

ASSESSMENT OF THE LEVEL OF IMPLEMENTATION OF
SAFETY STANDARDS GUIDELINES IN PUBLIC
SECONDARY SCHOOLS IN NGONG DIVISION, KAJIADO
DISTRICT, KENYA

BY

MUIGAI GRACE WANJIRU

E55/10855/06

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THIS RESEARCH PROJECT SUBMITTED TO THE SCHOOL OF EDUCATION
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Muigai, Grace Wanjiru
*Assessment of the
level of*




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DECLARATION

This research project is my original work and has not been presented for examination in any other university.


.....
MUIGAI GRACE WANJIRU
E55/10855/06

18/06/2010
.....
DATE


This research project has been submitted with our approval as the university supervisors.


.....
DR. KISILU KOMBO

23.06.2010
.....
DATE

Senior Lecturer,

Department of Education Foundation, Kenyatta University


.....
MR. K. GATIMU

21.6.2010
.....
DATE

Lecturer,

Department of Educational Management, Policy and Curriculum Studies, Kenyatta University

DEDICATION

This research project is dedicated to my husband George

For his support throughout my studies;

And

To our children Anndonna, Francis and Eliphaz ; to my house-help Margaret Wangui

Who had to bear with me for long hours I was away attending my studies.

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There are many people along my path that have been supportive and helpful either directly or indirectly. Thanks to all of you.

Last but not least, I sincerely thank God for giving me the gift of life, energy and health to pursue my studies.

ABSTRACT

There have been increased reported incidences of fires and other fatal accidents within the school environment. These incidences have left a number of lives lost and property worth million of shillings destroyed in Kenyan secondary schools. Many questions pertaining to the reasons for the increase in these incidences have been raised. It is therefore important to ensure that school safety standard guidelines are strictly followed. The Kenyan government has attempted to address the threat of school safety by issuing safety standard guidelines to schools. What was not clear is the status of implementation of the guidelines. This study assessed the current status of implementation of the MoEST guidelines on safety standards in secondary schools in Ngong Division in Kajiado District. The researcher expected that the status of implementation of the MoEST guidelines on safety in public secondary schools depended on knowledge of the guidelines among institutions headteachers, teacher and students, attitude toward various aspects of the safety guidelines, and resource constraints experienced in implementing the guidelines. The study used a survey design, targeting all the 16 public secondary schools in Ngong Division of Kajiado District. Random sampling was used to select 10 schools, from which 10 headteachers, 40 teachers, and 200 students will participate in the study. Four tools study were used for data collection: a questionnaire for headteachers, a questionnaire for teachers, a questionnaire for students, and an observation schedule. A pilot study was conducted in two schools to help in improving validity and reliability of the questionnaires. Descriptive statistics including percentages and frequency counts were used to analyze the quantitative data obtained. Qualitative data was analyzed by arranging responses according to the research questions and objectives. The study established that status of knowledge of the MoEST safety guidelines among the institutional headteachers, teachers and students was poor. This is explained by the fact that all headteachers and teachers had not attended any course, seminar or workshop on school safety, only a few had a copy of the safety standards manual, a few of them were aware of all safety precautions that schools should take to avert accidents and disasters. Most of the students were also not aware of the schools safety guidelines. Some of the strategies by the government to curtail school safety disasters are said not to be practical and therefore the government should ensure that the guidelines are realistic so as to enhance safety in schools. The government should also ensure that the safety standards guidelines manuals are available in all public schools in order to curb school disasters that are associated with safety. Training related to school safety was not offered. For effective implementation of the safety standards guidelines in public secondary schools, there should be involvement of the government, school administrators, students, parents and the community at large.

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ABBREVIATIONS & ACRONYMS

ASALs	-	Arid and Semi Arid Lands
CCTV	-	Closed-Circuit Television
CRISP	-	Crime Reduction in Schools Program
CSVR	-	Centre for the Study of Violence and Reconciliation
DEB	-	District Education Board
DEO	-	District Education Officer
DES	-	Department for Education and Skills
MoE	-	Ministry of Education
MoEST	-	Ministry of Education, Science and Technology
NACADA	-	National Campaign against Drug Abuse
PDE	-	Provincial Director of Education
PEB	-	Provincial Education Board
PSDB	-	Police Scientific Development Branch
RFID	-	Radio Frequency Identification
SPSS	-	Statistical Package for Social Sciences
UK	-	United Kingdom
UNICEF	-	United Nations International Children's Education Fund

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Kenyan education institutions have witnessed several school tragedies. Most of them have been as a result of students' unrest and strikes which have resulted to destruction of property and loss of lives. Although there are many factors attributed to loss of property and lives in schools, a big number of unsafe conditions in schools are as result of fire.

Some of the worst school tragedies witnessed in Kenya include St. Kizito Mixed Secondary School in Meru which has since been renamed St. Cyprian Secondary School, on 13th August, 1991 news of death of 19 girls of the school hit Kenyan air waves. The girls died following a rape rampage by the boys of the same school who had gone wild and invaded the girls' dormitory in a rape orgy. A stampede that ensued as the girls ran for safety shocked the whole world (Kenya Times, August 13th 1991; East African Standard, May 25th 1999).

In 1998, another school tragedy happened and 26 girls perished in a dormitory fire at Bombolulu Girls Secondary School near Mombasa. The girls had been locked overnight in their dormitory and the keys taken away by the school matron who was nowhere to open the door for them. The students who were sandwiched by fire from all angles had no way of escaping as the only door was locked and windows had been secured with grills making it difficult for them to find a safe exit out of the fire. The school has since been renamed Mazeras Memorial School (Daily Nation, March 31st, 1998).

Murderous students of Nyeri High School in 1999 dosed the prefects' cubicle with petrol and set it ablaze. In the horrendous inferno tragedy, the school headboy, deputy headboy and two other prefects were seriously injured and finally died at Kenyatta National Hospital (East African Standard, 25th May, 1999; Daily Nation 21st June 1999; Sunday Nation, 30th May 1999).

Just as the dust was settling on the Nyeri High School tragedy, another worse school tragedy occurred. In March 26th 2001, fire swept through Kyanguli High School dormitory killing 68 students and destroying property worth millions of shillings (Daily Nation, 27th March 2001). Following this school tragedy, the Director of Education Mrs. Naomi Wangai wrote a circular letter Ref. No. G9/1/169 dated 10th April on Health and Safety Standards in Educational Institutions.

The circular was sent to all educational stakeholders. Its intention was to direct all educational managers, headteachers, and other stakeholders under the direction of the Provincial Education Board (PEB), District Education Board (DEB) and Provincial Director of Education (PDE) to review their institutions safety standards and also implement the attached guidelines and specifications on physical facilities.

The Director of Education in her introduction of the circular, reminded the stakeholders that many educational institutions in this country are for the greater part of the year home to majority of students and that in the last few years, there have been a number of incidents of fire and other health risk situation on our educational institutions hence the reason for the review of the safety standards in all educational institutions.

She went on to explain that at independence in 1963, communities and parents were called upon and encouraged to put up educational facilities (through harambees) to

cater for the increasing number of children in schools. During the 1970s, the circular says that provision of most educational facilities was left to the communities, that is, parents, school boards and committees with the government only providing teachers and minimum teaching/learning materials as emphasis shifted to cost sharing. The result was that most educational institutions ended up having facilities that do not meet the health and safety standards as specified by the law through:

- Education Act Cap 211
- Public Health Act Cap 244
- The Ministry of Public Works Building Regulations

The existence of these sub-standard facilities was the major reason attributed to loss of lives though incidences of fire and other related health risks situations. Schools were therefore instructed to adhere to the laid down basic requirements in constructing new buildings. Any facility which has not been put up in conformity with the existing regulations should be modified. School managers were also required to adhere to laid down admission regulations. The circular went on to enlist several basic qualifications to be met by any new school buildings (see Appendix 5).

Several years after the issuing of the safety standards guidelines by the Director of Education incidences of fires and other risky situations continued being reported in the local daily newspapers and other electronic media. Diverse causes of injuries, deaths and loss of property in schools continue being reported. Hardly does a month pass without reports of fires or other unsafe situations occurring in the country's educational institutions. One wonders why this is so despite the emphasis on the importance of the health and safety standards by the law and the existence of MoEST Health and Safety Standards Guidelines to be followed by all schools.

Failure by schools to ensure proper health and safety measures can be blamed for various incidences of indiscipline experienced in Kenyan schools. For example, it is almost accepted as normal for students to be bullied (locally referred to as “monorization”) when they enter Form one. According to Ndirangu (2000), bullying is one of the most common forms of indiscipline in Kenyan secondary schools. Bullying has been identified as a significant problem that can impact the physical and psychosocial health of those who are frequently bullied and those students who bully their peers at an early age (Batsche & Knoff, 1994). Bullying has been defined as a set of intentional behaviours that cause physical and psychological harm to the recipient (Smith & Thompson, 1991). Bullying includes actions such as name calling or teasing, social exclusion, and hitting (Crick, 1997). Previous studies indicate that bullying, in the form of teasing is a common event experienced among adolescents and can have serious consequences (Corsaro & Eder, 1993).

Another factor that is a threat to school safety is drug abuse, which is rampant in Kenyan secondary schools. This, together with other forms of indiscipline, has resulted to a number of fatal incidences in schools; incidences that NACADA (2002) claims have brought an urgent need for the government and the public to take action and deal with the problem of drug abuse in our learning institutions and the youth in general. Some of these cases include:

- 1991; 19 girls of St. Kizito Secondary school in Meru were killed in an orgy of rape and subsequent stampede when boys from a neighbouring school invaded them.
- 1998; March, 23 girls were killed in Bombolulu Secondary School.
- 1999; Nyeri High School where fellow students attacked and killed four prefects.

- 2001; March, The most devastating and shocking incident occurred in Kyanguli Secondary School, Machakos where 58 students perished in a night inferno started by some of their colleagues using petrol.

Other Kenyan studies have shown that the state of health and safety standards in Kenyan schools is wanting. Dierkx (2002) found out that Kenya's urban conditions create hurdles for children to get quality education, and form barriers to school planning. Most schools in urban settings do not meet basic standards of health and inspection rarely takes place. Authorities are biased to 'modern', expensive, building methods. Use of sustainable methods is marginal; architects and building code form barriers even if energy efficient and affordable options are available (Njuguna 1997). This is despite the fact that the Ministry of Education has issued safety standards guidelines to be followed in schools. This study assessed the current status of implementation of the MoEST guidelines on safety standards in secondary schools in Ngong Division in Kajiado District.

1.2 Statement of the Problem

There have been increased reported incidences of fires and other fatal accidents within the school environment. The proportion of incidences of insecurity in schools that continue to be reported in the local daily newspapers and other electronic media is alarming. These incidences have left a number of lives lost and property worth million of shillings destroyed in Kenyan secondary schools. Many questions pertaining to the reasons for the increase in these incidences have been raised. Despite the emphasis on the importance of the health and safety standards by the law and the issuing of the Ministry of Education Guidelines on Health and Safety Standards to be followed by the schools education institutions managers continue overlooking them by putting up sub-standards buildings in schools which are not only life-threatening but also

contributes to loss of lives, destruction of properties and waste of scarce economic resources.

It is in this regard that the study set to assess the status of implementations of the MoEST Guidelines on Safety Standards in Secondary Schools in Ngong Division of Kajiado District. In the recent past the division has experienced a wave of school fires that have left property worth millions of shillings destroyed leading to temporary closure of the affected schools hence loss of valuable time for teaching and learning. Ololaiser Secondary School dormitory was destroyed by a fire in 2006. Though no lives were lost in the fires, they are a clear indication of safety situation in schools today and can therefore not be ignored.

1.3 Purpose of the Study

The purpose of the study was to assess the current status of implementation of the MoEST guidelines on safety standards in secondary schools in Ngong Division in Kajiado District.

1.4 Objectives of the Study

1. Establish the status of implementation of the MoEST guidelines on safety in public secondary schools.
2. Find out the extent of knowledge of the guidelines among institutions headteachers, teacher and students.
3. Find out the headteachers, teachers and students attitude toward certain aspects of the safety guidelines.
4. Identify factors hindering effective adherence of these guidelines in public secondary schools.

5. Suggest ways in which safety standards in public secondary schools in Kenya can be improved.

1.5 Research Questions

1. To what extent have public secondary schools adhered to the MoEST safety standards guidelines while putting up school buildings?
2. What is the status of knowledge of the MoEST safety guidelines among the institutional headteachers, teachers and students?
3. What are the headteachers, teachers and students attitude toward certain aspects of the safety guidelines?
4. What are the main factors that hinder effective implementations of these guidelines in public secondary schools in Kenya be improved?

1.6 Significance of the Study

The study may benefit the policy makers, researchers and the stakeholders in the following ways:

It was hoped that the findings of this study might provide policymakers with information to strengthen the present policies in order to improve on safety standards in schools. It could also provide useful source of reference for future researchers in related areas. It could also help create awareness to the stakeholders on issues related to safety and security in schools. The results could also benefit school administrators and persons involved in policy formulation pertaining safety standards in schools. The study comes at a time when secondary schools in the country is experiencing unprecedented cases of strikes and riots characterized by arson. The study unearthed school safety loopholes which, if corrected, could minimize damage caused during such eventualities.

1.7 Delimitations and Limitations of the Study

The study limited itself to public secondary schools. Although there are many measures proposed by the MoEST Guidelines aimed at improving health and safety standards in schools, the study was confined to those that relate to safety of school buildings. The study limited itself to only one division due to financial and time constraints.

1.8 Basic Assumptions of the Study

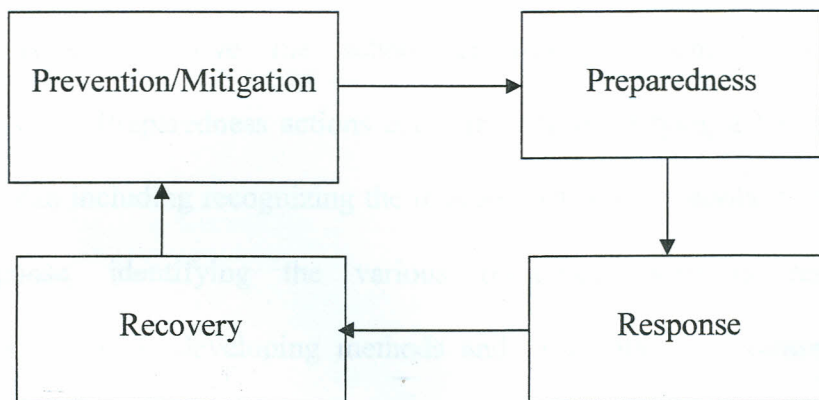
The study was based on the following assumptions:

- (a) That the respondents would be co-operative and give truthful information regarding their safety standards guidelines.
- (b) Headteachers would be willing to divulge information on the problems they face while implementing the safety standards guidelines.
- (c) That every public secondary school in Ngong Division, Kajiado District had safety standards guidelines.

1.9 Theoretical Framework

The study was based on the Comprehensive Emergency Preparedness and Response for Schools Model by Cole, Henry, Tyson, Fitzgerald & Hopkins (2008). According to this model, School Safety Plans, also known as Emergency Operation Plans, should be based on what Cole et al (2008) refer to as the four phases of incident management: a) Mitigation/Prevention, b) Preparedness, c) Response, d) Recovery. Figure 1.1 below outlines the four phases, which illustrates that the life cycle of incidents can be depicted as on-going, overlapping activities or phases.

Figure 1.1: The four phases of incident management



Source: Cole et al (2008).

Cole et al (2008) however note that while prevention, preparedness and mitigation activities tend to be on-going, response and recovery activities tend to have starting points while response tends to also have an end point.

Mitigation and Prevention: Both Mitigation and Prevention occur during the first phase. Mitigation is defined as on-going actions taken to identify assets and risk factors, steps taken to reduce and/or eliminate harm to persons or property, and efforts undertaken to protect the environment. Such actions may include school policy and rules, community education, environmental assessments and subsequent implementation of countermeasures. Prevention is defined as actions taken to protect life and property and avoid or intervene in incidents. It requires the application of intelligence and other information and may include surveillance, immunizations, inspections, warning systems, public notification, development of response partnerships, and exercise or testing various aspects of the school's Safety Plan.

Preparedness: The second phase in the incident management cycle is Preparedness. Preparedness is defined as pre-determining responses prior to

incidents, developing contingency plans, practicing the plan with school and first responders such as local police and fire departments, and identifying transitional steps necessary to move the school environment from incident response into recovery. Preparedness actions could include identifying a Safety Team to develop the plan including recognizing the triggers that move schools from normalcy to crisis response, identifying the various resources, detailing response roles and responsibilities, developing methods and protocols for communicating with staff, students, parents and the media, practicing the three school-wide response (Evacuation, Shelter-in-place, Lock-down), and identifying and incorporating lessons learned from other incidents into updated Safety Plans.

Response: The third phase of the incident management cycle is response. Response is defined as providing emergency assistance to save lives, protect property, and speed recovery. Response actions generally include the mobilization of emergency personnel and equipment to assess the situation, save lives, protect property and the environment, and contain the incident.

Recovery: The fourth and final phase of incident management is Recovery. Recovery is defined as long-range actions taken to restore the community to some degree of normalcy, as quickly and completely as possible through the provision of services and programs. Within a school setting, recovery usually includes a plan for academic, social-emotional, physical facilities, and fiscal recovery. Recovery actions may include cleaning the area, repairing the structure, restoring disrupted services, providing counselling or grief support, and preparing for the resumption of classes. Once started, the Recovery phase often continues for a period of time. There are usually well devised, albeit time-consuming strategies for restoring the physical

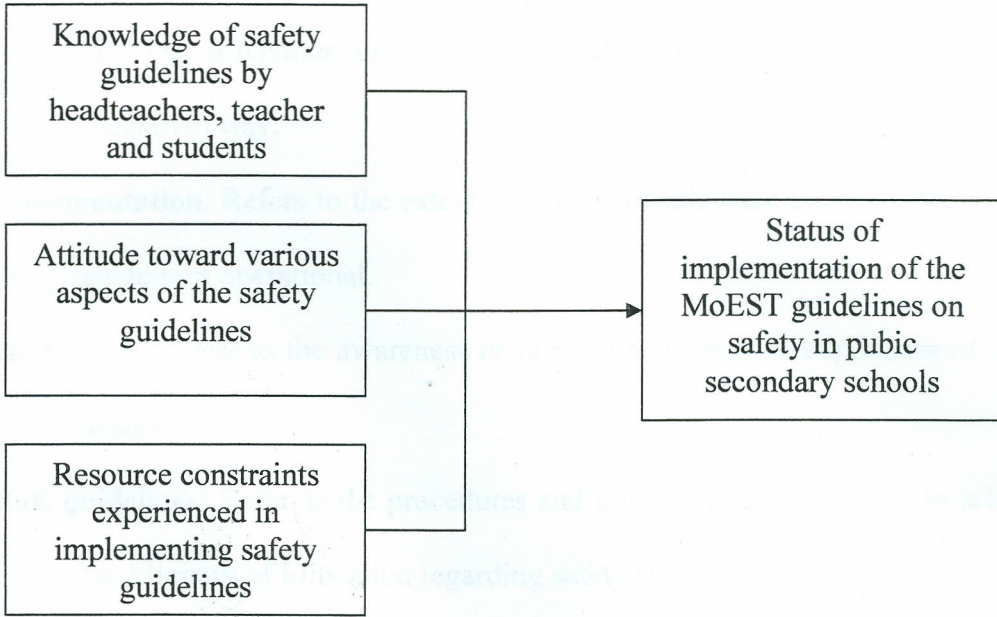
environment. However, restoring the social and emotional environment is generally more complex.

This model was relevant to the study on the status of implementation of the MoEST guidelines on safety standards in secondary schools because it clearly outlines the phases that are needed for a school to effectively manage safety situations. In this study, focus was on the prevention and mitigation phase, the steps taken to reduce and/or eliminate harm to persons or property, and efforts undertaken to protect the environment.

1.10 Conceptual Framework

The purpose of this study was to assess the current status of implementation of the MoEST guidelines on safety standards in secondary schools in Ngong Division in Kajiado District, with a focus on physical infrastructure. The researcher expected that the status of implementation of the MoEST guidelines on safety in public secondary schools depends on knowledge of the guidelines among institutions headteachers, teacher and students, attitude toward various aspects of the safety guidelines, and resource constraints experienced in implementing the guidelines. Figure 1.2 presents the conceptual framework of the study.

Figure 1.2: Conceptual framework



Source: Researcher's own

The dependent variable was the status of implementation of the MoEST guidelines on safety in public secondary schools while the independent variables were those factors that may influence implementation of the guidelines, including knowledge of safety guidelines by headteachers, teacher and students, attitude toward various aspects of the safety guidelines, and resource constraints experienced in implementing safety guidelines.

1.11 Definition of Terms

Attitude: This refers to a learned, positively enduring predisposition to respond to bullying behaviour in a constantly favourable (positive) or unfavourable (negative) way.

Implementation: Refers to the extent to which schools have made the various safety guidelines operational.

Knowledge: Refers to the awareness or familiarity gained by experience of a fact or situation

MoE guidelines: Refer to the procedures and guiding principles given to schools by the Ministry of Education regarding safety standards.

Public secondary school: This refers to a four-year post-primary school institution, which is developed, equipped, financed, and staffed with public funds from the government, parents and the community.

Safety standards: Refer to the set conditions, principles and values that schools are expected to operate on in order to safeguard the security and wellbeing of all members of the school.

School grounds: Refer to the entire enclosure designated for use by the school for any of its activities such as learning, play games or sports

School physical infrastructure: Refers to any built facility for use in the school to facilitate the provision of services. These facilities include structures such as classrooms, offices, toilets, dormitories, libraries, laboratories, kitchen, water tanks, and playground equipment.

School safety: Refers to the activities undertaken by the students, staff, parents and sponsors that seek to either minimize or eliminate risky conditions or threats that may cause accidents or bodily injury as well as emotional and psychological distress.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter covers a review of literature related to the study. First literature is presented on why emphasis on school safety is necessary, after which literature from outside Africa is presented on approaches to school safety. This includes some case studies of effective school safety programmes. Literature on approaches to school safety from Africa is then reviewed, after which literature from Kenya is presented. A summary of the literature review is then presented.

2.2 The Need for School Safety

Broadly and simply, school safety refers to the activities undertaken by the pupils, staff, parents and sponsors, that seek to either minimize or eliminate risky conditions or threats that may cause accidents or bodily injury as well as emotional and psychological distress. Accidents can lead to disability or death while emotional and psychological trauma can result in lack of self-esteem and ultimately lead to poor performance of tasks and responsibilities. Creating a School Safe Zone does not only mean ensuring an accident free school environment. Rather, it is the responsibility taken by pupils, staff, parents and sponsors to foster all-round safe living (Ministry of Education, 2007).

Students, parents, teachers and educational staff expect schools to provide a safe and secure environment for learning. The threat of insecurity in schools is of major concern all over the world. For example the United States experienced a series of school shootings during the 1990s, culminating in twelve deaths at Columbine High School in Colorado in 1999. While the events at Columbine were the worst act of high

school violence in United States' history, it was not the first case (DeVoe et al. 2004). According to the Bureau of Justice Statistics, 71 percent of public elementary and secondary schools report experiencing at least one violent incident ranging from bullying and physical fights to rape and assault with a weapon (National School Safety Centre, 2003). School officials have implemented anti-bullying and conflict resolution programs to improve school safety. Experts cite several possible causes for acts of violence at school, including large and impersonal high schools, violent video games, pressure to achieve high academic standards, and the stress of living in a post-9/11 world. College and university campuses are also not immune to acts of violence. In 1966 Charles Whitman killed 16 people at the University of Texas. On April 16, 2007, more than 30 people were killed on the campus of Virginia Polytechnic Institute, the worst such rampage in U.S. history (DeVoe et al. 2004).

According to Shaw (2001), America is not alone in its concern with school violence and school safety. Countries as far apart as Australia, Belgium, France, South Africa, and the United Kingdom have, in recent years, experienced tragic events in schools that have alarmed communities and governments alike. Schools and school safety have become the focus of much attention and action.

In African countries, particularly Sub-Saharan Africa, violent incidences have been reported mostly in South African black-township schools and in the killings and destruction in Kenya (NACADA, 2002). Students are victims of a spectrum of problem behaviours at school, ranging from minor disciplinary problems to criminal victimization. In Kenya, several fatal incidences in schools have brought an urgent need for the government and the public to take action and deal with the problem of violence in our learning institutions and the youth in general (NACADA, 2002). Some of these cases that are still vivid in our minds include:

- **1991** - 19 girls of St. Kizito Secondary school in Meru were killed in an orgy of rape and subsequent stampede when boys from a neighbouring school invaded them.
- **1998 March** - 23 girls were burnt to death in Bombolulu Secondary School.
- **1999** - Nyeri High School where fellow students attacked and killed four prefects.
- **2001 March** - The most devastating and shocking incident occurred in Kyanguli Secondary School, Machakos where 58 students perished in a night of inferno started by some students using petrol.

Since then, there have been many other cases of insecurity in Kenyan schools, causing tremendous concern among parents and educators regarding how to protect emerging adults from outcomes of violence.

A safe school is either a school that is located in a hazard free area, or one that has been constructed so as to withstand the hazards to which it is exposed. A safe school will not collapse if a disaster happens. A safe school can be achieved through several complementary measures that begin with land use planning, and pass through structural reinforcement (for earthquakes, landslides, hurricanes, explosions, toxic releases), flood proofing (for floods and tsunamis) and preparedness plans, amongst others. A safe school is important first, and most importantly, because of safety – a safe school building can save lives and spare children and school staff from death and injury. These cases underscore the importance of school safety.

2.3 Approaches to School Safety outside Africa

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Accidents, arson, stabbings, theft, earthquakes, vandalism, shootings...the range of problems and threats facing schools from within and without is vast, and their number

is increasing in many countries and communities. In response to these challenges in society and education, the range of approaches used to address these problems is also growing. Architects, project managers, ministry representatives, psychologists, teachers, security consultants, police officers, academics and many others have a role to play in helping to implement these solutions.

Children and adolescents tend to spend approximately one third of their day at school or on the way to or from school. Safety at school, in terms of the physical, emotional and psychological environment, is the subject of constant concern of parents/guardians, teachers and school directors. It is not only accidents at schools and in their environs merit constant debate, but also the multiplicity of violent acts to which students and teachers fall victim. As a result of increasing cases of accidents, injuries, and loss of life and property experienced in schools all over the world, different countries have initiated different school safety programmes, all of which have had varied impacts. In this section, a number of case studies on school safety programmes are reviewed.

2.3.1 The Safe School Programme in Malaysia

In Malaysia, Hee (2004) notes that schools have a legal responsibility to ensure the safety of students under the common law doctrine of *in loco parentis*. However, school safety is a growing problem in both primary and secondary schools; the number and severity of incidents of school violence, vandalism, theft and gangsterism, and general student discipline and misconduct problems are increasing. Widespread media coverage of these incidents has exacerbated the problem (Hee, 2004).

Traditionally, preventative measures were used to address negative behaviours: school circulars were disseminated by authorities, school rules posted in every classroom, staff room and on school notice boards, and school bags, equipment and grounds checked by teachers and prefects. All teachers were required to recognize and understand the various ordinances and circulars related to school discipline. School rules were enforced using a system of surveillance, penalties and punishments (*i.e.* suspension, expulsion, alternative school placement and arrest), although fines were not imposed on parents or guardians (Purkey, 1999).

Hee (2004) states that increasing incidents forced the Ministry of Education to re-evaluate school discipline policies and practices. In 1999, in response to public demand for safer schools in Malaysia, the Educational Planning and Policy Research Division of the Ministry of Education conducted a study on Gangsterism in Daily Secondary Schools (1999). Results of the study indicated that students' involvement in delinquent activities is influenced by their ethnicity, peer group and place of residence. Students with low parental income who live in densely populated areas, new villages, apartments or temporary public housing, for example, are most at risk. At-risk students have a tendency to rebel and break rules and regulations; to desire to be the centre of attention; to have low academic achievement; to receive little parental attention; and to be susceptible to negative peer influence.

To create a safe school environment, the Ministry of Education established a committee to examine and formulate a strategy to minimize violence in schools. It developed a blueprint for a Safe School Programme in Malaysia, known as the *Safe School Concept and Manual: Implementation Guide to Create a Safe School, Community and Family for Children*. The aim of the blueprint, which called for the

support of families and local communities, was to reduce school violence and contribute to a safe school culture and environment (Hee, 2004).

The committee considered the following elements as impeding the provision of a safe school environment: General lack of attention to school safety issues; need for a formal policy to address the inter-related physical, social, emotional and technical elements that contribute towards school safety problems; lack of collaboration and co-operation on safety issues between the family, society and educational institutions; and limited ability of the school to solve safety issues without family and community support.

The specific objectives of the Safe School Programme are to: improve understanding of safety-related procedures, such as emergencies, accidents and disasters; develop strategies for planning and incorporating safety-related issues in school activities; foster a school environment that is safe, healthy and conducive to learning; protect the rights of each individual in the school; enhance the quality of teaching and learning; prepare guidelines for each action; increase the focus on study and work in the school community; and encourage all involved to make a positive contribution towards the school.

According to Hee (2004), the Safe School Programme in Malaysia represents a comprehensive approach to school safety. It promotes active involvement of and co-operation between communities, teachers, parents and students. It also informs school administrators and teachers about their responsibilities concerning safety management and planning. Although schools in Malaysia remain susceptible to violence, implementing the Safe School Programme represents an important step towards providing a safer teaching and learning environment.

2.3.2 School Building Organization in Greece

The School Building Organization is responsible for the design, construction, planning and management of property and equipment of all schools in Greece (Baltas 2004). Another important role of School Building Organization – and of other public bodies such as the Ministry of National Education and Religious Affairs, the Secretariat of Civil Protection, the Earthquake Planning and Protection Organization, and local and prefectural authorities - is to provide safe educational facilities.

In Greece, as noted by Houndoumadi, Pateraki & Doanidou (2003), school safety and security issues are classified according to how school communities perceive safety. Based on research including a questionnaire on school buildings, which was conducted in all schools in collaboration with the National Technical University in 1998 and in 2002, the following school safety framework was identified:

- Enforcing structural and accommodation regulations for wells, glass areas, fire protection, heat insulation and access for people with disabilities.
- Using safe structural materials in buildings and equipment with the aim of protecting the environment (i.e. by controlling colouring of materials, chemical emissions and use of asbestos-based fibre materials, and by providing natural ventilation infrastructure).
- Using ergonomic standards for the dimensions, shape, size and comfort of school furniture.
- Ensuring hygiene in all schools, particularly in sanitary areas and in electrical and plumbing installations.
- Addressing issues of AIDS, drugs and alcohol in schools by developing health education and welfare and prevention policies.

- Ensuring student's safe arrival to and departure from school by providing secure school routes, special traffic signs and pedestrian roads around school buildings.
- Encouraging tolerance in multi-cultural school settings. Socialization can be an effective remedy for prejudice, alienation and anti-social behaviours. Schools are an ideal setting to promote the principles of democratic governance, tolerance and social responsibility (Baltas, 2004).

2.3.3 Safe Schools Initiative in the United Kingdom

In the United Kingdom, the government has been increasing capital investment in schools in an effort to raise the quality of the learning environment and thus improve educational standards. Projects such as the Safe Schools Initiative are ensuring that adequate returns are being made on this investment by helping to create safe and innovative schools. The Safe Schools Initiative (www.dfes.gov.uk/schoolsecurity), which is administered by the Department for Education and Skills (DfES) in co-operation with the Home Office's Police Scientific Development Branch (PSDB), aims to investigate the benefits of an integrated technology approach to reducing crime using two case study schools. These case studies and the Crime Reduction Toolkit will be used as a model by other schools, and may help reduce the cost and fear of crime in and around schools. The technologies used in the study were selected to address the specific security problems identified in the two schools. These technologies are:

- Access control systems, which prevent unauthorized access to buildings, thus protecting pupils and staff from abuse or assault.
- Closed-Circuit Television (CCTV), which can monitor inside and outside buildings, alerting staff to intruders and protecting property. Recordings from CCTV can also be used as evidence in assault cases.

- Radio Frequency Identification (RFID) tagging technology, which enables all property to be tracked, aiding the location and identification of stolen property.
- Biometric sensors, which are capable of uniquely identifying individuals, thus controlling access to key assets or areas, such as computer facilities (Bissell, 2004).

Bissel (2004) reports that the programme has had a high level of success and can be considered a best practice because it is well monitored and can be implemented in other schools within UK.

Shaw (2001), in an examination of approaches to school safety employed by Australia, Belgium, France, and the United Kingdom, revealed a number of emerging trends. These include the following:

- Framing the issues more on school safety and less on school violence.
- Linking school safety with the needs of victims and victimizers and to healthy behaviours.
- Changing emphasis from a reactive or punitive focus on perpetrators of school violence to proactive approaches.
- Shifting from physical, situational prevention or school expulsion to comprehensive approaches that use a range of policies and programs.
- Using programs geared both to problem students and to the entire school population, teachers, and families.
- Developing school-community partnerships.
- Targeting at-risk schools using evaluated model programs.
- Involving young people in the assessment of problems and project design.

2.4 Approaches to School Safety in Africa

The education system in most countries in Africa is facing monumental challenges. This is mainly due to resource inefficiencies and misallocations in the composition of public spending across educational levels. Many countries, especially in sub-Saharan Africa, have crowded classrooms, poor school infrastructure and inadequate learning environments.

In South Africa, violence among young people, especially in schools, has become a major prevention priority. Young people under age 25 make up 53 percent of the population. High levels of violence, racism, crime, poverty, and lack of jobs and job skills have focused attention on the need to develop a preventive strategy through schools to counter violence in schools. A joint national framework for intervention was initiated in 1999 (Roper, 2008). Youth Violence in Schools focuses on tackling the underlying causes of youth violence by targeting those schools with the greatest problems, developing community policing around schools, and developing community action around schools.

These objectives are aided by a data engine – improved national and local information – to monitor and evaluate problems and progress. Projects based on the model and other works are summarized by Shaw (2001) as including the following:

- The Crime Reduction in Schools Program (CRISP) in Durban.
- The School Watch program in Kwa Zulu-Natal, which has had a marked impact on the prevention of offending and victimization.
- The Safer Schools programs being developed by the federal Department of Education and provincial governments.

- The comprehensive Safe School Policy in 40 schools, which was developed by the Centre for the Study of Violence and Reconciliation (CSVR).26
- The guides, training, resources, and programs on school violence prevention being produced by national and provincial governments and non-government organizations (Shaw, 2001).

In Algeria, school buildings have suffered considerable damage in earthquakes. According to Benouar & Laradi (1996), during the 20th Century, earthquakes claimed at least 10,000 lives, injured about 27,000 and made homeless approximately 550,000 others. In addition to building collapse due to earthquakes, considerable damage from liquefaction and landslides was observed. Bendimerad (2004) notes that a number reports show the deficiencies in design, construction techniques, and materials (poor quality of concrete) with respect to particular earthquakes. The following typical damage to school buildings has been recorded in recent earthquakes:

- Rupture of staircases
- Destruction of joints
- Destruction of short columns
- Damage in Masonry
- ‘Pancake’ collapse due to weak columns, overly strong beams and heavy roofs composed of reinforced concrete slabs (Bendimerad 2004).

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Bendimerad (2004) further states that such damage causes enormous financial loss to the government. For instance, he quotes the National Ministry of Education as indicating that, after the Boumerdes earthquake disaster of 2003 in the provinces of Boumerdes and Algiers 100 primary schools had to be rebuilt completely for the sum of US\$ 4.28 million and 253 rehabilitated for \$10.65 million. In addition, 12 junior

high schools were completely rebuilt for the sum of \$10.28 million and 111 rehabilitated for \$20.85. Also, 10 high schools were rebuilt for the sum of \$21.42 million, and 58 were rehabilitated for \$12 million.

Fortunately, so far these destructive earthquakes have occurred after school hours or on weekends, and thus no loss of life or injuries have been recorded at schools in Algeria (Bendimerad, 2004). This good luck may have made government and the civil society alike less aware of the high vulnerability of the schools. It may also go some way toward explaining why there has so far been no implementation of a Ministerial instruction dating from 1989 that required application of “technical expertise and the eventual reinforcement of all public buildings and in particular schools and universities”. As a matter of fact, the introduction of new materials such as reinforced concrete in the absence of proper seismic resistant design, building codes and enforceable regulations has increased the risk to structures and their occupants (Bendimerad, 2004).

2.5 Approaches to school Safety in Kenya

In Kenya, the Ministry of Education (2007) recognizes a number of threats to school safety. Threats to school safety can emanate internally, that is, within the schools environment or externally, that is, from the wider community. Key among the threats to school safety as identified in the *Safety and Standards Manual* (Ministry of Education, 2007) are: accidents, school violence and harassment, lack of adequate health care and nutrition, armed conflict and insecurity, and hostile school environment.

The general objective of school safety in Kenya, as captured in the *Safety and Standards Manual* (Ministry of Education, 2007), is to create and maintain a safe, secure and caring environment, that facilitates and enhances quality teaching and learning processes in primary schools in the country. The safety and standards manual gives guidelines on safety on school grounds, school infrastructure, health and hygiene safety, school environment safety, food safety, safety against drug and substance abuse, teaching and learning environment, socio-cultural environment of the school, special needs children, safety against child abuse, transportation safety, disaster and emergency preparedness, and school community relations. Since this study will only concern itself with safety of school buildings, the guidelines related to school infrastructure are given in Appendix 5.

No studies were identified by the researcher on the status of implementation of the MoEST guidelines on safety standards in secondary schools in Kenya. However, some literature exists which may shed light on the situation of safety in Kenyan schools.

Dierkx (2004), in a study conducted in Nairobi schools, found that the city schools were characterized by adverse environmental conditions: flooded schools; excessive noise (traffic, industry); excessive odour (dumps, industry); solid/ fluid waste (small enterprises, sewers); polluted rivers (toxic waste); poor school conditions; and poor municipal services. The study by Dierkx also revealed that information about sustainable building is not available.

In 2007, the School Sanitation and Hygiene Education working group carried out rapid assessment in a sample of public schools in Nairobi, Machakos, Kajiado and Kiambu districts. In addition, the group talked to sector professionals and policy

makers. The main finding of the assessment, as summarized by Kirimi (2007), was that school toilet standards are not met. The Ministry of Health recommends a minimum of 1 toilet to 25 girls and 1 toilet to 30 boys. This assessment found that on average 64 children shared one toilet. Schools in the Arid and Semi Arid Lands (ASALs) were worst hit both by water supply and sanitation provision. Up to 104 children share one latrine in North Eastern Province.

In most schools, the toilets for girls and boys are semi-separated (back-to-back design), shared or constructed close together. Experience shows that when girls reach puberty, they drop out of school due to the embarrassment of having to share latrines with boys, or because the facilities do not give them privacy and dignity. A UNICEF report shows that 1 in 10 school-age girls do not attend school during menstruation. The assessment further showed that even where a fair number of latrines existed, their condition was deplorable. Maintenance and proper use were found to be poor. Toilets without proper doors, or means of locking from inside were common (Kirimi, 2007). The assessment further established that schools had no flowing water or hand-washing facilities. Over 90% of schools in rural Kenya lack a source of safe water and do not have even the simplest hand washing facility. There is plenty of water during the wet season, but the quality of this water is poor (Kirimi, 2007).

School planning has been shown to have serious implications on sanitation and hygiene. Sanitation, hygiene and education are Millennium Goals to be realized while protecting the environment. Yet, as Dierkx (2002) found out, Kenya's urban conditions create hurdles for children to get quality education, and form barriers to school planning. Top-down approaches are used in school planning, and innovation of climate/cultural-fit and cost-effective school plans is lacking. According to Dierkx (2004), the plans mostly from 1970/1980s have not been adapted to improve on

energy-efficiency, cost-effectiveness, aesthetics, flexibility and adoptability to suit current learning systems, and comfort of the users. Yet, the government acknowledges a need for better school environments. A Commission of Inquiry on Kenya's Education System (Republic of Kenya, 1999) attributed declining standards of education in part to poor school environments. These barriers influence the quality of learning and school environments.

In the year 2008, Kenya has witnessed very many cases of strikes by students in Kenyan secondary schools. In some of these cases school buildings, among them classrooms, dormitories and office blocks have been burnt. Following safety standards guidelines may help to mitigate the effects of such and other natural disasters such as earthquakes, storms and lightning. This study therefore aims at assessing the current status of implementation of the MoEST guidelines on safety standards in secondary schools in Ngong Division in Kajiado District.

2.6 Summary

This chapter covered literature related to school safety and the approaches to school safety in Europe, in Africa and in Kenya. Literature from countries outside Africa has revealed models of school safety that aim at addressing disasters such as earthquakes and school violence. Literature from Africa revealed that models like those in countries outside Africa are lacking, but schools face safety threats. In Kenya, the government has attempted to address the threat of school safety by issuing safety standard guidelines to schools. What was not clear is the status of implementation of the guidelines. At the same time, literature on school safety standards in Kenyan secondary schools was not available. To fill these two gaps, this study assessed the current status of implementation of the MoEST guidelines on safety standards in secondary schools in Ngong Division in Kajiado District.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section discusses the research design, target population, sample and sampling procedure, research instruments, validity and reliability of the instruments, data collection and data analysis procedure.

3.2 Research Design

This study used a survey design to investigate the current status of implementation of the MoEST guidelines on safety standards in secondary schools in Ngong Division in Kajiado District. Survey designs are used in preliminary and exploratory studies to allow researchers to gather information, summarize, present and interpret for the purpose of clarification (Orodho 2002).

Borg and Gall (1989) noted that survey research is intended to produce statistical information about aspects of education that interest policy makers and educators. By involving a broad category of principals and teachers, the proposed study fits within the cross-sectional sub-types of descriptive survey study designs.

3.3 Locale of Study

The locale of the study was Ngong Division of Kajiado District, Kenya. Singleton (1993) noted that the ideal setting for any study should be easily accessible to the researcher and should be that which permits instant rapport with the informants. As such, Ngong Division of Kajiado District was chosen because it was easily accessible to the researcher. Also, no similar research had been carried out in the district.

3.4 Target Population

The target population is defined as all the members of a real or hypothetical set of people, events or objects to which a researcher wishes to generalize the results of the research study (Borg and Gall, 1989). The target population for this study consisted of all the 16 public secondary schools in Ngong Division of Kajiado District. Of these, there were 3 boys' boarding schools, 5 girls' boarding schools and 8 mixed day schools.

3.5 Sample and Sampling Procedures

A sample is a small portion of a target population. Sampling means selecting a given number of subjects from a defined population as representative of that population. Any statements made about the sample should also be true of the population (Orodho 2002). It is however agreed that the larger the sample the smaller the sampling error.

The researcher employed random sampling to select 10 secondary schools from Ngong Division. This made 62.5% of the 16 schools in the district. From each school, the headteacher and four teachers randomly selected from all the teachers in that school participated in the study. Random sampling was used to select 20 students per school (5 each from forms one to four). In mixed gender schools, stratified random sampling was used to ensure that equal number of boys and girls were selected. Therefore the study sample comprised of 10 headteachers, 40 teachers, and 186 students from 10 secondary schools in Ngong Division.

3.6 Research Instruments

Four tools study were used for data collection: a questionnaire for headteachers, a questionnaire for teachers, a questionnaire for students, and an observation schedule.

Questionnaires are the most commonly used when respondents can be reached and are willing to co-operate. The method can reach a large number of subjects who know how to read and write independently (Peil, 1995). According to Lovele and Lawson (1970), questionnaires are widely used in educational studies to obtain information about current conditions and practices. They assist in making enquiry concerning attitudes and opinions quickly and in precise form. Two questionnaires were employed in the study, one for the principals and the other for teachers. The questionnaires each had two parts: part one collected on demographic data of the schools; while part two was on status of implementation of MoEST guidelines on safety standards in secondary schools.

The observation schedule, on the other hand, helped the researcher to confirm what the study participants responded in the questionnaires for validation. The researcher made observations on the condition of physical facilities in schools following the MoEST guidelines on safety standards in secondary schools.

3.7 Instrument Validity and Reliability

Mugenda and Mugenda (1999) define reliability as a measure of the degree to which a research instrument yields consistent results or data after repeated trial. To enhance reliability of the instruments, a pilot study was conducted in two secondary schools in Ngong Division, but which were not used in the final study. The reason behind pre-testing was to assess the clarity of the questionnaire items so that those items found to be inadequate or vague were modified to improve the quality of the research instrument thus increasing its reliability.

Validity is defined as the accuracy and meaningfulness of inferences, which are based on the research results (Mugenda and Mugenda, 1999). In other words, validity is the

degree to which results obtained from the analysis of the data actually represents the phenomena under study. Validity according to Borg and Gall (1989) is the degree to which a test measures what it purports to measure.

According to Borg and Gall (1989), validity of an instrument is improved through expert judgment. As such, the researcher sought assistance of research experts, experienced graduates, lecturers and experienced supervisors in order to help improve validity of the instrument.

3.8 Data Collection Procedure

A research permit was obtained from the Ministry of Education (MOE). Thereafter the office of the District Education Officer, (DEO) Kajiado was contacted before the start of the study. The selected schools were visited and the questionnaire administered to the respondents. The researcher personally administered the questionnaires to the headteachers, teachers and students. The respondents were assured that strict confidentiality would be maintained in dealing with the responses. The filled-in questionnaires were collected immediately after respondents finish filling in. As the teachers and headteachers responded to the questionnaires, the researcher moved around the school making observations on the status of physical facilities in relation to safety.

3.9 Data Analysis

Data collected from the field was coded and entered into the computer for analysis using the Statistical Package for Social Sciences (SPSS). As Martin and Acuna (2002) observe, SPSS is able to handle large amount of data, and given its wide spectrum of statistical procedures purposefully designed for social sciences, it is also quite efficient. Data to be collected was of both qualitative and quantitative nature.

Descriptive statistics including percentages and frequency counts were used to analyze the quantitative data obtained. Bell (1993) maintains that when making the results known to a variety of readers, simple descriptive statistics such as percentages have a considerable advantage over more complex statistics. Borg and Gall (1989) also hold that the most widely used and understood standard proportion is the percentage. Qualitative data was analyzed by arranging responses according to the research questions and objectives.

1. What is the level of knowledge of the National Curriculum Framework for Mathematics among teachers and students in public secondary schools in Kenya?
2. What is the state of implementation of mathematics in public secondary schools in Kenya?
3. What are the major factors that hinder effective implementation of mathematics in public secondary schools in Kenya?
4. What are the suggested strategies through which the implementation of mathematics in public secondary schools in Kenya can be improved?

4.3 Background data of the study area

This study used a survey design to investigate the extent of the implementation of the NCWF guidelines on mathematics in secondary schools in Kiunga Division in Nairobi District. The survey was done in the first semester of 2011 in all the 16 public secondary schools in Kiunga Division of Nairobi District. The study sample consisted of 10 headteachers and 10 teachers from 10 secondary schools in Kiunga Division. Out of the 200 respondents, 79 (42.5%) were males while 121 (57.5%) were females. Figure 4.1 shows the age distribution of the students.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the study results and discussions. The purpose of the study was to assess the current status of implementation of the MoEST guidelines on safety standards in secondary schools in Ngong Division in Kajiado District. This study was guided by the following research questions which are all tackled in this chapter:

1. What is the status of knowledge of the MoEST safety guidelines among the institutional headteachers, teachers and students?
2. What are teachers and students attitude toward aspects of the safety guidelines?
3. What is the status of implementation of safety guidelines in schools?
4. What are the main factors that hinder effective implementations of these guidelines in public secondary schools in Kenya?
5. Which are the suggested ways through which safety standards in public secondary schools in Kenya can be improved?

4.2 Background data of the respondents

This study used a survey design to investigate the current status of implementation of the MoEST guidelines on safety standards in secondary schools in Ngong Division in Kajiado District. The target population for this study consisted of all the 16 public secondary schools in Ngong Division of Kajiado District. The study sample comprised of 10 headteachers, 40 teachers, and 186 students from 10 secondary schools in Ngong Division. Among the student respondents, 79 (42.5%) were males while 107 (57.5%) were females. Figure 4.1 shows the age distribution of the students.

Figure 4.1: Age Distribution of the students

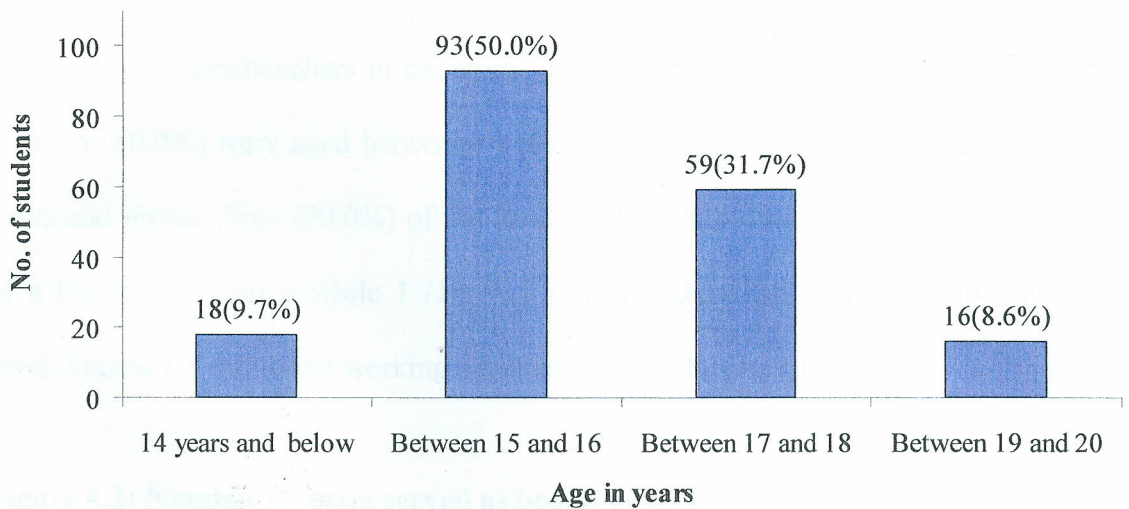


Figure 4.1 above shows that 18 (9.7%) of the students indicated that they were aged 14 and below, 93 (50.0%) indicated between 15 and 16 years, 59 (31.7%) indicated between 17 and 18 years while 16 (8.6%) were aged between 19 and 20 years.

Out of the 40 teachers who took part in the study, 14 (35.0%) were males while 26 (65.0%) were females. Eleven 11 (27.5%) of the teachers indicated that they were between 31 and 35 years old, 11 (27.5%) indicated 36 – 40 years, 9 (22.5%) indicated 41 – 45 while 9 (22.5%) indicated that they were above 45 years. Table 4.1 shows the academic qualifications of the teachers.

Table 4.1: Academic qualifications of teachers

Academic Qualifications	No. of teachers	Percent
Diploma	4	10.0
B.Ed	28	70.0
BA/BSc with PGDE	3	7.5
Masters	5	12.5
Total	40	100.0

Table 4.1 shows that the teachers had different levels of education; 4 (10%) of the teachers indicated that they had studied up to diploma level, 28 (70.0%) were B.Ed

holders, 3 (7.5%) had BA/BSc with PGDE while 5 (12.5%) were holders of a Masters Degree.

Among the 10 headteachers in the study, one (10.0%) was aged between 30 and 39 years, 5 (50.0%) were aged between 40 and 49 years while 4 (40.0%) were aged 50 years and above. Nine (90.0%) of the head teachers indicated that they were holders of a Bachelor's degree while 1 (10.0%) indicated they had studied up to diploma level. Figure 4.2 shows the working experience of the headteachers.

Figure 4.2: Number of years served as headteachers

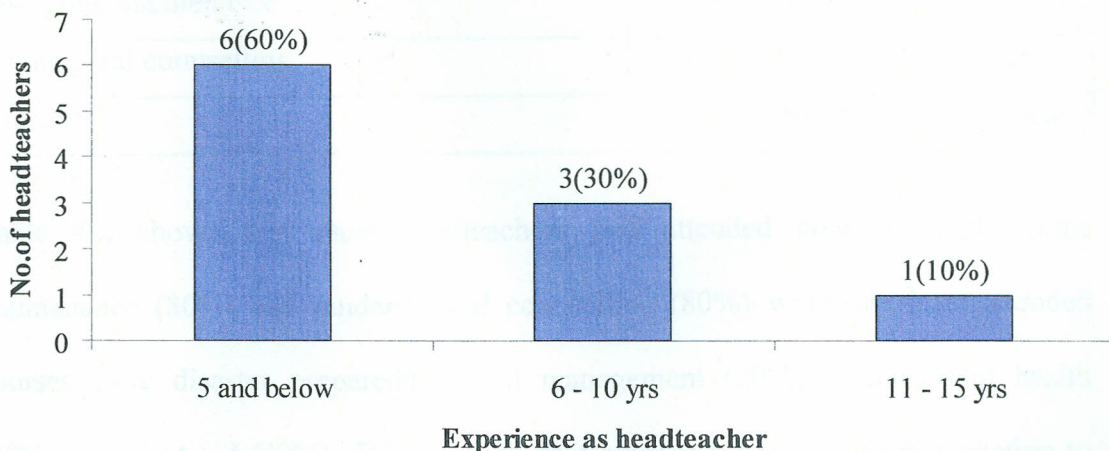


Figure 4.2 shows that 6 (60%) of the headteachers had served as school heads for 5 years or less in their current schools, 3 (30.0%) indicated 6 – 10 years while 1 (10.0%) indicated 11 – 15 years.

4.3 The Status of Knowledge of MoEST Safety Guidelines

The first objective was to find out the status of knowledge of the MoEST safety guidelines among the institutional headteachers, teachers and students in secondary schools in Ngong Division in Kajiado District.

4.3.1 Knowledge of MoEST Safety Guidelines among Headteachers

Only 3 (30%) of the headteachers indicated that they owned a copy of the safety standards manual for schools from the Ministry of Education, while 7 (70.0%) reported that they did not have one. Table 4.2 shows the courses attended by headteachers that have relevance to school safety.

Table 4.2: Training courses attended by headteachers

Courses attended	Attended		Not attended	
	F	%	F	%
Disaster preparedness and management	2	20.0	8	80.0
Occupational health	3	30.0	7	70.0
Discipline maintenance	8	80.0	2	20.0
Guiding and counselling	8	80.0	2	20.0
First aid	4	40.0	6	60.0

Table 4.2 shows that most headteachers had attended courses in discipline maintenance (80%) and guidance and counselling (80%) while the least attended courses were disaster preparedness and management (20%), occupational health (30%), and first aid (40%). This suggests that courses that were of great relation to school safety were not tackled. Based on the results above, it emerges that institutional headteachers in Ngong Division had not been adequately equipped with knowledge and skills related to school safety, and only 30% of the schools had copies of the school safety standards manual.

4.3.2 Knowledge of MoEST Safety Guidelines among Teachers

Only 4 (10.0%) of the teachers indicated that they had read the safety standards manual for schools by the MoE while 36 (90.0%) said they had never come across the manual. Table 4.3 shows the proportion of teachers who had attended training courses that have relevance to school safety.

Table 4.3 Training courses attended by teachers

Courses attended	Attended		Not attended	
	F	%	F	%
Disaster preparedness and Management	2	5.0	38	95.0
Occupational Health	0	0.0	40	100.0
Discipline Maintenance	10	25.0	30	75.0
Guidance and Counselling	16	40.0	24	60.0
First Aid	8	20.0	32	80.0

Table 4.3 shows that most teachers had not attended most of the courses with relevance to school safety. As much as some of them attended courses in guidance and counselling (40%) and discipline maintenance (25%), the numbers that had attended most of the courses were too low, with none having attended courses on occupational health, only 5% had attended courses on disaster preparedness and management, and only 20% had attended first aid training. In addition, majority (82.5%) of the teachers indicated that they were not aware of all safety precautions that schools should take to avert accidents and disasters and only a small number of 7 (17.5%) said that they were aware. This shows that teachers, like the headteachers, were also not exposed to knowledge and skills on school safety.

4.3.3 Knowledge of MoEST Safety Guidelines among Students

The students were asked to indicate whether they were aware of what to do in case they found themselves in various situations relating to safety in schools, to which they responded as shown in Table 4.4.

Table 4.4 Students' Awareness of safety precautions

Safety issue	I know		I don't know	
	F	%	F	%
What to do in case a fire breaks out in the classroom	57	30.6	129	69.4
What to do to prevent myself from injuries	151	81.2	35	18.8
How to give first aid to an injured friend	125	67.2	61	32.8
Where the emergency doors are located	83	44.6	103	55.4
How to use emergency doors in an emergency	76	40.9	110	59.1
How to fight using fire extinguishers	42	22.6	144	77.4

As shown in Table 4.4, most students knew how to prevent themselves from injuries (81.2%) and they knew how to give first aid to injured colleagues (67.2%). This suggests that they understood the basics in case of an emergency. However, most of them did not know how to use emergency items like fire extinguishers (77.4%) and emergency doors (59.1%) and hence they did not know what to do in case of fire breaks.

This shows that majority of the students were not aware of most safety precautions. This is contrary to recommendations by authorities in the area of health and safety, such as Cole, et al. (2008), who propose adequate preparedness through training and activities such as fire drills for all members of the school community.

4.4 Attitudes toward Aspects of Safety Guidelines

The second objective was to find out the headteachers, teachers and students attitude towards certain aspects of the safety guidelines in secondary schools in Ngong Division in Kajiado District.

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4.4.1 Attitudes of Headteachers toward Safety Guidelines

The headteachers were presented with 9 items to measure their attitudes toward various aspects of the safety guidelines. Table 4.5 shows how they responded on each item.

Table 4.5 Attitudes of headteachers towards safety guidelines

Statement	Strongly agree		Agree		Disagree		Strongly disagree	
	F	%	F	%	F	%	F	%
Following MoE safety standards can prevent most accidents in schools	5	50.0	4	40.0	0	0.0	1	10.0
No matter how schools administrators try, disasters will still happen	1	10.0	5	50.0	1	10.0	3	30.0
Indiscipline is to blame for most deaths that occur as a result of school fires	6	60.0	1	10.0	3	30.0	0	0.0
Following safety standards is not possible due to lack of resources	1	10.0	3	30.0	2	20.0	4	40.0
Schools should be inspected frequently on adherence to safety standards	8	80.0	2	20.0	0	0.0	0	0.0
Most of the MoE safety standards cannot be implemented practically.	1	10.0	3	30.0	1	10.0	5	50.0
Even if safety standards were strictly implemented, safety cannot be assured	2	20.0	4	40.0	3	30.0	1	10.0
The school can do more to improve safety	7	70.0	3	30.0	0	0.0	0	0.0
Training on safety standards for school administrators is very important.	10	100.0	0	0.0	0	0.0	0	0.0

As shown in Table 4.5 all the 10 (100%) headteachers agreed or strongly agreed that schools should be inspected more frequently on adherence to safety standards, schools can do more to improve safety situation and that training on safety standards for school administrators is very important. Nine (90%) of the headteachers agreed that following MoE safety standards can prevent most of the accidents that happen in schools. Sixty percent (60%) of the headteachers indicated that no matter how school

administrators try, disasters will still happen; 70% agreed that indiscipline of students is to blame for most deaths that occur as a result of school fires; and 60% agreed that even if safety standards were strictly implemented, safety of students cannot be assured.

The table also shows that 40% of the headteachers agreed that following safety standards is not possible due to lack of resources and that most safety standards cannot be implemented practically.

Figure 4.3 shows the overall attitudes of headteachers towards school safety guidelines.

Figure 4.3: Headteachers' attitudes toward safety guidelines

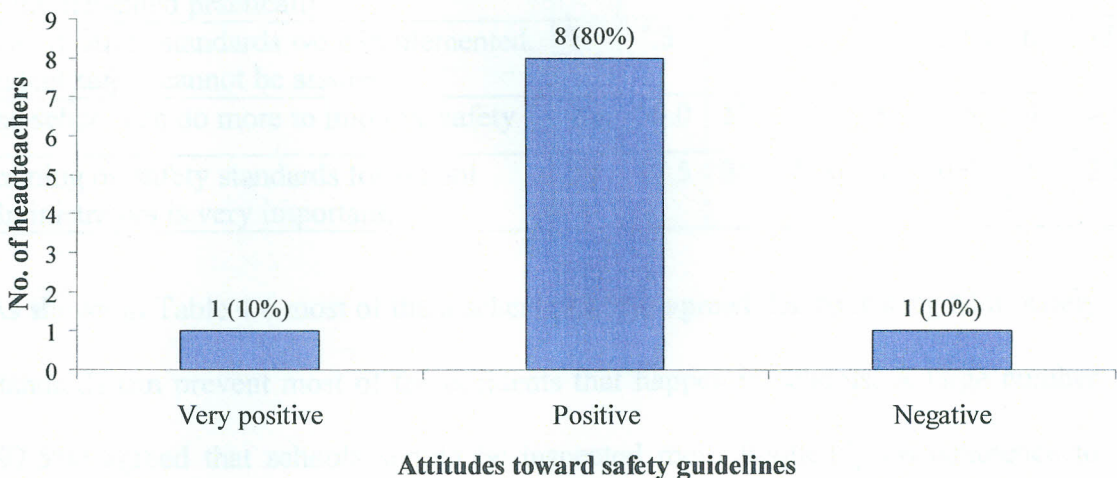


Figure 4.3 shows that 10% of the headteachers had very positive attitudes, 80% had positive attitudes, while 10% had negative attitudes toward safety guidelines. This shows that majority of the headteachers had positive attitudes towards school safety guidelines. Attitudes are important because they predict behaviour. If the positive attitudes are coupled with training and the necessary resources, headteachers can promote safety behaviour in their schools.

4.4.2 Attitudes of Teachers toward Safety Guidelines

Table 4.6 indicates the attitudes of teachers towards various safety guidelines.

Table 4.6 Attitudes of teachers towards various Safety Guidelines

Attitude	Strongly Agree		Agree		Disagree		Strongly Disagree	
	F	%	F	%	F	%	F	%
Following safety standards can prevent most accidents that happen in schools	16	40.0	21	52.5	2	5.0	1	2.5
No matter how schools administrators try, disasters will still happen	5	12.5	18	45.0	8	20.0	9	22.5
Indiscipline of students is to blame for most deaths that occur as a result of school fires	17	42.5	13	32.5	4	10.0	6	15.0
Following safety standards is not possible due to lack of resources	7	17.5	20	50.0	8	20.0	5	12.5
Schools should be inspected more frequently on adherence to safety standards	21	52.5	18	45.0	1	2.5	0	0.0
Most of the MoE safety standards cannot be implemented practically.	10	25.0	13	32.5	11	27.5	6	15.0
Even if safety standards were implemented, student safety cannot be assured	1	2.5	21	52.5	12	30.0	6	15.0
The school can do more to improve safety	20	50.0	17	42.5	3	7.5	0	0.0
Training on safety standards for school administrators is very important.	31	77.5	8	20.0	0	0.0	1	2.5

As shown in Table 4.6 most of the teachers (92.5%) agreed that following MoE safety standards can prevent most of the accidents that happen in schools. A large number (97.5%) agreed that schools should be inspected more frequently on adherence to safety standards. More than 90% of the teachers concurred that the schools can do more to improve safety situations. In addition, almost all teachers, (97.5%), agreed that training on safety standards for school administrators is very important. Majority of them (75%) said that indiscipline of students is to blame for most deaths that occur as a result of school fires.

Teachers at the margin of 50% agreed with the statements that no matter how schools administrators try, disasters will still happen; following safety standards is not

possible due to lack of resources; most of the MoE safety standards cannot be implemented practically and even if safety standards were strictly implemented, safety of students cannot be assured. According to (Ministry of Education, 2007), it is the responsibility taken by pupils, staff, parents and sponsors to foster all-round safe living.

Figure 4.4 shows the overall attitudes of teachers toward safety guidelines.

Figure 4.4: Teachers' attitudes toward safety guidelines

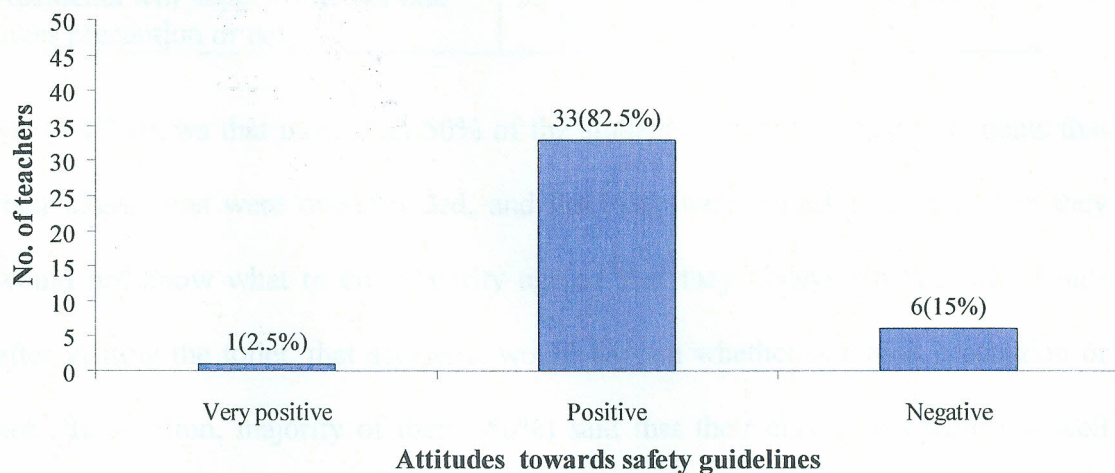


Figure 4.4 shows that 1(2.5%) of the teachers had very positive attitudes, 33(82.5%) had positive attitudes, while 6(15%) had negative attitudes toward safety guidelines. This shows that majority of the teachers had positive attitudes towards safety guidelines.

4.4.3 Attitudes of Students towards Safety guidelines

The students were presented with various statements regarding safety guidelines, whereby they were to indicate the extent to which they agree or disagree with the statements. Their responses are shown in Table 4.7.

Table 4.7 Views of students about safety guidelines

Students' views	Strongly agree		Agree		Disagree		Strongly disagree	
	F	%	F	%	F	%	F	%
The classrooms are well ventilated	28	15.1	9	4.8	42	22.6	107	57.5
My classroom is overcrowded	19	10.2	85	45.7	59	31.7	23	12.4
I am afraid in case of fire I would not know what to do	27	14.5	75	40.3	61	32.8	23	12.4
I always wash my hands after visiting the toilet	47	25.3	113	60.7	11	5.9	15	8.1
I would want to attend first aid classes	48	25.8	115	61.8	14	7.5	9	4.8
Accidents will happen whether one takes precaution or not	35	18.8	86	46.2	48	25.8	17	9.1

Table 4.7 shows that more than 50% of the students agreed with the statements that their classrooms were overcrowded, and that they were afraid in case of fire they would not know what to do. Majority agreed that they always washed their hands after visiting the toilet, that accidents would happen whether one took precaution or not. In addition, majority of them (80%) said that their classrooms were not well ventilated.

However, a good number of them (87.6%) said they would want to attend first aid classes and equip themselves on what to do in case of an emergency. Attention of overcrowded classrooms should be put into consideration by the headteachers. Fire disasters could be attributed to overcrowded and not well ventilated classrooms and also lack of awareness of what to do in case of fire by the students.

Table 4.8 shows whether students have been taught how to use the following items given.

Table 4.8: Training received by students on safety

Areas of training	Yes		No	
	F	%	F	%
Fire extinguishers	21	11.3	165	88.7
Emergency doors	42	22.6	144	77.4
Fire alarms	12	6.5	174	93.5
Emergency signs e.g. exit routes	37	19.9	149	80.1
Assembly points in case of emergencies	25	13.4	161	86.6

As indicated in Table 4.8, majority of the students indicated that they had not been taught how to use all the emergency items such as fire extinguishers, emergency doors, fire alarms, emergency signs e.g. exit routes, and assembly points in case of emergencies. Additionally, only 8 (4.3%) of the students agreed that they had conducted a fire drill in their schools while 178 (95.7%) said that they had not conducted any. As a result, most of them would not know how to handle emergencies once they occur.

4.5 Status of Implementation of the MoEST Safety Guidelines

The third objective of the study was to find out the status of implementation of the MoEST guidelines on safety in secondary schools.

Table 4.9 indicates the status of implementation of the MoEST safety guidelines in the class rooms.

Table 4.9 Status of Implementation of Safety Guidelines in the classrooms

Safety guidelines in the Classrooms	Fully Implemented		Partially Implemented		Not Implemented	
	F	%	F	%	F	%
The size of the classroom (length/width) is as specified in the MoE building specifications	7	70.0	3	30.0	0	0
Doorways are adequate for emergency purposes	10	100.0	0	0	0	0
Doorways open outwards and are not locked from outside at any time when students are inside.	9	90.0	0	0	1	10.0
The corridors are well ventilated and lit	10	100.0	0	0	0	0
The width of corridors is wide enough for students to walk along without bumping into each other.	10	100.0	0	0	0	0
Classroom windows are without grills and are easy to open	3	30.0	4	40.0	3	30.0
The classroom are properly lit and ventilated	8	80.0	1	10.0	1	10.0
The floors are level and kept clean always	9	90.0	0	0	1	10.0
Each classroom block is fitted with serviced fire extinguishers	1	10.0	6	60.0	3	30.0
Regular inspection of buildings is carried out and immediate measures taken to correct any problem noticed	6	60.0	1	10.0	3	30.0
Furniture in the classrooms are appropriate for use without risk of injuries	9	90.0	0	0	1	10.0
Teachers ensure that arrangement of desks facilitates easy movement of students in the classroom.	7	70.0	0	0	3	30.0

Table 4.9 shows that all the headteachers, (100%), confirmed that doorways were adequate for emergency purposes, the corridors were well ventilated and lit and that the width of corridors was wide enough for students to walk along without bumping into each other. Nine (90%), of the headteachers said that doorways opened outwards and were not locked from outside at any time when students were inside, the floors were level and kept clean always and furniture in the classrooms were appropriate for

use without risk of injuries. Eight (80%) of the headteachers established that the classrooms were properly lit and ventilated. Seven (70%) stated that the size of the classroom (length/width) was as specified in the MoE building specifications and that class teachers ensured that the desks were arranged in a manner that facilitates easy and orderly movement of students in the classroom. Six (60%) said that regular inspection of classrooms, halls and stairways was carried out and immediate measures taken to correct any problem noticed. A very small number (less than 50%) of headteachers acknowledged that each classroom block was fitted with serviced fire extinguishers and that classroom windows were without grills and were easy to open. This explains that most of the MoEST safety guidelines were adequately adhered to. The areas that need to be looked at are availability of proper furniture and that it is arranged properly for easy movement. Doorways should open outwards, classroom windows should be without grills, classroom should be properly lit and ventilated, floors should be level and kept clean always, each classroom block should be fitted with serviced fire extinguishers and regular inspection of classrooms, halls and stairways should be carried out.

Another area of concern was dormitories. Only four schools had boarding facilities and therefore responses on status of implementation of MoEST safety guidelines in the dormitories were from 4 out of the 10 headteachers. Table 4.10 shows the status of implementation of MoEST safety guidelines in the dormitories.

Table 4.10 Status of Implementation of MoEST Safety Guidelines in the dormitories

Safety guidelines in Dormitories	Fully Implemented		Partially implemented		Not Implemented		Not Applicable	
	F	%	F	%	F	%	F	%
The space between the bed is at least 1.2 meters	3	30.0	1	10.0	0	0.0	6	60.0
Corridors/pathways space is not less than 2 meters	4	40.0	0	0	0	0.0	6	60.0
All doorways are wide enough at least 5 feet wide	4	40.0	0	0	0	0.0	6	60.0
All doorways open outwards	4	40.0	0	0	0	0.0	6	60.0
All doorways are never locked from outside when students are inside	4	4.0	0	0	0	0.0	6	60.0
Each dormitory has a door at each end and additional emergency exit	3	30.0	1	10.0	0	0.0	6	60.0
Emergency exit doors are clearly labeled as such	1	10.0	2	20.0	1	10.0	6	60.0
Dormitory doors are always locked when students are away	4	40.0	0	0	0	0	6	60.0
The door keys are kept by dormitory master/mistress or the dormitory prefect	4	40.0	0	0	0	0	6	60.0
Dormitory windows are without grills and are easy to open outwards	3	30.0	0	0	1	10.0	6	60.0
Fire extinguishers are placed at each exit	1	10.0	2	20.0	1	10.0	6	60.0
Fire alarms are fitted at easily accessible points	0	0	1	10.0	3	30.0	6	60.0
Regular spot checks by teachers are undertaken	2	20.0	2	20.0	0	0.0	6	60.0
An accurate roll call is taken every day and records well maintained	3	30.0	1	10.0	0	0.0	6	60.0
There are regular patrols by security personnel	4	40.0	0	0.0	0	0	6	60.0
No visitor is allowed in the dormitory	3	30.0	1	10.0	0	0.0	6	60.0
There is regular inspection of hygiene standards in the dormitories	3	30.0	1	10.0	0	0.0	6	60.0

As shown in Table 4.10, all the headteachers 4(40%) whose schools had dormitories reported that corridors and/or pathways space is not less than 2 meters, all doorways are wide enough at least 5 feet wide, all doorways open outwards, all doorways are never locked from outside when students are inside, dormitory doors are locked at all times when students are away such as in class or the playing fields, the keys to the doors are kept by the dormitory master/mistress or the dormitory prefect and there are regular patrols by the school security personnel or any other authorized school personnel. This ensures the safety of students. Three (30%) of the headteachers reported that the space between the bed is at least 1.2 meters, each dormitory has a door at each end and additional emergency exit at the middle, dormitory windows are without grills and are easy to open outwards, an accurate roll call is taken every day and records well maintained, no visitor is allowed in the dormitory and there is regular inspection of hygiene standards of the dormitories. However, statements that emergency exit doors were clearly labeled 'Emergency Exit' was partially implemented by 2(20%) of the headteachers, Regular spot checks by the teachers and the administration being undertaken before students retire to bed was either partially implemented or fully implemented and fire extinguishing equipment being placed at each exit was partially implemented by 2(20%) of the headteachers. The statement that fire alarms are fitted at easily accessible points was either not implemented at all or was partially implemented.

Table 4.11 illustrates the status of implementation of MoEST safety guidelines in relation to sanitation infrastructure.

Table 4.11 Status of sanitation infrastructure

Sanitation Infrastructure	Fully Implemented		Partially Implemented		Not Implemented	
	F	%	F	%	F	%
Pit toilets are built at least 10 meters away from tuition and boarding facilities on the downwind side	7	70.0	1	10.0	2	20.0
High degree of cleanliness is maintained in all ablution blocks	8	80.0	2	20.0	0	0
Pit latrines are regularly well disinfected	9	90.0	0	0	1	10.0
Girls' sanitation areas are separated and offered complete privacy	5	50.0	2	20.0	3	30.0
Provisions are given to students with special needs	8	80.0	0	0	2	20.0
All sanitary facilities and equipment are in the best state of repair	7	70.0	2	20.0	1	10.0
Running water is provided outside the toilets for cleaning hands	7	70.0	0	0	3	30.0

According to most (over 50%) of the headteachers as indicated in Table 4.11, pit toilets had been built at least 10 meters away from tuition and boarding facilities on the downwind side, high degree of cleanliness was maintained in all ablution blocks, pit latrines were regularly well disinfected, provisions were given to students with special needs, running water was provided outside the toilets for cleaning hands and all sanitary facilities and equipment were in the best state of repair. This shows that sanitation was at a high level in the schools. However, only half (50%) of the headteachers stated that girls' sanitation areas were separated and offered complete privacy.

Table 4.12 shows the status of implementation of MoEST safety guidelines in the libraries.

Table 4.12 Status of Implementation of Safety Guidelines in the libraries

Safety guidelines in the libraries	Fully Implemented		Partially Implemented		Not Implemented	
	F	%	F	%	F	%
Library is located in a place of least noise	8	80.0	2	20.	0	0
Library is well ventilated and safe from invasion by destructive insects and pests	10	100.0	0	0	0	0
Library has adequate lighting	5	50.0	5	50.0	0	0
Wide alleys of passageways are provided to facilitate evacuation	7	70.0	2	20.0	1	10.0
Library is spacious for easy movement	6	60.0	3	30.0	1	10.0
Library books are dusted regularly after every three days	6	60.0	4	40.0	0	0
Bookshelves are properly reinforced and well spaced	4	40.0	5	50.0	1	10.0

Table 4.12 shows that all headteachers reported that libraries were well ventilated and safe from invasion by destructive insects and pests. Only 2 (20%) headteachers established that libraries were not located in a place of least noise. Half (50%) of the headteachers acknowledged that their libraries had adequate lighting. Seven (70%) of the headteachers stated that wide alleys of passageways were provided in the libraries to facilitate evacuation. Six (60%) percent of the headteachers agreed with the statements that libraries were spacious for easy movement and that library books were dusted regularly after every three days. A very small number of headteachers 4 (40%) said that bookshelves were properly reinforced and well spaced. Table 4.12 therefore shows that most of the MoEST guidelines in the libraries had been implemented apart from the fact that bookshelves were not properly reinforced and well spaced.

Table 4.13 shows the status of implementation of MoEST safety guidelines in the administration block.

Table 4.13: Implementation of Safety Guidelines in the administration block

Safety guidelines in the administration Block	Fully Implemented		Partially implemented		Not Implemented	
	F	%	F	%	F	%
There is provision of offices for key school personnel such as principal, deputy, HoDs, bursar	6	60.0	3	30.0	1	10.0
The school has a staff room and registry	5	50.0	5	50.0	0	0
Administration block is centrally located and not far from classrooms	10	100.0	0	0	0	0
The doors and windows are as much as possible burglar proof	9	90.0	0	0	1	10.0
Each administration block has a fire extinguisher	7	70.0	0	0	3	30.0
There are fire-proof cabinets for storage of essential office materials and documents	5	50.0	2	20.0	3	30.0
There is easy access to legal and administrative documents such as the Educational Act	5	50.0	1	10.0	4	40.0

As shown in Table 4.13, all the headteachers established that the administration block was centrally located and not far from classrooms. Ninety percent said that the doors and windows were as much as possible burglar proof, 70% percent established that each administration block had a fire extinguisher, 60% established that there was provision of offices for key school personnel such as the head teachers and deputy teacher, senior teacher, bursar and the supporting secretarial staff while 50% agreed with the statements that the school had a staff room and registry, there were fire-proof cabinets for storage of essential office materials and documents and there was easy access to legal and administrative documents such as the Educational Act, the Children's Act, Sexual Offences Act, the public Health Act, Code of Regulations, School Rules etc. This shows that the safety guidelines were fully implemented by at least 50% of the headteachers.

4.6 Factors hindering effective implementations of school safety guidelines

The fourth study objective was to identify factors hindering effective adherence of these guidelines in public secondary schools. The respondents were asked to indicate the factors that they felt hindered effective implementation of safety guidelines in their schools, to which they responded as shown below:

- Lack of trained personnel to induct students and workers
- Lack of resources such as fire extinguishers
- Some safety standards are not practical for example, with window grill removal; there can be invasion from outside. In addition, with free secondary education, most classes and dorms are overcrowded and therefore the recommended spacing is not possible.
- Lack of proper planning on safety by head teachers
- Ignorance on school safety guidelines
- Lack of security of safety resources within the school

4.7 Recommendations on Ways of Improving School Safety

The fifth objective of the study was to suggest ways in which safety standards in public secondary schools in Kenya can be improved. The respondents were asked to suggest ways through which safety standards in their schools could be improved, to which they suggested that:

- MoE should provide resources specifically for achieving safety standards and thereafter inspecting the schools to ensure adherence
- The safety manual should be made available and training should be made accessible
- Involving the schools in identifying unique security threats to schools
- Unique situations should be handled by the respective individual schools

- Construction and installation of safety equipment should be enacted by law
- Improving and maintaining discipline in schools to avoid disasters
- Employing trained guards who can maintain security and are aware of what to do in case of an emergency

... as well as suggestions

... the observation of the level of ...
 in public schools in Nairobi in Kenya

5.1 Summary of the study

The study objectives were to identify the ... safety ...
 ... the ... health ...
 ... teacher ... attitude toward ...
 ... the status of ... of the MoEST guideline ...
 ... schools, find out ... that hinder effective ...
 ... in public schools in Kenya ...
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 ... discipline maintenance and ...

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter covers the summary of the study, conclusions and recommendations arrived at, as well as suggestions for further studies. The purpose of the study was to find out the assessment of the level of implementation of safety standards guidelines in public secondary schools in Ngong division, Kajiado district, Kenya.

5.2 Summary of the Study

The specific objectives were to identify the status of knowledge of the MoEST safety guidelines among the institutional headteachers, teachers and students, identify the headteachers, teachers and students attitude toward certain aspects of the safety guidelines, the status of implementation of the MoEST guidelines on safety in public secondary schools, find out the main factors that hinder effective implementations of these guidelines in public secondary schools in Kenya and identify the suggested ways through which safety standards in public secondary schools in Kenya can be improved. The study sample comprised of 10 headteachers, 40 teachers, and 186 students from 10 secondary schools in Ngong Division.

The key findings of the study showed that only a few of the headteachers and teachers had a copy of the safety standards manual for schools from the MoE. All headteachers and teachers indicated that they had never attended any course, seminar or workshop on school safety. Only about half of the headteachers and teachers were aware of all safety precautions that schools should take to avert accidents and disasters. The courses that were mostly attended to by both headteachers and teachers were discipline maintenance; and guidance and counselling. These courses however were

not as much of great relation to safety as the courses which were not attended to, that is, disaster preparedness and management; occupational health and first aid.

Most of the students knew the basics of what to do in case of an emergency, for example, how to give first aid to an injured friend and what to do to prevent themselves from injuries. However, most of the students did not know how to use fire extinguishers and therefore said that they would not know what to do in case of fire. In addition, only 8 (4.3%) of the students agreed that they had conducted a fire drill in their schools. Majority of the students had not been taught how to use fire extinguishers, emergency doors, fire alarms, assembly points in case of emergencies and emergency signs e.g. exit routes. Nonetheless, 163 (87.6%) of the students agreed that they would want to attend first aid classes.

Majority of both the headteachers and teachers agreed that training on safety standards for school administrators is very important, indiscipline of students is to blame for most deaths that occur as a result of school fires, schools should be inspected more frequently on adherence to safety standards, the school can do more to improve safety situation and following MoE safety standards can prevent most of the accidents that happen in schools. On the other hand, an average number of both headteachers and teachers agreed with the statements that no matter how schools administrators try, disasters will still happen; even if safety standards were strictly implemented, safety of students cannot be assured; most of the MoE safety standards cannot be implemented practically and following safety standards is not possible due to lack of resources.

5.3 Conclusions

The study established that status of knowledge of the MoEST safety guidelines among the institutional headteachers, teachers and students was poor. This is explained by the fact that all headteachers and teachers had not attended any course, seminar or workshop on school safety, only a few had a copy of the safety standards manual, a few of them were aware of all safety precautions that schools should take to avert accidents and disasters. Most of the students were also not aware of the schools safety guidelines.

Some of the strategies by the government to curtail school safety disasters are said not to be practical and therefore the government should ensure that the guidelines are realistic so as to enhance safety in schools. The government should also ensure that the safety standards guidelines manuals are available in all public schools in order to curb school disasters that are associated with safety. Training related to school safety was not offered. For effective implementation of the safety standards guidelines in public secondary schools, there should be involvement of the government, school administrators, students, parents and the community at large.

5.4 Recommendations

1. The Ministry of Education should commission trained personnel to induct students and workers on school safety.
2. The government should provide resources like safety standards manuals, safety equipment or funds; and training to enhance safety within the schools.
3. There should be proper planning on safety by head teachers. In connection to this, the Quality Assurance and Standards Officers should make sure that schools adhere to safety guidelines.

4. There should be provision of materials and training to reduce ignorance on school safety guidelines.
5. Security of safety resources within the schools should be enhanced by employing security personnel.

5.5 Suggestions for Further Research

1. A similar study could be carried out in other districts in the country to find out whether safety guidelines are adhered to.
2. A study could be carried out to find some of the key safety disasters facing schools and how the government, school authorities, students, parents and the community at large can come in to curtail such crisis.

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Background Information

1. Your gender Male Female

2. Your age in years
 Between 18-24 25-34
 Between 35-44 45-54
 55-64 65-74
 75-84 85+

3. Your education
 Master's
 Bachelor's Degree Diploma
 Other (Specify) _____

4. Type of school
 Boys Boarding Boys Day
 Girls Boarding Girls Day
 Mixed Boarding Mixed Day
 Mixed Day/Boarding
 Other (Specify) _____

5. Experience as a headmaster/ headmistress
 (a) Experience as a headmaster/ headmistress in your current school
 Yes No

Knowledge of Safety Guidelines
 6. Do you have a copy of the safety manual issued by the Ministry of Education?
 Yes No

7. (a) Have you ever used the manual to improve your school's safety?
 Yes No

APPENDIX ONE

QUESTIONNAIRE FOR HEADTEACHERS

This research is meant for academic purpose. Kindly you are requested to provide answers to these questions as honestly and precisely as possible. Responses to these questions will be treated as confidential. Please do not write your name or that of your school anywhere on this questionnaire. Please tick [] where appropriate or fill in the required information on the spaces provided.

Background Information

1. Your gender Male [] Female []
2. Your age in years
 Between 20-29 [] Between 40-49 []
 Between 30-39 [] 50 plus []
3. Level of education
 Master's []
 Bachelor's Degree [] Diploma []
 Other (**Specify**).....
4. Type of school
 Boys Boarding [] Boys Day []
 Girls Boarding [] Girls Day []
 Mixed Boarding [] Mixed Day []
 Mixed Day & Boarding []
 Other (**Specify**)
5. Experience as a headteacher years
6. Experience as a headteacher in the current school years

Knowledge of Safety Guidelines

7. Do you have a copy of the safety standards manual for schools from the Ministry of Education? Yes [] No []
8. (a) Have you ever attended any course, seminar, workshop on school safety? Yes [] No []

(b) If yes, explain briefly the duration of the course and the elements that were covered

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9. Do you consider yourself to be fully aware of all safety precautions that schools should take to avert accidents and disasters? Yes [] No []

10. Have you ever attended any course on: -

- (a) Disaster preparedness and management Yes [] No []
- (b) Occupational health Yes [] No []
- (c) Discipline maintenance Yes [] No []
- (d) Guidance and counselling Yes [] No []
- (e) First aid Yes [] No []

Status of Implementation of MoEST Safety Guidelines

11. In the statements below, indicate the extent to which your school has implemented each of the safety guidelines indicated.

3: Fully implemented **2:** Partially implemented **1:** Not implemented at all

Classrooms	3	2	1
The size of the classroom (length/width) is as specified in the MoE building specifications.			
Doorways are adequate for emergency purposes.			
Doorways open outwards and are not locked from outside at any time when students are inside.			
The corridors are well ventilated and lit.			
The width of corridors is wide enough for students to walk along without bumping into each other.			
Classroom windows are without grills and are easy to open			
The classrooms are properly lit and ventilated.			
The floors are level and kept clean always.			
Each classroom block is fitted with serviced fire extinguishers			
Regular inspection of classrooms, halls and stairways is carried out and immediate measures taken to correct any problem noticed.			
Furniture in the classrooms are appropriate for use without risk of injuries			
Class teachers ensure that the desks are arranged in a manner that facilitates easy and orderly movement of students in the classroom.			

3: Fully implemented

2: Partially implemented

1: Not implemented at all

Dormitories	3	2	1
The space between the beds is at least 1.2 metres			
Corridors and/or pathways space is not less than 2 metres.			
All doorways are wide enough at least 5 feet wide			
All doorways open outwards.			
All doorways are never locked from outside when students are inside.			
Each dormitory has a door at each end and an additional emergency exit at the middle.			
Emergency exit doors are clearly labelled Emergency Exit.			
Dormitory doors are locked at all times when students are away such as in class or the playing fields.			
The keys to the doors are kept by the dormitory master/mistress or the dormitory prefect.			
Dormitory windows are without grills and are easy to open outwards.			
Fire extinguishing equipment are placed at each exit			
Fire alarms are fitted at easily accessible points.			
Regular spot checks by the teachers and the administration are undertaken before students retire to bed.			
An accurate roll call is taken every day and records well maintained.			
There are regular patrols by the school security personnel or any other authorized school personnel.			
No visitor is allowed in the dormitory.			
There is regular inspection of hygiene standards of the dormitories			
Sanitation infrastructure	3	2	1
Pit toilets are built at least 10 metres away from tuition and boarding facilities and on the downwind side.			
High degree of cleanliness is maintained in all ablution blocks.			
Pit latrines are regularly well disinfected.			
Girls' sanitation areas are separated and offered complete privacy.			
Provisions are given to students with special needs			
All sanitary facilities and equipment are in the best state of repair			
Running water is provided outside the toilets for cleaning hands.			
Libraries	3	2	1
Library is located in a place of least noise			
Library is well ventilated and safe from invasion by destructive insects and pests.			
Library has adequate lighting			
Wide alleys of passageways are provided to facilitate evacuation			
Library is spacious for easy movement			
Library books are dusted regularly - after every three days			
Bookshelves are properly reinforced and well spaced			

3: Fully implemented

2: Partially implemented

1: Not implemented at all

Administration Block	3	2	1
There is provision of offices for key school personnel such as the headteachers and deputy teacher, senior teacher, bursar and the supporting secretarial staff.			
The school has a staff room and registry.			
Administration block is centrally located and not far from classrooms.			
The doors and windows are as much as possible burglar proof			
Each administration block has a fire extinguisher			
There are fire-proof cabinets for storage of essential office materials and documents.			
There is easy access to legal and administrative documents such as the Educational Act, the Children's Act, Sexual Offences Act, the Public Health Act, Code of Regulations, School Rules etc.			

Attitudes towards Various Safety Guidelines

12. Indicate the extent to which you either agree or disagree with each of the statements given, using the scale below –

SA: Strongly Agree

A: Agree

D: Disagree

SD: Strongly Disagree

Statement	SA	A	D	SD
Following MoE safety standards can prevent most of the accidents that happen in schools				
No matter how schools administrators try, disasters will still happen				
Indiscipline of students is to blame for most deaths that occur as a result of school fires				
Following safety standards is not possible due to lack of resources				
Schools should be inspected more frequently on adherence to safety standards				
Most of the MoE safety standards cannot be implemented practically.				
Even if safety standards were strictly implemented, safety of students cannot be assured				
The school can do more to improve safety situation				
Training on safety standards for school administrators is very important.				

13. Indicate the factors that hinder effective implementation of school safety guidelines in your school.

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14. Suggest ways in which safety standards in public secondary schools can be improved.

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THANK YOU FOR YOUR PARTICIPATION

1. Gender

2. Age

Below 30 yrs

Between 36 - 45 yrs

Above 45 yrs

3. How long have you been teaching for?

Below one year

2 - 5 years

6 - 10 years

11 - 15 years

16 - 20 years

Above 20 yrs

4. What is the category of your school?

Day

Boarding

Mixed day and boarding

5. What is your current academic qualification?

Diploma

SI

B.Ed

Any other

Knowledge of Safety Standards

6. Do you have a copy of the safety standards for schools from the Ministry of Education? Yes [] No []

7. (a) Have you ever attended a safety training workshop for school safety? Yes [] No []

APPENDIX TWO

QUESTIONNAIRE FOR TEACHERS

This research is meant for academic purpose. Kindly you are requested to provide answers to these questions as honestly and precisely as possible. Responses to these questions will be treated as confidential. Please do not write your name or that of your school anywhere on this questionnaire. Please tick [] where appropriate or fill in the required information on the spaces provided.

Background Information

1. Gender Male [] Female []
2. Age
 Below 30 yrs [] Between 31 – 35 yrs []
 Between 36 – 40 yrs [] Between 41 – 45 yrs []
 Above 45 yrs []
3. Please indicate for how long you have been a secondary school teacher in your teaching career
 Below one year [] 2 – 5 years []
 6 – 10 years [] 11 – 15 years []
 16 - 20 years [] Above 20 years []
4. What is the category of your school?
 Day []
 Boarding []
 Mixed day and boarding []
5. Indicate your current academic qualification
 Diploma [] BA/BSc with PGDE []
 SI [] BA/BSc without PGDE []
 B.Ed [] Masters []
 Any other [**specify**]

Knowledge of Safety Guidelines

6. Do you have a copy of the safety standards manual for schools from the Ministry of Education? Yes [] No []
7. (a) Have you ever attended any course, seminar, workshop on school safety? Yes [] No []

(b) If yes, explain briefly the duration of the course and the elements that were covered

.....

8. Do you consider yourself to be fully aware of all safety precautions that schools should take to avert accidents and disasters? Yes [] No []

9. Have you ever attended any course on: -

- (a) Disaster preparedness and management Yes [] No []
- (b) Occupational health Yes [] No []
- (c) Discipline maintenance Yes [] No []
- (d) Guidance and counselling Yes [] No []
- (e) First aid Yes [] No []

Attitudes towards Various Safety Guidelines

10. Indicate the extent to which you either agree or disagree with each of the statements given, using the scale below –

SA: Strongly Agree **A:** Agree **D:** Disagree **SD:** Strongly Disagree

Statement	SA	A	D	SD
Following MoE safety standards can prevent most of the accidents that happen in schools				
No matter how schools administrators try, disasters will still happen				
Indiscipline of students is to blame for most deaths that occur as a result of school fires				
Following safety standards is not possible due to lack of resources				
Schools should be inspected more frequently on adherence to safety standards				
Most of the MoE safety standards cannot be implemented practically.				
Even if safety standards were strictly implemented, safety of students cannot be assured				
The school can do more to improve safety situation				
Training on safety standards for school administrators is very important.				

11. Indicate the factors that hinder effective implementation of school safety guidelines in your school.

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APPENDIX THREE

QUESTIONNAIRE FOR STUDENTS

This research is meant for academic purpose. Kindly you are requested to provide answers to these questions as honestly and precisely as possible. Responses to these questions will be treated as confidential. Please do not write your name or that of your school anywhere on this questionnaire. Please tick [✓] where appropriate or fill in the required information on the spaces provided.

Background Information

1. Gender Male [] Female []
2. Age Yrs
3. Your Form F1 [] F2 []
 F3 [] F4 []

Knowledge of Safety Measures

4. Indicate whether you know or do not know what to do in the situations indicated in the table below.

Statement	I know	I don't know
What to do in case a fire breaks out in the classroom		
What to do to prevent myself from injuries		
How to give first aid to an injured friend		
Where the emergency doors are located		
How to use emergency doors in case of an emergency		
How to fight fires using fire extinguishers		

Attitudes toward Safety Measures

5. Indicate the extent to which you agree or disagree with each of the statements given below.

Statement	SA	A	D	SD
The classrooms are well ventilated				
My class is overcrowded				
I am afraid in case of fire I would not know what to do				
I always wash my hands after visiting the toilet				
I would want to attend first aid classes				
Accidents will happen whether one takes precautions or not				

6. Has your school ever conducted a fire drill? Yes [] No []
7. Have you ever been taught on how to use the following?
- (a) Fire extinguishers Yes [] No []
 - (b) Emergency doors Yes [] No []
 - (c) Fire alarms Yes [] No []
 - (d) Emergency signs e.g. exit routes Yes [] No []
 - (e) Assembly points in case of emergencies Yes [] No []
8. Which areas related to safety would you like your school to improve on?

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THANK YOU FOR YOUR PARTICIPATION

APPENDIX FOUR

OBSERVATION SCHEDULE

Status of Implementation of MoEST Safety Guidelines

3: Fully implemented

2: Partially implemented

1: Not implemented at all

Classrooms	3	2	1
The size of the classroom is as specified in the MoE building specifications.			
Doorways are adequate for emergency purposes.			
Doorways open outwards			
The corridors are well ventilated and lit.			
The width of corridors is wide enough for students to walk along without bumping into each other.			
Classroom windows are without grills and are easy to open			
The classrooms are properly lit and ventilated.			
Each classroom block is fitted with serviced fire extinguishers			
Furniture in the classrooms are appropriate for use without risk of injuries			
Desks are arranged in a manner that facilitates easy and orderly movement of students in the classroom.			
Dormitories	3	2	1
Corridors and/or pathways space is not less than 2 metres.			
All doorways are wide enough at least 5 feet wide			
All doorways open outwards.			
Each dormitory has a door at each end and an additional emergency exit at the middle.			
Emergency exit doors are clearly labelled Emergency Exit.			
Dormitory windows are without grills and are easy to open outwards.			
Fire extinguishing equipment are placed at each exit			
Fire alarms are fitted at easily accessible points.			
Sanitation infrastructure	3	2	1
Pit toilets are at least 10 metres away from tuition and boarding facilities and on the downwind side.			
High degree of cleanliness is maintained in all ablution blocks.			
Girls' sanitation areas are separated and offered complete privacy.			
Provisions are given to students with special needs			
All sanitary facilities and equipment are in the best state of repair			
Running water is provided outside the toilets for cleaning hands.			

Libraries	3	2	1
Library is located in a place of least noise			
Library is well ventilated and safe from invasion by destructive insects and pests.			
Library has adequate lighting			
Wide alleys of passageways are provided to facilitate evacuation			
Library is spacious for easy movement			
Bookshelves are properly reinforced and well spaced			
Administration Block	3	2	1
There are offices for all key school personnel.			
The school has a staff room and registry.			
Administration block is centrally located and not far from classrooms.			
The doors and windows are as much as possible burglar proof			
Each administration block has a fire extinguisher			
There are fire-proof cabinets for storage of essential office materials and documents.			
There is easy access to legal and administrative documents such as the Educational Act, the Children's Act, Sexual Offences Act, the Public Health Act, Code of Regulations, School Rules etc.			

General comments

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MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY

COPY

JOGOO HOUSE 12
 HARAMBEE AVENUE
 P.O. BOX 30040
 NAIROBI,
 KENYA.

REF. No. G 9/1/169

10th April, 2001

All Chairmen -Provincial Education Board
 All Chairmen - District Education Board
 All Provincial Directors of Education with
 Sufficient Copies to- All D.E.O.s/D.Cs and M.F.Os
 Board of Governors
 Principals: Teachers Colleges
 Secondary Schools, Polytechnics and Technical Training Institute
 All Heads of Boarding Primary Schools

RE: HEALTH AND SAFETY STANDARDS IN EDUCATIONAL INSTITUTIONS

As you are all aware, many educational institutions in this country are, for the greater part of the year, home to the majority of students. In the last few years, there have been a number of incidents of fire and other health risk situations in our educational institutions. In this regard, the Ministry has found it necessary to review all Health and safety standards in all educational institutions, and also provide the relevant guidelines that affect the welfare of students.

This circular is intended to direct all managers, headteachers and other stakeholders under the general direction of P.E.O.s, D.E.Bs and P.D.Es, to review their institutions and implement the following guidelines and specifications.

I. PHYSICAL FACILITIES

At Kenya's Independence in 1963, communities and parents were called upon and encouraged to put up educational facilities (through Harambee) to cater for the ever increasing number of children. Later during the 1970's, the provision of most educational facilities was left to the communities (parents, school boards and committees) who have continued to provide whatever the children needed. The Government has only provided teachers and minimal teaching/ learning materials as emphasis shifted to cost sharing. Most of the resultant educational institutions have facilities that do not meet the health and safety standards as specified by the law through: -

- i. Education Act Cap. 211
- ii. Public Health Act Cap. 242

iii. Ministry of Public Works building regulations.

It is a requirement that the schools set site plans from the Ministry of Public Works and such plans is adhered to. Any facility which has not been put up in conformity with the existing regulations should be modified and the concerned school management to adhere to the laid down admission regulation. The construction of new school building MUST meet the following basic qualification.

a) **CLASSROOMS**

- i) Size: 7.5m by 5.85m or 7.5m by 6.0m
Such class sizes should accommodate a maximum of 30 pupils in one seater desk and 40 pupils in two seater desks.
- ii) Doorways: should be adequate for emergency purposes and open outwards and should not be locked from outside at any time when students are inside.
- iii) Stairways: for storey buildings, stairways should be wide enough and be located at both opposite ends of the building and should be clear of any obstructions all the time.
- iv) Corridors: should be well ventilated and lit. The width of stairways and corridors should not be less than 1.2 meters. Strong enough handrails should be provided in the stairway rump and should be firmly fixed.
- v) Windows: classroom windows must be openable without grills and reasonable in size for the purposes of ventilation, lighting and evacuation.

b) **LABORATORIES**

Secondary schools and colleges should adhere to the Ministry of Education guidelines and Design, construction, Equipment and Materials as stipulated in the Guideline for Secondary Schools Science Laboratories published by the Ministry of Education, Science and Technology and popularly referred to as the Blue Book

For class sizes of 40/45 students, a safe working area should allow for 2-sq meter per student. The facility must have fire extinguishers strategically placed next to the main exits. Laboratories should also have a serviceable First Aid Box, the contents of which should be sufficient to provide for basic emergency treatment of burns and cuts. All chemicals, glassware and general equipment must be stored in shelves in alphabetical order and carefully labelled. System regular checks should be implemented.

c) LIBRARY/DINING HALL FACILITIES

Special attention should be paid to provision of adequate;

- Fire extinguishers
- Ventilation and lighting
- Wide enough exits for evacuation
- Area spacious enough for ease of movement.

d) DORMITORIES

The following must be observed in the accommodation

- i. **Spacing:** Space between the beds should be at least 1.2 metres, whereas, the corridor/pathway should not be less than 2 metres. Sharing of bed is prohibited and this rule must be enforced in all learning institutions.
- ii. **Doorways:** all dormitory doors should be wide enough and open outwards. In addition they must not at any time be locked from the outside when students are inside.
- iii. **Emergency Exits:** Each dormitory should have a door at each end and additional emergency exits at the middle, clearly labelled 'Emergency Exit'
- iv. **Windows:** should be openable outwards and without grilles.
- v. **Additional measures:**
 - Regular and spot checks by the teachers and administration before the pupils retire to bed.
 - An accurate roll calls everyday and well maintained records.
 - Regular patrols by the school guards and a register of all visitors
 - Regular inspection of health standards of the dormitories and the students.
 - In addition, each school must have regular fire drills, at least twice a term.

2. HEALTH AND SAFETY

a) HEALTH EDUCATION

Each student must be to respect and appreciate his/ her body at all times and should provide for personal hygiene and protect themselves from any circumstances of abuse and degradation.

In order to ensure food safety, food handlers in schools must be examined and certified as in the Public Health Act cap 242. Appropriate measures should be put in the place to ensure that the water provided is clean and safe.

3/8/04

3. ENVIRONMENTAL FACTORS

- The long sides of buildings should run from East to West so that the sun does not shine through the windows either in the morning or evening.
- Laboratories and kitchen should be upwind from the main buildings.
- Likewise buildings should be upwind from the playing grounds so that dust is not blown into the rooms.
- The school environmental/ Premises should be kept tidy at all times.

a) SANITATION

Pit toilets should be built at least 10 metres away from tuition and boarding facilities in the leeward side to avoid smell.

Where an ablution is attached to the dormitory, high degree of cleanliness must be maintained.

The following specifications have to be adhered to in putting up sanitary facilities.

b) DAY SCHOOL SANITATION

SEX	NUMBER OF PUPILS	CLOSET
GIRLS	a) First 30 girls	4
	b) The next 270 girls	1 extra per every 30 girls
	c) Every additional 50 girls	1 closet per 50 girls
BOYS	a) First 30 boys	4 fittings
	b) For next 270 boys	1 fitting every 30 boys
	c) For every 50 additional boys	1 fitting per 50 boys

c) BOARDING SANITATION:

SEX	NUMBER	CLOSETS	URINALS
Girls	50	7	
Boys	50	5	2

Pit latrines: - not less than 6m (20 ft deep), regularly well disinfected, 15m (50 ft) away from a borehole or well or water supply point.

- d) **SANITARY FOR STAFF**-closets – one per 12 persons. Separate provision for ladies and gentlemen is necessary

3/8/04

4) ABLUTIONS/ WASHING BASIN:

TYPE OF SCHOOL	PUPILS	BASIN
Day	First 120 pupils	1 basin for every 30 pupils
	Every additional 30 pupils	1 basin
Boarding	Every 50 pupils	1 basin
Staff	Every 12 members	1 basin

NB

- a) At least one third of the fittings for boys should be closets, and the rest urinals. If a urinal trough, then 0.6m (2 ft) of the trough is equivalent to one fitting.
- b) All closets must be well ventilated.
- c) For mixed schools, girls' sanitation must be separate and offer complete privacy.

5. FIRST AID AND SAFETY EDUCATION

First aid education for the Matrons and Nurses particularly in disaster and crisis management should be provided. There is need for training on how to handle emergencies including fires, lighting, swimming accident, floods and any other catastrophe, which may occur.

- The school community should undertake fire drills frequently, at least twice a term.
- Fire equipment should be clearly serviced.

6. OTHER MEASURES:

- (i) School Matrons, Nurses and Headteachers must reside in the school compound, as per the Director of Education Circular Ref. No. G/1/VOLIII/138 of 14/10/99.
- (ii) All facilities should be in the best state of repair, serviceable and be tested/ inspected regularly.
- (iii) Guidelines on transportation of school children/ students must be observed at all times as outlined in circular Ref. G9/1/163 of 2/7/93. ✓
- (iv) During suspected outbreaks of contagious diseases, the school administration should inform the Local Medical Officer of Health immediately.
- (v) Headteachers should also consult medical officers, architects, fire experts and first aid trainers for any relevant advice and assistance.

- (vi) Any complaints raised by the students in connection with their welfare must be acted upon promptly.
- (vii) Any occurrence in the school however minor must be comprehensively entered in the LogBook and each information used to improve on the pupils' welfare.
- (viii) Issues and threats touching on the security of the students must be reported to the relevant organs of the Government.

Rules are as good as the people who implement them. The successful implementation of these guidelines will depend on the Head-teachers and on how well the pupils/ students are sensitised, and the establishment of good communication channels between the Administration, the students and the teachers. Our learning institutions will fall or stand on its head.

SIGNED

MRS. NAOMY WANGAI
DIRECTOR OF EDUCATION

CC.

All Sponsors	- Education Secretaries
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Chairman	- Parliamentary Committee for Education.
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