on implementation of safety standards in public secondary schools in Matungulu Sub-County.

4.4.4 School Management Practices and Implementation of Safety Standards

This was the fourth objective the researcher analyzed to determine the influence of school management practices on implementation of safety standards in public secondary schools in Matungulu Sub-County. The researcher presented the results as per the subheadings 4.3.4.1 through 4.3.4.5.

4.4.4.1 Integration of Safety Activities into Daily School Routine

To begin with, both teachers and school heads were first asked whether their schools integrated safety activities into daily school routine. Tables 4.38 shows the results as obtained from the school heads and teachers respectively.

Table 4.38: Views of School Heads and Teachers on Integration of Safety Activities into Daily School Routine

	School Heads(N=9)		Teachers (N=41)	
	Frequency	Percent	Frequency	Percent
Yes	7	77.8	21	51.2
No	2	22.2	20	48.2
Total	**9**	**100.0**	**41**	**100.0**

Results in Table 4.38 shows that about 78 percent of the school heads were in support that schools integrated safety activities into daily school routine while, 22% of the school heads were against. On the other hand, teachers were almost equally divided on their opinion where 51% of the teachers were of the opinion that schools have integrated safety activities into daily school routine while 48% were of the contrary view

4.4.4.2 Influence of School Management Practices on Implementation of Safety Standards

The study sought to establish the level of agreement with respect to the statement relating to school management practices. A 5 point Likert scale was used to rate responses of this variable and it ranged from; 1 = Strongly Disagree to 5 = Strongly Agree. The findings representing teachers and school heads view about the parameter are presented in Tables 4.39 and Table 4.40.

Table 4.39: School Heads Views on School Management Practices

N=9 Statement	SA %	A %	M.A %	D %	S.D %	Mean
Quality assurance and standards officers visit the school very often.	11.1	11.1	22.2	44.4	11.1	2.67
Trainings on disaster management are frequently held.	0	22.2	11.1	44.4	22.2	2.33
All teachers and support staff have at one point attended trainings on disaster management.	0	33.3	11.1	33.3	22.2	2.56
The school regularly invites resource persons from different safety departments to come and talk to the students and staff about safety.	0	11.1	0	56.6	33.3	1.89
School inspections by the Ministry of Health officers on safety and health status are regularly carried out.	22.2	22.2	0	33.3	22.2	2.89
The school infrastructure is repaired, maintained and serviced	22.2	44.4	11.1	22.2	0	3.67
The school safety committee briefs the head teacher on the school safety situation	0	44.4	11.1	33.3	11.1	2.89
Students often use suggestions boxes to air their concerns	22.2	33.3	44.4	0	0	3.78

Table 4.39 shows that majority (about 56%) of school heads disagreed that quality assurance and standards officers visited the school very often while 22% moderately agreed with the statement. The mean of 2.67 indicated that most school heads to some extent agreed with the statement. Similarly, majority (about 67%) of the school heads disagreed that trainings on disaster management are frequently held while 22% agreed to the statement. The mean index of 2.33 indicates that most school heads disagreed to the statement, implying that trainings on disaster management were rarely done. About 55% of the school heads disagreed that all teachers and support staff have at one point attended trainings on disaster management while, a third of the school heads agreed to the statement. A mean index value of 2.56 implied that most school heads disagreed that teachers ever attended such trainings.

In regard to the statement that the school regularly invited resource persons from different safety departments to come and talk to the students and staff about safety, majority of the school heads disagreed with the statement. The mean value of 1.89 implies that most school heads confirmed that they do not invite resource people to give talks regarding matters of safety. As to whether school inspections by the Ministry of Health officers on safety and health status are regularly carried out,

majority (about 56%) of the school heads disagreed with the statement while 22% agreed and another 22% strongly agreed to the statement. The mean value index to this statement was 2.89 meaning that majority of the school heads agreed moderately to the statement.

Further, regarding as to whether the school infrastructure is repaired, maintained and serviced, a majority of about 67% of the respondents either agreed or strongly agreed that school infrastructure is usually repaired, maintained and serviced while, 22% of the respondents disagreed. The mean value index of 3.67 implies that majority of the school heads agreed that there were regular repairs and maintenance of school safety infrastructure. Moreover, a 44% of the school heads agreed that the school safety committee usually briefs the school heads on the school safety situation. About 33% of them however disagreed and 11% strongly disagreed to the statement. With the mean value index of 2.89, it means that most school heads moderately agreed that such briefs were in existence. Finally, it can be noted that majority (about 56%) of the school heads either agreed or strongly agreed that students often use suggestions boxes to air their concerns while 44% of them to some extent agreed to the statement. This resulted to a mean index level of 3.78, implying that most head teachers agreed that suggestion boxes were a norm in most schools towards addressing students concerns.

Table 4.40: Teachers Views on School Management Practices

N=41 Statement	SA %	A %	M.A %	D %	S.D %	Mean
Quality assurance and standards officers visit the school very often.	2.4	46.3	14.6	29.3	7.3	3.07
Trainings on disaster management are frequently held.	0	22.0	22.0	34.1	22.0	2.44
All teachers and support staff have at one point attended trainings on disaster management.	0	14.6	12.2	48.8	24.4	2.17
The school regularly invites resource persons from different safety departments to come and talk to the students and staff about safety.	0	19.5	17.1	46.3	17.1	2.39
School inspections by the Ministry of Health officers on safety and health status are regularly carried out.	0	36.6	31.7	22.0	9.8	2.95
The school infrastructure is repaired, maintained and serviced.	7.3	46.3	26.8	14.6	4.9	3.37
The school safety committee briefs the head teacher on the school safety situation	0	31.7	29.3	24.4	14.6	2.78
Students often use suggestions boxes to air their concerns.	14.6	43.9	9.8	19.5	12.2	3.29

It can be seen from Table 4.40 that majority (46%) of the teachers agreed that quality assurance and standards officers visited the school very often; however, there were 29% of the teachers who disagreed with the statement. The mean index value for this statement is 3.07 which implies that the teachers agreed moderately with the statement. Majority (56%) of the teachers disagreed that trainings on disaster management are frequently held while, 22% of the respondents to some extent agreed to the statement and a similar number also agreed to the statement. The mean value index to this statement was 2.44 implying that there are no frequent trainings in schools for teachers and other staff on disaster management.

The study also sought to establish whether teachers and support staff have at one point attended trainings on disaster management. As can be seen from the table, majority (about 73%) of the teachers disagreed to the statement while about 15% supported the statement. This statement had a mean value of 2.17 indicating that teachers rarely attend trainings on disaster management. In addition, the study found out that majority (about 63%) of the teachers disagreed that the school regularly invites resource persons from different safety departments to come and talk to the students and staff

about safety while, about 20% of the teachers agreed with the statement. Considering the mean value to this statement was 2.39, it can be concluded that seldom do schools invite resource persons to talk to students and staff on safety issues.

Further, the study sought to establish from the teachers if school inspections by the Ministry of Health officers on safety and health status were regularly carried out. Results in view of this parameter showed that about 37% of the respondents agreed to the statement. While about 32% to some extent agreed and a similar number also disagreed. The mean value of 2.95 indicates moderate agreement. It can also be seen that majority (about 53%) of teachers consented to the view that the school infrastructure is repaired, maintained and serviced while about 27% of the teachers to some extent agreed to the statement. A mean value of 3.37 depicts that most teachers moderately agreed to the statement.

As to whether the school safety committee briefs the school head on the school safety situation, about 32% of the teachers agreed while 29% moderately agreed to the statement. The mean index value of 2.78 depicts moderate levels of agreement with the statement. Finally, most teachers (about 59%) agreed that students often use suggestion boxes to air their concerns while about 32% disagreed to the statement with a mean index being 3.29 implying moderate level of agreement to the statement.

Table 4.41: Students Views on Safety Practices

N=256 Safety Practices	SA %	A %	M.A %	D %	SD %
The school has enough security personnel	35.5	30.5	20.7	9.4	3.9
The school has a perimeter fence and a gate manned by a security personnel all the time	37.1	31.6	11.7	11.3	8.2
The school regularly conducts fire drills	14.1	23.8	14.8	25.4	21.9
The students use suggestion boxes to communicate their issues	41.4	19.1	9.0	7.8	22.7
There are regular inspections of students by the teachers	36.3	27.0	16.8	9.8	10.2
There are regular patrols by the teacher on duty	47.3	31.6	5.9	4.7	10.5

It can be noted that most (66%) of the students agreed that the school has enough

security personnel while about 21% of the students moderately agreed to the statement, and only 13% disagreed. Similarly, most of the students (about 69%) agreed that the school has a perimeter fence and a gate manned by security personnel all the time while about 19% disagreed and about 12% agreed to some extent with the statement. The findings further suggested that the school regularly conducted fire drills as indicated by about 39% of the students who agreed to the statement. However, 48% disagreed that schools do conduct regular fire drills.

Regarding whether the students use suggestion boxes to communicate their issues, majority (61%) of the students agreed while 30% disagreed to the statement. Similarly, another majority (63%) of the students agreed and strongly agreed that there are regular inspections of students by the teachers. The respondents were asked to indicate whether there were regular patrols by the teacher on duty, in this regard, majority (about 79%) of the students agreed to the statement while about 16% of the students disagreed with the statement.

4.4.4.3 Correlation Analysis on School Management Practices and Implementation of Safety Standards

Correlation analysis was used to determine the relationship between school management practices and implementation of safety standards in public secondary schools. The result of the correlation analysis is summarized in Table 4.42.

Table 4.42: Correlation Analysis between School Management Practices and Implementation of Safety Standards

		School Management Practices	Implementation of Safety Standards
School Management Practices	Pearson Correlation	1	.627**
	Sig. (2-tailed)		.000
	N	41	41
Implementation of Safety Standards	Pearson Correlation	.627**	1
	Sig. (2-tailed)	.000	
	N	41	41

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

The correlation analysis to determine the relationship between management practices and implementation of safety standards in public secondary schools shows there is a strong positive relationship; r (40) =.627, p =≤.01. Hence it can be concluded that a statistically significant and strong positive relationship exists between school management practices and implementation of safety standards.

4.4.3.5 Regression Analysis-School Management Practices and Implementation of Safety Standards

Further to the correlation analysis, regression analysis was conducted to empirically determine whether students' enrolment could predict implementation of safety standards in public secondary schools as analyzed in table 4.43 through 4.45.

Table 4.43: Model Summary- School Management Practices and Implementation of Safety Standards

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.627[a]	.393	.378	.49384

a. Predictors: (Constant), School Management Practices

The regression results in Table 4.43 confirm that the model's correlation coefficient is .627 as shown from the results of correlation analysis. It further indicates that the coefficient of determination (R square) is .393, implying that management practices as a predictor variable can be able to explain about 39% of the total variance on implementation of safety standards in schools.

As to whether this model was a good fit to enable management practices to predict implementation of safety in schools, the results are as shown in the ANOVA table 4.44.

Table 4.44: ANOVA on School Management Practices and Implementation of Safety Standards

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.168	1	6.168	25.289	.000[b]
	Residual	9.511	39	.244		
	Total	15.679	40			

a. Dependent Variable: Implementation of Safety Standards
b. Predictors: (Constant), School Management Practices

Table 4.44 shows that school management practices is the only predictor variable in

the model and the implementation of safety standards is shown as the outcome variable. The ANOVA table shows that the model containing the two variables is a statistically significant model that can enable the independent variable to predict the outcome variable; F (1, 39) = 25.289; P ≤.01. In order to ascertain the unique contribution of the independent variable in the model towards prediction of the dependent variable so as to be able to answer the fourth research question for this study which is stated as: To what extent do school management practices influence implementation of safety standards in public secondary schools in Matungulu Sub-County?", a table of coefficients was generated and is presented in table 4.45.

Table 4.45: Regression Coefficient-School Management Practices and Implementation of Safety Standards

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	2.176	.300		7.251	.000
	School Management Practices	.519	.103	.627	5.029	.000
a. Dependent Variable: Implementation of Safety Standards						

Table 4.45 displays the regression coefficients of the independent variable (school management practices) and its unique contribution to the overall model as measured by the un standardized and standardized coefficient, Beta. The results reveal that school management practices can statistically and significantly explain the implementation of safety standards in public secondary schools in Matungulu Sub-County; t (40) = 5.029; p ≤.05; β =.627. From the analysis, it means that a one unit increase in school management practices could influence an increase of about .627 in the level of implementation of safety standards in schools. This therefore implies that school management practices have a significant influence on implementation of safety standards in public secondary schools in Matungulu Sub-County.

4.4.5 Implementation of Safety Standards

Finally, the study sought to determine the implementation of safety standards in public secondary schools in Matungulu Sub-County. This was the dependent variable and was measured by asking the respondents to respond to various statements describing the implementation of safety standards. A 5 point Likert scale ranging

from; 1 = Strongly Disagree to 5 = Strongly Agree was used to measure the responses to the statements posed. These results are presented in Table 4.46.

Table 4.46: Implementation of Safety Standards

N=41 Our school has instituted measures that ensure that:	SA %	A %	M.A %	D %	SD %
There is safety on school grounds	0	9.8	58.5	26.8	4.9
There is safety in physical infrastructure	9.8	48.8	31.7	9.8	0
Health and hygiene safety measures are maintained in school	9.8	56.1	24.4	9.8	0
School environment is safe	12.2	63.4	17.1	7.3	0
There is food safety	12.2	63.4	17.1	7.3	0
Students are secured from drugs and substance abuse	12.2	51.2	29.3	7.3	0
There is safe teaching and learning environment	14.6	56.1	22	4.9	2.4
Socio-cultural environment of the school is safe and secure	17.1	43.9	31.7	7.3	0
The safety of children with special needs is guaranteed	12.2	39.0	26.8	17.1	4.9
There is safety against drug abuse	14.6	53.7	22	9.8	0
There is transportation safety	9.8	29.3	48.8	12.2	0
There are provisions for disaster risk reduction	9.8	26.8	43.9	17.1	2.4

Results in Table 4.46 indicated that most (about 59%) of the respondents strongly agreed that there is safety on school grounds while other respondents (about 49%) agreed that there is safety in physical infrastructure. The findings further suggested that health and hygiene safety measures are maintained in school as indicated by 56% of the respondents who agreed to the statement. With regards to whether school environment is safe, it is noted that majority (64%) of the respondents agreed to the statement. Similarly, 64% of the respondents agreed that there is food safety in schools while 51% of the respondents agreed that students were secured from drug and substance use.

It is noted that there was safe teaching and learning environment in schools as indicated by 56% of the respondents who agreed to the statement. It is also evident from the findings that socio-cultural environment of the school is safe and secure as indicated by 44% of the respondents who consented to the statement. According to majority of the respondents (39%), the safety of children with special needs is guaranteed in schools. As cited by about 54% of the respondents, there is safety against drug abuse. Further, 49% of the respondents to some extent agreed that there is transportation safety and 44% of them to some extent agreed that there were provisions for disaster risk reduction in schools.

CHAPTER FIVE

DISCUSSION AND INTERPRETATION OF THE RESEARCH FINDINGS

5.1 Introduction

The study objectives which guided this study were to determine the influence of safety awareness, availability of financial resources, students' enrolment and management practices on implementation of safety standards in public secondary schools in Matungulu Sub-County. Further, discussions were made in relation to findings of existing empirical studies conducted locally and internationally.

5.2 Safety Awareness and Implementation of Safety Standards

This study sought to establish the influence of safety awareness among teachers and students on implementation of safety standards in public secondary schools in Matungulu Sub-County. Views collected from both the school heads and the teachers showed that the students and staff were fully aware of the safety standards manual, awareness to Safety Standards Manual was usually incorporated into class lessons, there were efforts to create awareness which was supported by the teachers and also noticed was that awareness creation was successful and faced no major barriers as shown in Table 4.13. Other views collected from the teachers showed that there were copies of Safety Standards Manual for Schools in Kenya. However, they were not accessible since they were found in the offices of school heads only. In table 4.8 the difference in views could be as a result of the school heads playing safe before their seniors. This is because it is a requirement by the MoE that copies of the Safety Standards Manual must be availed to all staff, students and other stakeholders in the school.

Due to awareness most schools had implemented the Ministry of Education safety standards and were practicing the requirements of Safety Standards Manual for Schools. The results indicated that a few of the school heads reported that copies of the Safety Standard Manual were not available in their respective schools due to inability of the government to avail the materials on a timely basis. According to the school heads they usually invited experts periodically to train students and staff on safety measures and the staffs were trained on how to use the fire extinguishers. The

results of correlation analysis between safety awareness and implementation of safety standards showed that there was a relationship between safety awareness and implementation of safety standards. This was supported by the regression analysis whose regression coefficients revealed that safety awareness is statistically significant in explaining implementation of safety standards in public secondary schools. This implies that safety awareness has an overall positive impact on implementation of safety standards. It can therefore be argued that the high rates of implementation of safety standards in public secondary schools in the Matungulu Sub-County can be attributed to safety awareness within the study area.

Despite the fact that a few of the school heads and teachers reported that Safety Standard Manuals were not available in their respective public secondary schools, it was also observed that in some schools, students were not sensitized by their teachers about safety standards. In addition, it was noted that most of the students were not conversant with First Aid training skills and that the secondary school curriculum did not emphasize on safety standards to facilitate awareness among teachers and students.

The findings of this study are in line with that of Rober et al. (2014) who found that increased safety awareness has resulted to more schools implementing safety measures in US schools. However, the findings of this study differ with those of Van Jaarsveld (2011) who found in her study on Safety and Security Measures at Secondary Schools in Tshwane, South Africa, that, majority of the scholars and educators were not familiar with the written security plans and most schools did not have the appropriate emergency plans in place at their schools. Similarly, UNICEF (2013) found that safety awareness on disaster risk reduction was low and affected implementation of disaster risk reduction policies in Uganda. On the same note, Ng'ang'a (2013) found out that the awareness of safety standards was low in Kenya. In this regard, it is evident that the government, school management and other stakeholders have collaborated well, and thus implementation of safety standards can be guaranteed.

5.3 Financial Resources and Implementation of Safety Standards

This study sought to determine the extent to which availability of financial resources influence implementation of safety standards in public secondary schools in Matungulu Sub-County. The findings of the study showed that the schools had budgetary provisions for purchase of safety equipment every financial year, whenever safety equipment gets obsolete, the school replaces them as quickly as possible because there are financial provisions, the schools had adequate finances for maintaining safety, and the government releases funds for the purchase and maintenance of safety equipment. However, with regard to whether parents do provide funds for purchasing of safety equipment, it was noticed that the parents do not provide funds for purchasing of safety equipment.

Although there was budgetary provision for purchase of safety equipment every financial year and the government usually disburses funds for the purchase and maintenance of safety equipment, the school heads admitted that the funds are still a major problem to maintenance of safety. This was supported by the views of both the school heads and teachers as shown in Table 4.22 who were of the opinion that inadequate funds were the most possible constraint in implementation of safety standards in schools as compared to inadequate safety equipment and ignorance. It was further noted that availability of financial resources is a factor in adherence to safety standards implementation. According to the school heads and the teachers, availability of financial resources enable the acquisition of equipment and sponsoring teachers for training and also enables the school to acquire fire extinguishers and fire blankets.

The results of correlation analysis between availability of financial resource and implementation of safety standards showed that there was a significant relationship between financial resources and implementation of safety standards. This was supported by the regression analysis whose regression coefficients revealed that financial resources is statistically significant in explaining implementation of safety standards in public secondary schools. This implies that availability of financial resources has an overall positive impact on implementation of safety standards. It can therefore be argued that the high rates of implementation of safety standards in public secondary schools in the Sub-County can be attributed to availability of financial

resources in schools which is disbursed by the government and the school having a budget for it.

Despite school heads and teachers of a few public secondary schools indicating that insufficient funds was one of the factors that hindered implementation of safety standards; the possible reason as to why there are inadequate funds for purchase and maintenance of safety equipment and yet the government disburses funds to facilitate budgetary provision for the same, could be that; school management boards considered safety to be a non-core function from the normal learning activities of public secondary schools, and therefore, not given priority as compared to learning materials which have a direct impact on academic results. Further, it was observed that even schools that had adequate financial resources did not implement safety standards as expected by the Ministry of Education. This could be attributed to parents being financially supportive towards paying for an extra teacher than contributing money for safety equipment or for an extra security guard.

Studies conducted elsewhere also confirm that availability of financial resources is critical in implementation of safety standards in schools. Makau (2016) found that majority of schools were not able to purchase adequate security infrastructure due to unavailability of funds. Equally, a survey carried out by New Jersey School Boards Association (NJSBA) School Security Taskforce (2014), established that schools in New Jersey were unable to implement recommended safety measures due to lack of funding. Similarly, the findings of UNISDR (2016) showed that schools in Uganda have not been able to integrate Disaster Risk Reduction into the curriculum as funding remains a challenge, limiting the massive roll-out of the curriculum plan.

5.4 Student Enrolment and Implementation of Safety Standards

This study sought to establish the extent to which students' enrolment influences the implementation of safety standards in public secondary schools in Matungulu Sub-County. Views collected from both the teachers and the school heads indicated that safety measures put in schools corresponds with the enrolment levels of students. It was further revealed that safety infrastructure in schools is constrained owing to high students' numbers and that it was difficult to maintain safety standards in schools due to congestion. In addition, schools were found to have adequate safety equipment that resonates well with levels of student enrolment, and school safety policies are tied to

the levels of student enrolment. It was also evidenced that the schools considered safety before they enrolled students in schools.

In an attempt to ascertain school students' enrolment, school heads and teachers showed that majority of the schools in the Sub-County had a student population ranging between 200 to 600 which was moderate as shown in Table 4.29. This was supported by the views of students on student population as shown in Table 4.30 who moderately agreed that their respective schools were congested in terms of students' population. The results of correlation analysis between school student enrolment and implementation of safety standards showed that there was a relationship between school student enrolment and implementation of safety standards. This was supported by the regression analysis whose regression coefficients revealed that school student enrolment is statistically significant in explaining implementation of safety standards in public secondary schools. This implies that school student enrolment has an overall positive impact on implementation of safety standards. Therefore, it can be argued that successful implementation of safety standards in schools in Matungulu Sub-County can be attributed to the moderate school student enrolment within the study area.

Even though a few school heads and teachers indicated that they admitted students based on infrastructural facilities that were available such as classrooms and dormitories, congestion was pointed out as a limitation to implementation of safety standards. This could be attributed to government policies on free primary and secondary education and that of 100% transition rate from primary to secondary school level. In this situation the school heads are under pressure to admit students way above the available infrastructural facilities.

These findings of this study are in line with those of Wahura (2013) which showed that increasing student population is a challenge to achieving successful implementation of safety standards because there was congestion in the classrooms as well as in the dormitories. Lyons (2002) also suggests that students in overcrowded schools are exposed to more risks than students in underutilized schools. For example, the tragedy in which 68 students died at Kyanguli Secondary School dormitory fire in 2001 was blamed on overcrowding, existence of grilled windows, lack of emergency

doors and fire extinguishers (Nthenya, 2011). Van (2011) asserts that the increased number of student enrolment and more specifically in public secondary schools in middle income countries such as South Africa is attributed to deteriorating performance of education of public secondary schools. Inability of schools administrators or head teachers to develop frameworks of implementing new policies is one of the factors that had hindered effective implementation of policies formulated by education authorities.

5.5 School Management Practices and Implementation of Safety Standards

This study sought to determine the influence of school management practices on implementation of safety standards in public secondary schools in Matungulu Sub-County. The findings of the study on this variable showed that quality assurance and standards officers failed to visit the schools very often; trainings on disaster management were not frequently held as they should be, and that not all the teachers and support staff had attended trainings on disaster management. The study further revealed that school inspections by the Ministry of Health officers on safety and health status were not regularly carried as required.

However, it was evident that the school regularly invited resource persons from different safety departments to come and talk to the students and staff about safety and that school infrastructure is repaired, maintained and serviced regularly, as the school safety committee usually briefs the school head on the school safety situation. In addition, students often use suggestion boxes to air their security concerns. The findings also revealed that most schools had integrated safety activities into daily school routine. The results of correlation analysis between school management practices and implementation of safety standards showed that there was a strong and significant relationship between school management practices and implementation of safety standards.

It was observed that in a few secondary schools where there were frequent visits by Ministry of Education officials such as, quality assurance and standards officer were not in a position to implement safety standards. Their inability to implement safety standards could be attributed to a combination of factors such as lack of goodwill by

the school management boards to ensure implementation of safety standards by allocation of adequate funds. In addition, rather than being proactive, the school management boards use reactive approach following audit inspection reports by ministry officials hence, stalling the implementation process of safety standards in secondary schools in line with the Safety Standards Manual for Schools in Kenya.

These finding are supported by the regression analysis whose regression coefficients revealed that school management practices were statistically significant in explaining implementation of safety standards in public secondary schools. This implies that school management practices have an overall positive impact on implementation of safety standards. It can therefore be argued that implementation of safety standards in schools in Matungulu Sub-County can be predicated on sound school management practices within the study area. These finding are in line with those of Makau (2016) who established that school heads were not supporting safety measures and equally to Obiamaka (2015), who established that insecurity in public secondary schools was attributed to insufficient devices such as surveillance cameras. Further, it was noted that lack trained security officers and inadequate management support were aspects that hindered effective implementation of safety measures.

Subsequently, Robert et al. (2015), Song (2014), Oguye (2012) and Simatwa (2007) concur that implementation of safety measures and more specifically in public secondary schools ins not only affected by lack of financial resources but also inability of the schools administrators or head teachers to conceptualize on how to implement policies formulated. The studies reported that despite the fact that some schools had no financial challenges, more than 50% of the public secondary schools were unlikely to implement policiesdue to lack of implementation skills among the head teachers. Further, the study pointed out that absence of a framework illustrating on how policies will be implemented and measured were some of the factors that negatively hindered effective implementation of policies formulated regardless of financial constraints in public secondary schools.

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

This section gives conclusions and recommendations of the study based on the formulated research objectives as found in Chapter one of this research project.

6.1.1 Safety Awareness and Implementation of Safety Standards

This study sought to establish the influence of safety awareness among teachers and students on implementation of safety standards in public secondary schools in Matungulu Sub-County. The results indicated that safety awareness was critical in implementation of safety standards in schools. It inferred that when students and staff are fully aware of the safety standards, they will support implementation of safety standards and vice versa. It is informative to conclude that safety awareness significantly influences implementation of safety standards though to a small extent as was established from the findings of this study. Therefore, it is important to conclude that schools that have created awareness about safety practices are more effective on implementation of safety standards.

Further, it is concluded by the study that despite a few school heads indicating that they had distributed Safety Standard Manuals for Schools in Kenya to teachers, the teachers indicated they had not accessed the Manuals though majority of the teachers did not prioritize safety but focused on performing their duties irrespective of safety at the workplace. Since a few schools did not have budgets for safety trainings among students, teaching and non-teaching staff, it can also be concluded that safety was not given the attention it deserved.

6.1.2 Financial Resources and Implementation of Safety Standards

This study sought to determine the extent to which availability of financial resources influence implementation of safety standards in public secondary schools in Matungulu Sub-County. Regardless of the availability of financial resources influencing implementation of safety standards in public secondary schools, it was noted that to a larger extent lack of adequate funds was a major constraint to implementation of safety standards. It was also pointed out that lack of funds to train teachers and students were constraints to effective implementation of safety standards. Further, the results indicated that most of the schools did not manage to raise funds to;

purchase fire extinguishers, fire blankets and install surveillance cameras and construct perimeter walls or renovate dormitories and class rooms as well as fix emergency exit doors.

Though financial constraints were attributed to non-implementation of safety standards among a few public secondary schools in Matungulu Sub-County, it was noted that management of schools did not prioritize allocating adequate funds to; train staff, purchase safety equipment such as fire extinguishers and fire blankets or train students on First Aid.

6.1.3 School Student Enrolment and Implementation of Safety Standards

This study sought to establish the extent to which students' enrolment influences the implementation of safety standards in public secondary schools in Matungulu Sub-County. The findings of this study revealed a significant positive relationship between student enrolment and implementation of safety standards in public secondary schools. However, it was noted that despite increased enrolment of students in public secondary schools, little was done by management of schools and Boards of Management to address safety standards. It was noted that most of the dormitories were overcrowded thus posing high risks of accidents to students.

6.1.4 School Management Practices and Implementation of Safety Standards

This study sought to determine the influence of school management practices on implementation of safety standards in public secondary schools in Matungulu Sub-County. The results revealed that school management practices had a significant influence on implementation of safety standards in public secondary schools. However, it was noted that school heads of public secondary schools did not have security plans or effective ways of sensitizing students and the staff on safety standards.

It was noted that to a larger extent, school management was one of the major factors that influenced implementation of safety standards in schools. For example, allocation of adequate funds and system support on safety measures was highly influenced by management practices such as coordination of implementation, evaluation and control of safety standards.

6.2 Recommendations

Based on the findings that safety awareness influence implementation of safety standards in schools, the study recommends:

i. Hard copies of Safety Standards Manual for Schools in Kenya should be availed by head teachers in the staff room and school library, and be made accessible to all stakeholders including teachers, students and also school workers;
ii. School managers should mobilize financial resources from well wishers, alumni and through harambees to build more classrooms and dormitories to cater for the increasing student enrolment in schools.
iii. The Ministry of Education should allocate more funds to schools to enable them retrofit the existing buildings to meet the required safety standards and acquire safety equipment.
iv. School head teachers should always strive to facilitate drills on disaster preparedness for both teachers and students.
v. Schools heads should ensure parents are informed about safety of their children while at school in order to stimulate the demand of raising more funds from parents in order to equip classes and dormitories with safety facilities.
vi. The Ministry of Education should not only audit schools for compliance with teaching policies but also ensure schools are compliant with safety measures before admitting students.

6.3 Suggestion for Further Study

a) Given that the study was limited to addressing issues of safety in public secondary schools, a study can be done focusing on safety in public institutes of higher learning such as TIVET and Universities.
b) A similar study can be replicated to cover an entire county or group of counties with change in research design.
c) The current study focused on the influence of school factors on implementation of safety standards. Another study can be conducted focusing on other environmental factors that have a bearing on safety issues within school community.

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APPENDICES

APPENDIX I: LETTER OF INTRODUCTION

Penninah M. Mutiso
South Eastern Kenya University
P.O. BOX 170-90100
Kitui, Kenya

The Principal,

Dear Sir/Madam,

RE: PERMISSION TO COLLECT RESEARCH DATA

I am a post graduate student at South Eastern Kenya University conducting a research study on**: School-based factors influencing implementation of safety standards in public secondary schools in Matungulu Sub-county, Machakos County.** Your school has been sampled to participate in the study. This letter is to seek your participation in the study, your teachers and form three students. The data collected will be used for academic purpose only.

Thank you for your cooperation.

Yours faithfully,

Penninah M. Mutiso
E55/Tal/20313/2013

APPENDIX II: QUESTIONNAIRE FOR SCHOOL HEADS

Introduction

This questionnaire is designed to collect data for academic study, a requirement for award of Master of Education degree. The study seeks to investigate school-based factors influencing implementation of safety standards in public secondary schools in Matungulu Sub-county, Machakos County. All information will be treated with strict confidence.

Section A: Bio Data

Kindly tick in the brackets against that which is applicable to you

1. What is your gender? Male ( ) Female ( )
2. In which age category do you belong?
   25 years and below ( )26 – 34 ( ) 35 – 44 ( ) 45 – 54 ( ) 55 and above ( )
3. How many years have you been a school head?
   5 years and below ( )6 to 10 years ( ) 11 to 15 years ( ) 16 years and above ( )
4. How many years have you been in the current school?
   5 years and below ( ) 6 to 10 years ( ) 11 to 15 years ( ) 16 years and above ( )
5. What is your level of professional qualification?

Diploma [D. Ed] ( ) Degree [B. Ed] ( ) Masters [M. Ed] ( ) PhD [Edu] ( )

Section B: The extent of safety awareness

6. Does the school have a copy of Safety Standards Manual for Schools in Kenya (2008)?

Yes ( ) No ( )

If yes, is it easily accessible?

Yes ( ) No ( )

Explain your answer ……

7. To what level has your school implemented the Ministry of Education safety standards in your school?

   a) To very large extent b) To a large extent c) To a moderate extent d) To a small extent

8. Do you discuss safety standards manual for schools?

Yes ( ) No ( )

Explain your answer ……

9. Do you practice the requirements of safety standards manual for schools in Kenya?

Yes ( ) No ( )

Explain your answer ……

10. What is your opinion on the implementation of the government policy of safety standards and guidelines? .....

11. Using the key provided, please indicate how true the following statements are.

KEY: SA – Strongly Agree, A – Agree, MA – Moderately Agree D – Disagree, SD – Strongly Disagree

	SA	A	MA	D	SD
The students and staff are fully aware of the safety standards manual					
The awareness to safety standards manual is usually incorporated into class lessons					
The efforts to create awareness is supported by the teachers					
Awareness creation is successful and faces no major barriers					

Section C: Financial resources and implementation to safety standards

12. Has the school been able to purchase adequate infrastructure for safety?

Yes ( ) No ( )

13. Is availability of financial resources a factor in adherence to safety standards implementation?

Yes ( ) No ( )

If yes to the above, state in what ways

.....

14. The following are possible constraints on the implementation of safety standards and guidelines. Put a tick to the option you feel is most appropriate.

Inadequate funds ( )

Inadequate safety equipment ( )

Ignorance ( )

15. Please indicate the level of your agreement with respect to the following statements on financial resource provisions

KEY: SA – Strongly Agree, A – Agree, MA – Moderately Agree, D – Disagree, SD – Strongly Disagree

	SA	A	N	D	SD
There are budgetary provisions for purchase of safety equipment every financial year					
Whenever safety equipment gets obsolete, the school replaces them as quick as possible because there are financial provision					
Our school has adequate finances for maintaining safety					
Parents do provide funds for purchasing of safety equipment					
The government releases funds for the purchase and maintenance of safety equipment.					
Funds are major problem to maintain of safety standards					

Section D: Enrolment

16. My school students' population is

High (Above 600) { } Moderate (btw 200 and less 600) { } Low (Less than 200){ }

17. How would you rate safety of students in your school?

Very high: ( ) High: ( ) Average:( ) Low: ( ) Very low ( )

18. The existing physical infrastructure has taken safety into consideration
Strongly Agree ( ) Agree ( ) Neutral ( ) Disagree ( ) Strongly Disagree ( )
Explain your answer in …….

19. Kindly indicate the level of agreement in respect of the statement provided
KEY: SA – Strongly Agree, A – Agree, MA – Moderately Agree, D – Disagree, SD – Strongly Disagree

	SA	A	N	D	SD
The safety measures put in our school correspond with the enrolment levels of student					
The safety infrastructure in our school is constrained owing to high students numbers					
It is difficult to maintain safety standards in our school due to congestion					
We have adequate safety equipment that resonates well with levels of student enrolment					
We consider safety before we enroll students in our school					
Our school safety policies is tied to the levels of student enrolment					

Section E: Management practices and implementation to safety standards

20. Does the school integrate safety activities into daily school routine?
i) Yes ( ) ii) No ( )

21. Please indicate your level of agreement regarding the statements provided:
KEY: SA – Strongly Agree, A – Agree, N – Neutral, D – Disagree, SD – Strongly Disagree

Safety practices	SA	A	N	D	SD
Quality assurance and standards officers visit the school very often.					
Trainings on disaster management are frequently held.					
All teachers and support staff have at one point attended trainings on disaster management.					
The school regularly invites resource persons from different safety departments to come and talk to the students and staff about safety.					
School inspections by the Ministry of Health officers on safety and health status are regularly carried out.					
The school infrastructure is repaired, maintained and serviced					
The school safety committee briefs the head teacher on the school safety situation					
Students often use suggestions boxes to air their concerns					

22. Please indicate your level of agreement:

KEY: SA – Strongly Agree, A – Agree, N – Neutral, D – Disagree, SD – Strongly Disagree

Our school has instituted measures that ensure that:	**SA**	**A**	**N**	**D**	**SD**
There is safety on school grounds					
There is safety in physical infrastructure					
Health and hygiene safety measures are maintained in school					
School environment is safe					
There is food safety					
Students are secured from drugs and substance abuse					
There is safe teaching and learning environment					
Socio-cultural environment of the school is safe and secure					
The safety of children with special needs/disabilities is guaranteed					
There is safety against drug abuse					
There is transportation safety					
There are provisions for disaster risk reduction					

APPENDIX III: QUESTIONNAIRE FOR TEACHERS

Introduction.

This questionnaire is designed to collect data for academic study, a requirement for award of Master of Education degree. The study seeks to investigate school factors influencing implementation of safety standards in public secondary schools in Matungulu Sub-county, Machakos County. All information will be treated with strict confidence.

Section A: Bio Data

Kindly tick in the brackets against that which is applicable to you

1. What is your gender? Male ( ) Female ( )
2. In which age category do you belong?
   25 years and below ( ) 26 – 34 ( ) 35 – 44 ( ) 45 – 54 ( ) 55 and above ( )
3. How many years have you been a teacher?
   5 years and below ( )6 to 10 years ( ) 11 to 15 years ( ) 16 years and above ( )
4. How many years have you been in the current school?
   5 years and below ( ) 6 to 10 years ( ) 11 to 15 years ( ) 16 years and above ( )
5. What is your level of professional qualification?

Diploma [D.Ed] ( ) Degree [B.Ed] ( ) Masters [M.Ed] ( ) PhD [Edu] ( )

Section B: The extent of safety awareness

6. Does the school have a copy of Safety Standards Manual for Schools in Kenya (2008)?

Yes ( ) No ( )

If yes, is it easily accessible?

Yes ( ) No ( )

Explain your answer ……

7. To what level has your school implemented the Ministry of Education safety standards in your school?

To large extent ( ) To a moderate extent ( ) To a small extent ( ) Neutral ( )

Not satisfied at all ( )

8. Do you discuss safety standards manual for schools?

Yes ( ) No ( )

Explain your answer ……

9. Do you practice the requirements of safety standards manual for schools in Kenya?

Yes ( ) No ( )

Explain your answer ……

10. What is your opinion on the implementation of the government policy of safety standards and guidelines?

…….

11. Using the key provided, please indicate how true the following statements are.

KEY: SA – Strongly Agree, A – Agree, N – Neutral, D – Disagree, SD – Strongly Disagree

	SA	A	N	D	SD
The students and staff are fully aware of the safety standards manual					
The awareness to safety standards manual is usually incorporated into class lessons					
The efforts to create awareness is supported by the teachers					
Awareness creation is successful and faces no major barriers					

Section C: Financial resources and implementation to safety standards

12. Has the school been able to purchase adequate infrastructure for safety?

Yes ( ) No ( )

13. Is availability of financial resources a factor in adherence to safety standards implementation?

Yes ( ) No ( )

If yes to the above, state in what ways

…….. ……

14. The following are possible constraints on the implementation of safety standards and guidelines. Put a tick to the option you feel is most appropriate.

Inadequate funds ( )

Inadequate safety equipment ( )

Ignorance ( )

15. Please indicate the level of your agreement with respect to the following statements on financial resource provisions

KEY: SA – Strongly Agree, A – Agree, MA – Moderately Agree, D – Disagree, SD – Strongly Disagree

	SA	A	N	D	SD
There are budgetary provisions for purchase of safety equipment every financial year					
Whenever safety equipment gets obsolete, the school replaces them as quick as possible because there are financial provision					
Our school has adequate finances for maintaining safety					
Parents do provide funds for purchasing of safety equipment					
The government releases funds for the purchase and maintenance of safety equipment.					
Funds are major problem to maintain of safety standards					

Section D: Enrolment

16. My school students' population is

High (Above 600){ } Moderate (btw 200 and less 600) { } Low (Less than 200) { }

17. How would you rate safety of students in your school?

Very high: ( ) High: ( )Average:( ) Low: ( ) Very low ( )

18. The existing physical infrastructure has taken safety as into consideration
Strongly Agree ( ) Agree ( ) Neutral ( ) Disagree ( ) Strongly Disagree ( )
Explain your answer in …….

19. Kindly indicate the level of agreement in respect of the statement provided
KEY: SA – Strongly Agree, A – Agree, MA – Moderately Agree, D – Disagree, SD – Strongly Disagree

	SA	A	N	D	SD
The safety measures put in our school correspond with the enrolment levels of student					
The safety infrastructure in our school is constrained owing to high students numbers					
It is difficult to maintain safety standards in our school due to congestion					
We have adequate safety equipment that resonates well with levels of student enrolment					
We consider safety before we enroll students in our school					
Our school safety policies is tied to the levels of student enrolment					

Section E: Management practices and implementation to safety standards

20. Does the school integrate safety activities into daily school routine?
i) Yes ( ) ii) No ( )

21. Please indicate your level of agreement regarding the statements provided:
KEY: SA – Strongly Agree, A – Agree, N – Neutral, D – Disagree, SD – Strongly Disagree

Safety practices	SA	A	N	D	SD
Quality assurance and standards officers visit the school very often.					
Trainings on disaster management are frequently held.					
All teachers and support staff have at one point attended trainings on disaster management.					
The school regularly invites resource persons from different safety departments to come and talk to the students and staff about safety.					
School inspections by the Ministry of Health officers on safety and health status are regularly carried out.					
The school infrastructure is repaired, maintained and serviced					
The school safety committee briefs the head teacher on the school safety situation					
Students often use suggestions boxes to air their concerns					

22. Please indicate your level of agreement:

KEY: SA – Strongly Agree, A – Agree, N – Neutral, D – Disagree, SD – Strongly Disagree

Our school has instituted measures that ensure that:	**SA**	**A**	**N**	**D**	**SD**
There is safety on school grounds					
There is safety in physical infrastructure					
Health and hygiene safety measures are maintained in school					
School environment is safe					
There is food safety					
Students are secured from drugs and substance abuse					
There is safe teaching and learning environment					
Socio-cultural environment of the school is safe and secure					
The safety of children with special needs is guaranteed					
There is safety against drug abuse					
There is transportation safety					
There are provisions for disaster risk reduction					

APPENDIX IV: STUDENTS' QUESTIONNAIRE

This questionnaire is designed to collect data for academic study, a requirement for award of Master of Education degree. The study seeks to investigate school factors influencing implementation of safety standards in public secondary schools in Matungulu Sub-county, Machakos County. All information will be treated with strict confidence.

Section A: Bio Data

The questions in this section are designed to obtain personal information from you. Please answer each question by ticking (√) in the appropriate box.

1. Gender: Male: ( ) Female: ( )
2. Indicate the class/form you study: ( )
3. Indicate your age ( )

Section B: Factors influencing implementation of safety standards in schools

4. How would you rate safety of students in your school?

Very high: ( ) High: ( ) Average: ( ) Low: ( ) Very low ( )

5. Indicate your level of agreement with the following view: The school is congested in terms of students' population

Strongly Agree ( ) Agree ( ) Neutral ( ) Disagree ( ) Strongly Disagree ( )

6. To what extent do you agree with the following statements?

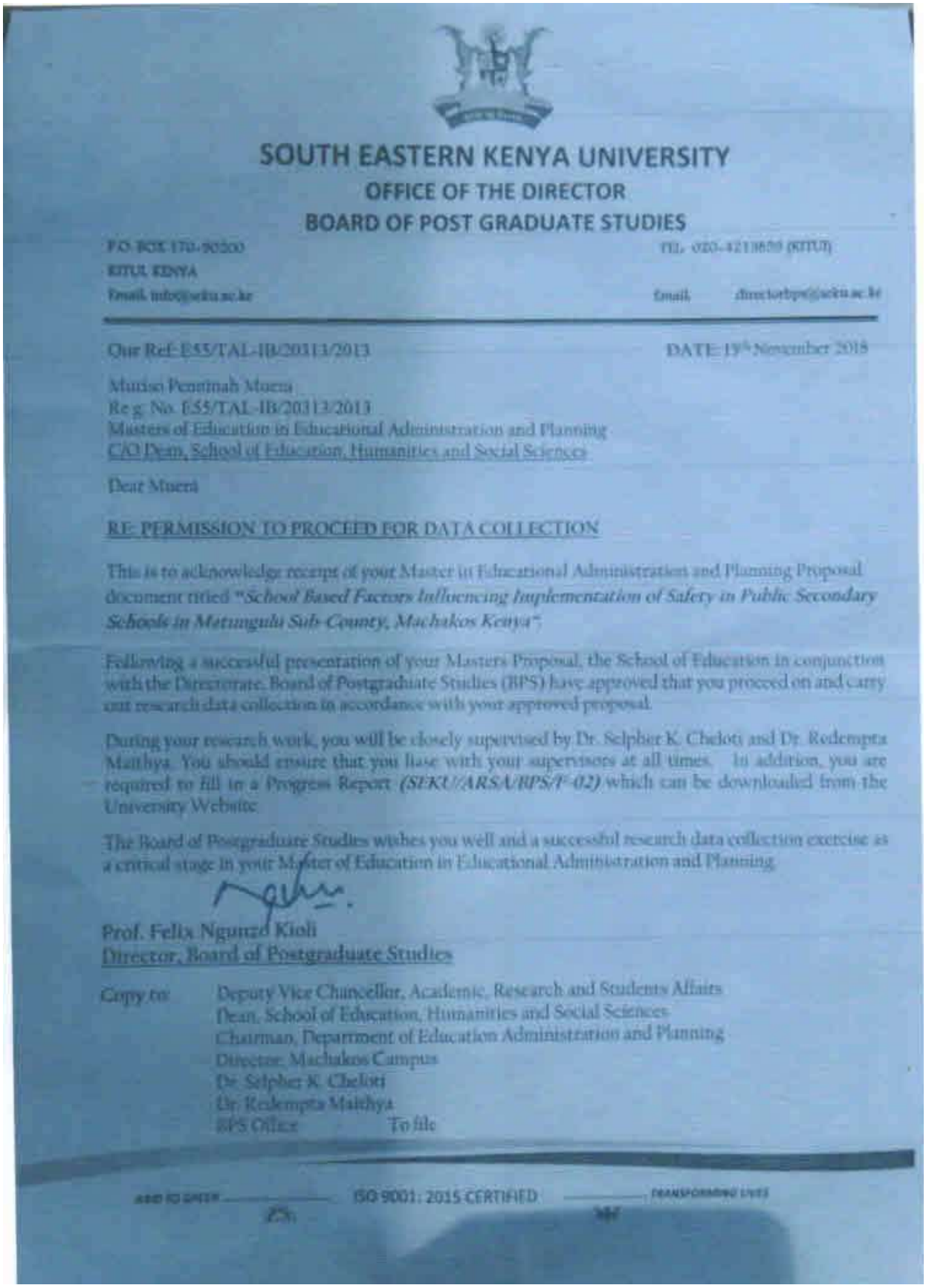
KEY: SA – Strongly Agree, A – Agree, MA – Moderately Agree, D – Disagree, SD – Strongly Disagree

Safety practices	**SA**	**A**	**MA**	**D**	**SD**
The school has enough security personnel					
The school has a perimeter fence and a gate manned by a security personnel all the time					
The school regularly conducts fire drills					
The students use suggestion boxes to communicate their issues					
There are regular inspections of students by the teachers					
There are regular patrols by the teacher on duty					

APPENDIX V: OBSERVATION CHECKLIST

ITEM	YES	NO	COMMENT
Perimeter fence			
Sign posts			
Play grounds			
Toilets			
Ramps			
Path ways			
Door ways			
Dormitories			
Furniture			
Railings			
Windows			
Gates			
Fire extinguishers			
Grills			
Emergency doors			

APPENDIX VI: PERMISSION TO PROCEED FOR DATA COLLECTION



SOUTH EASTERN KENYA UNIVERSITY

OFFICE OF THE DIRECTOR

BOARD OF POST GRADUATE STUDIES

P.O. BOX 170-90200
KITUI KENYA
Email: info@seku.ac.ke

TEL: 020-4213859 (KITUI)
Email: directorbps@seku.ac.ke

Our Ref: E55/TAL-IB/20313/2013 DATE: 13th November 2018

Muiruri Penninah Muema
Reg. No. E55/TAL-IB/20313/2013
Masters of Education in Educational Administration and Planning
CAO Dean, School of Education, Humanities and Social Sciences

Dear Muema

RE: PERMISSION TO PROCEED FOR DATA COLLECTION

This is to acknowledge receipt of your Master in Educational Administration and Planning Proposal document titled *"School Based Factors Influencing Implementation of Safety in Public Secondary Schools in Matungulu Sub-County, Machakos Kenya"*.

Following a successful presentation of your Masters Proposal, the School of Education in conjunction with the Directorate, Board of Postgraduate Studies (BPS) have approved that you proceed on and carry out research data collection in accordance with your approved proposal.

During your research work, you will be closely supervised by Dr. Selpher K. Cheloti and Dr. Redempta Maithya. You should ensure that you liase with your supervisors at all times. In addition, you are required to fill in a Progress Report *(SEKU/ARSA/BPS/F-02)* which can be downloaded from the University Website.

The Board of Postgraduate Studies wishes you well and a successful research data collection exercise as a critical stage in your Master of Education in Educational Administration and Planning.

Prof. Felix Nguuzi Kioli
Director, Board of Postgraduate Studies

Copy to: Deputy Vice Chancellor, Academic, Research and Students Affairs
Dean, School of Education, Humanities and Social Sciences
Chairman, Department of Education Administration and Planning
Director, Machakos Campus
Dr. Selpher K. Cheloti
Dr. Redempta Maithya
BPS Office To file

ISO 9001: 2015 CERTIFIED

APPENDIX VII: RESEARCH AUTHORIZATION

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

NACOSTI, Upper Kabete
Off Waiyaki Way
P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No. **NACOSTI/P/19/48005/27570** Date: **1st February, 2019**

Penninah Mueni Mutiso
South Eastern Kenya University
P.O. BOX 170-90200
KITUI

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"School based factors influencing implementation safety standards in public secondary schools in Matungulu 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 **1st February, 2020.**

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

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

DR. MOSES RUGUTT, PHD, OGW
DIRECTOR GENERAL/CEO

Copy to:

The County Commissioner
Machakos County.

The County Director of Education
Machakos County

APPENDIX VIII: RESEARCH PERMIT

THIS IS TO CERTIFY THAT:
MS. PENNINAH MUENI MUTISO
of SOUTH EASTERN KENYA UNIVERSITY, 668-10300 Kerugoya,has been permitted to conduct research in *Machakos County*

on the topic: *SCHOOL BASED FACTORS INFLUENCING IMPLEMENTATION SAFETY STANDARDS IN PUBLIC SECONDARY SCHOOLS IN MATUNGULU SUB-COUNTY, MACHAKOS COUNTY KENYA*

for the period ending:
1st February,2020

.....
Applicant's Signature

Permit No : NACOSTI/P/19/48005/27570
Date Of Issue : 1st February,2019
Fee Recieved :Ksh 1000

.....
Director General
National Commission for Science, Technology & Innovation

THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013

The Grant of Research Licenses is guided by the Science, Technology and Innovation (Research Licensing) Regulations, 2014.

CONDITIONS

1. The License is valid for the proposed research, location and specified period.
2. The License and any rights thereunder are non-transferable.
3. The Licensee shall inform the County Governor before commencement of the research.
4. Excavation, filming and collection of specimens are subject to further necessary clearance from relevant Government Agencies.
5. The License does not give authority to transfer research materials.
6. NACOSTI may monitor and evaluate the licensed research project.
7. The Licensee shall submit one hard copy and upload a soft copy of their final report within one year of completion of the research.
8. NACOSTI reserves the right to modify the conditions of the License including cancellation without prior notice.

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REPUBLIC OF KENYA

National Commission for Science, Technology and Innovation

RESEARCH LICENSE

Serial No.A 22989

CONDITIONS: see back page