SCHOOL SAFETY AND EMERGENCY PREPAREDNESS: AN ASSESSMENT OF PUBLIC BOARDING SECONDARY SCHOOLS IN NANDI NORTH DISTRICT, KENYA

BY

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DECLARATION

Declaration by the candidate

I, the undersigned, hereby declare that this thesis is my original work and has not been submitted for a degree award in any other university. All sources have been identified and acknowledged by means of complete references.

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ABSTRACT

The study assessed the state of safety in secondary schools in Nandi North district. This has been motivated by the persistent media reports on insecurity and school violence, a fact that projects a grim picture that Kenyan schools are not the safe havens that the public might have thought them to be. The main objective of the study was to establish the safety measures available and determine the level of safety preparedness of public boarding secondary schools in Nandi North District, while the specific objectives were: To establish the safety measures available in schools; to assess the level of awareness and the skills-levels of staff and students; to identify the challenges faced in the implementation of safety measures in schools and to identify the strategies devised for future enhancement of school safety. The study was based on the Chaos Theory which offers lessons for managing periods of extreme instability in a system. Descriptive survey design was employed. Stratified and purposive sampling techniques were used to determine the sample size. Respondents included head teachers, teachers, students and security officers. The research instruments used were questionnaire, interview schedule and observation checklist. A pilot study was administered to verify the validity and reliability of the instruments. Data obtained was analyzed both quantitatively and qualitatively. Presentation of data is in form of tables, charts, graphs, frequencies, and percentages. Microsoft Excel and the Statistical Package for Social Sciences (SPSS) program aided in data analysis. The findings revealed that most schools were not adequately prepared for emergencies both in terms of planning and equipment. For instance only 33.3% of teachers had been trained on firefighting while 33.8% had a safety policy in their schools. The study confirmed that safety policy and training predicted school safety since the R^2 and adjusted R^2 value of 0.769 and 0.787 respectively both indicated that over 70% of the variance in the dependent variable can be explained by the regression model. The t test results for the individual regression coefficient were as follows: Safety policies ($t = 11.52$, $p<.05$) and training ($t = 2.25$, $p<.05$) indicating that the variables were statistically significant at 0.05 level. Inadequate finance was cited as the main challenge that hindered the implementation of the safety policy. In light of these findings, it is recommended that the government should emphasize frequent assessment of schools by QASOs so as to monitor and evaluate the implementation of the safety policy, enforce awareness and training programs and provide adequate funds for the purchase of safety equipment in schools.

DEDICATION

This work is dedicated to my dear parents, Mr. Samuel Maritim and Mrs. Sally Maritim for having started it all. I am what I am because of their efforts.

To my beloved children June, Dennis and Eileen for always being a source of encouragement and inspiration to move on in harder times. May the good Lord bless you abundantly.

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LIST OF ABBREVIATIONS/ACRONYMS

CDC	Centre for Disease Control
DC	District Commissioner
DEO	District Education Officer
FEMA	Federal Emergency Management Agency
ICCU	Injury Control Centre-Uganda
IES	Institute for Education Sciences
IPT	Independent Project Trust
KESI	Kenya Education Staff Institute
MOE	Ministry of Education
MOH	Ministry of Health
NCES	National Centre for Education Statistics
NASP	National Association of School Psychologists
NSSC	National School Safety Centre
PDE	Provincial Director of Education
PIRLS	Progress in International Reading Literacy Study
QASO	Quality Assurance Officers
SA	South Africa
SAIRR	South African School of the Race Relations
SGB	School governing boards
SPSS	Statistical Package for Social Sciences
SSC	School Safety Committee
SSCS	Safe School Contract Strategy
SSP	School Safety Policies
UNESCO	United Nations Educational, Scientific and Cultural Organization
USA	United States of America

CHAPTER ONE

INTRODUCTION

1.1 Introduction to the Chapter

This chapter presents the background to the study, the problem statement, the purpose of the study, objectives and the questions that guided the study. The justification of the study, its significance as well as the scope and limitations are highlighted. The theoretical framework in which the study is embedded is explained, assumptions of the study are stated and operational terms defined.

1.2 Background to the Study

School safety means an effective structure and organization free from potential and physical harm, absence of violence and presence of nurturing, caring and protective staff (Chukwu, 2008). During the last two decades, there has been a worldwide move towards enhancing school safety. This is because the issue of school safety is a global concern. In the UK, for instance, reports from Teachernet, Fire Safety Area (2007), indicates that, each year more than 1,300 schools in the UK suffer from fire outbreaks. Cases of school shootings have been reported in the U.S, the Columbine High school incident being the worst reported case (Calefati, 2009).

In a Survey by the National League of cities, 41% of America's large cities stated that students were seriously injured or killed because of school violence, while 38% of the 700 cities surveyed said there had been a noticeable increase in school violence in the past five years (Day, 1996).

In South Africa, research has shown that youth gangs intrude the schools of vulnerable communities, using them as markets for drugs, alcohol, weapons and young girls, who are abducted and raped (Simpson, 2001). In the years between 2003 and 2008, at least 33 fires in Ugandan schools that took lives as well as destroyed property worth billions of shillings were reported (Opondo, 2008). Since school safety has become an issue of global concern, different countries have had to put up diverse mechanisms to address the problem. In Pakistan, for instance, a three day international conference on school safety was held in Islamabad, between 14th and 16th May 2008, to address the weakness of the school buildings in which 17,000 children lost their lives during the Kashmir earthquake. In Kenya, there have been perpetual reports of arson acts or attempts across the schools in the country. These reports are evidence that schools in Kenya, like in other countries face a lot of challenges related to safety.

Safety is an important aspect of human life that helps to mitigate risks in any given situation. In schools, safety is an integral and indispensable component of the teaching and learning process (R.O.K, 2008). However, safety can only be guaranteed, if some form of preparedness exists in the school system. The main objective of every school should be to offer quality education to its learners, something that can only be achieved if the school environment is conducive and safe enough for learning. School safety can be threatened by factors that emanate within the school environment or externally from the wider community. It is therefore imperative that all the educational stakeholders take up the responsibility to ensure that school safety threats are minimized or eliminated so as to foster all round safe living in schools.

Preparedness is a combination of structural and non-structural measures designed to reduce risks and ensure effective response to a range of threats. Preparedness at all levels for a range of threats is a key aspect of effective emergency management (O'Brien, 2005). No management can claim to be efficient if it has not considered safety preparedness as an important aspect of its administration.

In Kenya, the government has taken considerable steps to strengthen safety preparedness in schools, despite this, the school disaster preparedness still remains poor (Lucheli & Masese, 2009). Lack of funding has been cited as a factor that has paralyzed efforts by schools to install firefighting equipment, a factor that further explains the ill-preparedness of many schools to counter fire outbreaks whenever they arise. The heavy rains of 2010 that hit different parts of the country, resulting in heavy floods, landslides and mudslides put to test the level of schools' preparedness to deal with natural disasters. Schools that were affected suffered great losses because of ill-preparedness. In Homa Bay District for instance, more than 100 pupils of Nyawara Primary School had to study under trees after floods destroyed their classrooms and property valued at two million Kenyan Shillings. (Anyuor & Weru, 2010).

Tragic fires as well as school violence and unrest have heightened the need for crisis and emergency preparedness in Kenyan schools. Some of the disasters have been caused by student indiscipline and unrest as was the case in Nyeri High School in 1999, when a group of boys locked up four prefects in their cubicles and set them on fire and the St. Kizito incident in 1991, when boys invaded a Girl's Dormitory and raped more than 70 girls leaving 19 of them dead (Kigotho, 2009). Ndetei, D., Otieno, C., Gakinya, B. &

Ndumbu, A. (2004), wrote a paper with regard to the tragic Kyanguli Secondary school fire incident, where 69 students were burnt to death.

The upsurge of such incidents is a clear sign that safety measures had not been put in place in the affected schools. Normally after fire incidents, students are sent to court and judged with arson attack as the case was at Kyanguli, Nyeri and Endarasha Secondary Schools. Taking students to court is a good move to attaining justice, but it does not solve the problem. The issue should be to address the school fire preparedness and come up with viable and lasting solutions. The court process only diverts the attention from the real problem, that is, lack of coordinated fire plans in schools.

More recently, in 2008, there were persistent sporadic waves of secondary schools strikes that hit different parts of the country. The government set up the parliamentary select committee on Education (2008) to carry out an inquiry into the schools' unrest. The committee found out that more than 300 schools went on strike due to rampant drug and alcohol abuse. At that time, one student died in a dormitory fire started by Upper Hill High School students in Nairobi. The latest case of arson attack was witnessed in October 2010 at Endarasha Secondary School in Nyeri when two Form One boys died in a dormitory fire. The foregone incidents suggest that the problem of school safety and insecurity is rife in Kenyan schools. It is under this backdrop that the researcher developed interest to research on school safety and emergency preparedness in the district.

School violence has profoundly affected schools and communities resulting in the formulation of policies and programs that aim at protecting students from disasters and preventing the occurrence of such tragedies. Some of the policies in Kenya include:

1. The Health and Safety Standards in Educational Institutions - Circular Ref. No.G9/1/169 (ROK, 2001), which was released after the Kyanguli Secondary School incident.
2. The Safety Standards Manual for Schools in Kenya (ROK, 2008).

The school safety policies and procedures are set in place to make schools safer and to have a course of action to take in the event of unsafe situations. They `help to keep students safe in unpredictable circumstances (Trump, 1996). The chances of effectively preventing or managing a crisis or emergency, increases when distinct policies are put in place (Librera, 2004).

Safety preparedness is therefore a prerequisite to school safety. Safe schools are those with structures put in place to ensure that any forms of emergency that may arise at any time are managed. Safety programs enhance preparedness, help to prevent accidents and thus minimize the resulting loss and damage to persons and property (Armstrong, 2000). Instead of waiting till a crisis occurs, it is safer for schools to always prepare by putting up the necessary mechanisms that enhance safety.

In view of the foregoing, there was need to conduct a study to assess the availability of safety measures in secondary schools in Kenya. The major concern of the study was to establish the measures that have been put in place to enhance school safety and crisis

preparedness in Nandi North District. Some of the factors considered include: Safety in physical infrastructure, training of teachers, students, and other members on disaster risk reduction, the availability of clean water and provision of toilets, school fencing and measures to guard against road accidents.

1.3 Statement of the Problem

The following incidents that occurred in different schools over the years clearly bring out the manifestation of the problem in Nandi North District. Deaths were reported at Moi High School Sirgoi in 1994, Lelmokwo Boys' secondary school in 2001 after a dormitory caught fire, and at Kapsabet Girls' High School where a student died after falling into a pit latrine in June 2007. Most recently at Kosirai High School, learning was disrupted on 13/5/2010 when the wind blew off the roof of the classrooms. These incidents are severe enough to make schools take the necessary steps to implement more effective safety measures and strategies to prevent such occurrences or to minimize their impact.

The persistence of media reports on insecurity problems of learners in schools projects a grim picture that Kenyan schools are not as safe as the public may have thought them to be. The research problem addressed in this study is the frequency of incidents related to insecurity in secondary schools in Kenya. An indication of these insecurities is emphasized in the following statement.

> *"With the ever rising incidents of fire outbreaks and violent disturbances in some of our secondary schools, resulting in horrifying death of students and extensive damage to property, there is an urgent need to focus our efforts on implementing proactive security and disaster management procedures aimed at minimizing and if possible, eradicating the menace"*. (Kuria, 2007:1)

Several authors have carried out research and affirmed the need for safety measures and procedures in schools. Among them are Librera (2004), Trump (2005), Rono & Kyalo (2007), Lulua et al. (2007), Calefati (2009), & Boehlke (2010) but what is yet to be established is the level of awareness of the school community and an assessment of the level of implementation of these safety measures. In Kenya, for instance, the government has attempted to address the problem of school safety by issuing schools with guidelines in the Safety Standards Manual, but the big question is "How far have the schools implemented the guidelines in this manual?" This study therefore, sought to assess the level of implementation of these guidelines.

1.4 Purpose of the Study

The purpose of this study was to establish the safety measures available and determine the level of safety preparedness of secondary schools in Nandi North District.

1.5 Objectives

1. To establish the safety mechanisms put in place by secondary schools in the district.
2. To assess the awareness and skills level of the staff and students on school safety.
3. To identify the challenges faced by schools in implementing safety measures.
4. To determine the strategies devised for future enhancement of school safety in Nandi North District.

1.6 Research Questions

1. What are the safety mechanisms in place in secondary schools in Nandi North District?
2. What are the awareness and the skills levels of the staff and students on school safety in the District?
3. What are the challenges faced by the school communities in the implementation of safety measures in Nandi North District?
4. What strategies have been devised for future enhancement of school safety in Nandi North District?

1.7 Hypothesis

$H0_1$: There is no statistically significant relationship between availability of safety measures and school safety.

$H0_2$: There is no statistically significant relationship between training and school safety.

$H0_3$: There is no statistically significant relationship between awareness and school safety.

1.8 Justification

The safety of learners at all times in school cannot be over emphasized. The provision of the safety standards manual to schools underscores the government's commitment to the safety and overall welfare of learners. Over the years, there has been an outcry from the public over the state of safety in Kenyan schools. This has been caused by the alarming rate of insecurities manifested in the many reported cases of school disasters all over the

country. This trend has to be checked otherwise cases of student deaths will continue rising making the attainment of school safety a distant dream.

The researcher decided on Nandi North District as the area of study because of several reported cases of disasters in schools and yet according to available sources, a research to address such a problem had not been carried out in the district before. An earlier research by Rono and Kyalo (2007) in Turkana District revealed that a big percentage of teachers, students and non-teaching staff did not know how to effectively use a fire extinguisher. He then recommended that further research was required on how training and awareness programs could be integrated in the schools' curriculum. It is in line with these recommendations that the researcher decided to carry out the study to ascertain the situation in Nandi North District. The study therefore sought to establish the existing safety measures and explore possible strategies for further enhancement of school safety.

1.9 Significance of the Study

The information obtained from this study is useful to the policy makers as an evaluation of the implementation of the safety standards manual.

The study sensitizes the school communities and makes them realize the need to invest in safety programs, thus creating more awareness. The findings would also benefit other scholars in the same field as reference material.

1.10 Scope of the Study

The study was carried out in public boarding Secondary Schools in Nandi North District. This was because of the several reported cases of school disasters in the district. The

study was carried out during term one of 2011.The research was confined to safety in physical infrastructure, the training of teachers, students and other members on disaster risk reduction, the availability of clean water and provision of toilets, fencing of schools and measures to guard against road accidents. Data collection instruments included questionnaires, interview schedule and observation check list while the respondents were head teachers, teachers, students and security officers.

1.11 Limitations of the Study

1. This study was conducted in Nandi North District, and this may not allow generalization of the results to other districts; however, the results can be applicable to districts with similar characteristics.
2. The respondents may not have been very honest and may have given false information or failed to respond to all questions in the questionnaires, which may threaten the validity of the findings. To counter this limitation; the researcher used triangulation of research methods to enhance validity.

1.12 Assumptions of the Study

In this study, the following assumptions were made:

That the instruments used in data Collection would be reliable and valid, that the respondents would respond to the instruments on time and with sincerity, and that the findings from the sampled schools would represent the situation in other schools.

1.13 Theoretical Framework

Chaos Theory and Disaster Response Management

This study was based on the Chaos Theory propounded by Douglas Kiel (1993). According to the theory, chaos is one possible result of the dynamics of nonlinear systems. In this study, the school is a nonlinear system where issues of safety are characterized by uncertainty, unpredictability and thus the need for safety measures and preparedness for such eventualities. According to Nonaka (1988), chaos widens the spectrum of opinion and forces the organization to seek new points of view. The many incidents of insecurity in schools have forced the MOE to provide guidelines on safety measures that should be implemented in schools to enhance safety.

During times of high instability such as disasters and occasions when emergency services reach peak levels of activity, it is essential to recognize that stability can only be regained by developing appropriate strategies. According to Ott, E. Grebogi, C. & Yorke, J.A. (1990), there are three fundamental methods for controlling chaos.

One of the methods is to alter the parameters of the system. This means limiting the degrees of freedom of the extent of the behavior available to a system. In relation to this study, certain measures need to be put in place, so as to alter the behavior of learners and limit their freedom thus enhance stability in the school. The measures that may be put in place include fencing of the school compound, inspection of students' lockers and wearing of school uniforms among others.

A second method uses perturbations or disturbances during chaotic episodes to change behaviour back to more predictable and smoother functioning. In schools, some of the

ways of controlling chaotic situations include the issue of punishments, suspensions, expulsion and counseling.

The third method aims at altering the orbit of a chaotic system to a more desirable orbit on its attractor (Ditto & Pecora, 1993). This approach uses continuous tracking and seeks to identify changes in system behavior that occur over time. Public managers (including school administrators) work within an environment of considerable constraints. Budget constraints dictate levels of agency services and response. Many school administrators, despite being aware of the need for safety equipment in their schools are not able to provide these requirements because of financial constraints. The theory emphasizes the need for workplace rules such as policies and work processes. Safety policies are very important because they help to give direction on what should be done to mitigate and respond to a crisis in schools.

Strategy developed for public managers clearly must include recognition of the different stakeholders (Nutt & Backoff, 1992). Managers (Head teachers included) should know that any effective strategy must consider all relevant stakeholders impacted by the strategic plan.

1.14 Conceptual Framework

In this study, the dependent variable is school safety while the independent variable is preparedness, which comprises factors such as awareness and training, safety policies, administrators' roles and school violence prevention.

The illustration indicates that certain contingent plans need to be put in place if school safety is to be achieved. The attainment of school safety is however influenced by intervening variables such as the local environment, school culture and even the students' discipline. The study attempted to establish the relationship between availability of safety measures and enhancement of school safety. Refer to Figure 1.1

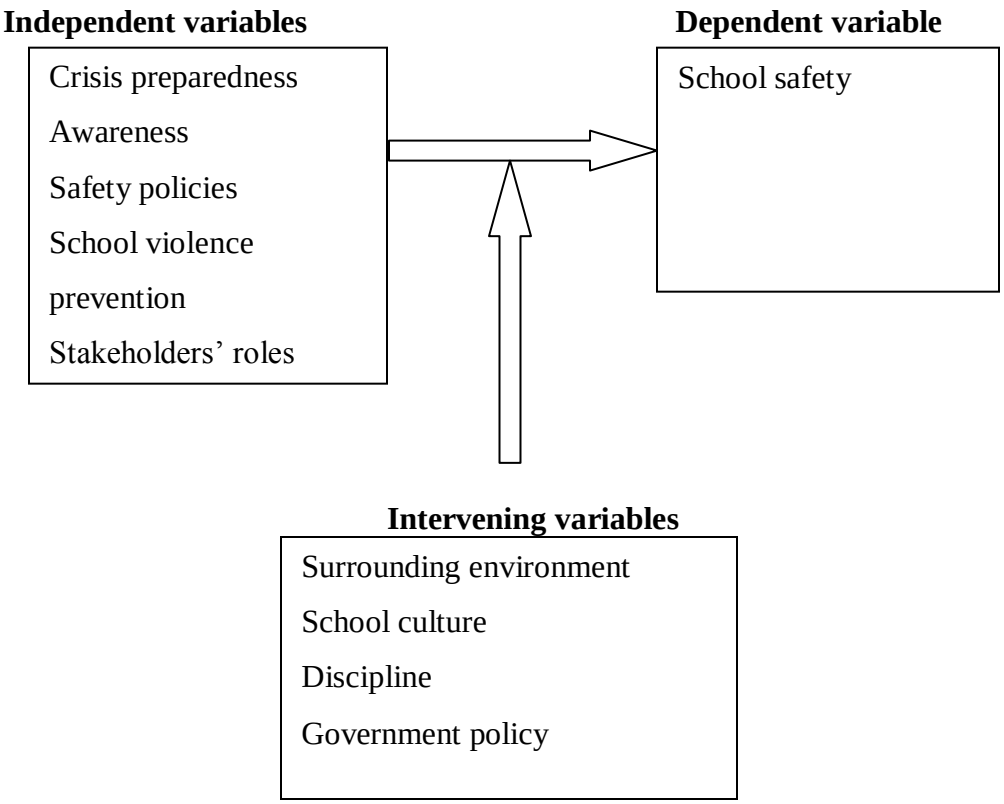

Figure 1.1 Relationships between Variables in the Study

1.15 Operational Definition of Terms

Awareness: Being informed on issues that surround school safety.

Disaster: A serious disruption of the functioning of a community causing widespread human, material or environmental losses. The community in this case being the school.

Emergencies: Any unplanned event that can cause death or significant injuries to Persons in school, or that can destroy property and cause physical or environmental damage.

Preparedness: A combination of structural and non-structural measures designed to reduce risks and ensure effective response to a range of threats in schools.

Safe School: A safe School is one that is free from danger, possible harm, where non-educators, educators, and learners can work, teach and learn without fear.

School safety: These are measures undertaken by learners, staff, parents and other stakeholders to either minimize or eliminate risky conditions.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction to the chapter

This chapter covered a review of literature on school safety preparedness from both the global and local perspective. In order to place the study in the context of the general body of scientific knowledge relating to the topic, it is vitally important to review the literature (Babbie & Mouton, 2003).The underlying assumption that knowledge accumulates and that people learn from and build on what others have done (Neuman, 2003) makes the review of literature a vital component of this study.

The first section of this chapter discusses legislation appropriate to school safety, followed by a review of past studies on school safety in countries such as the U.S.A., South Africa, Uganda and Kenya. Issues relating to school safety such as safety policies and procedures, crisis response plan, school violence, safety in physical infrastructure, training and awareness are also discussed. The role of the school administrators, safety committee, and the local community in enhancing school safety are highlighted.

2.1 Legislation and policy

The government of Kenya has committed itself to improving the standards of education at all levels. It is for this reason that the government has from time to time appointed various educational commissions, committees and task forces to address various challenges facing our education sector.

The government is also a signatory to International Conventions and protocols that have emphasized the right of every human being to quality education. With regard to basic education, the government focuses on promotion of access, equity, relevance and quality of education (Sessional paper No.1 of 2005). The policy framework aims at achieving education for all (EFA) by 2015, ensuring the right of children to basic education as underscored in the children`s Act (2001) increasing equity, access, and relevance of basic education and delivering quality services efficiently and effectively at all levels.

Towards the realization of the set goals, the government has developed various interventional strategies to ensure safe and secure school environments. This is because safe and secure school environments facilitate and foster quality teaching and learning in educational institutions. In recognition of the initial importance of school safety in the provision of quality education, the government, through the ministry of education is committed to institutionalizing and mainstreaming school safety.

2.2 School Safety in Different Countries

The issue of school safety has of late become a global concern. This explains why over the last two decades, there has been a lot of literature written on the topic as a way of creating awareness and thus enhancing school safety.

2.2.1 School Safety in the U.S.A.

A nationwide survey conducted biennially by the centre for disease control and prevention (CDC) in 2007 and involving representative samples of U.S. High school students found that 5.9% of students carried a weapon on the school compound (National Centre for education statistics (NCES) (1996). The survey revealed that 7.8% of high

school students reported having been threatened or injured by use of a weapon in school. This study in Nandi -North District seeks to investigate the existence of such practices and what schools are doing to ensure safety of learners from such habits at all times.

School shootings have been an issue in the U.S. schools. Research conducted jointly by the Secret Service and U.S. Department of Education (2009), shows that since the early 90's, majority of school shooters have given some kind of warning signals prior to their attacks (Calefati,2009). The study further found out that school shootings are rarely impulsive acts, but well thought out and planned in advance. This shows that some attacks could be prevented and that students could play an important role in crime prevention in schools. The prefects' body in schools should be empowered so that they can assist the administration to track down culprits among the students. This is because prefects are likely to have prior information before a crime is committed, given that they are more in touch with the students than the teachers are.

To enhance school safety in the U.S., preventive measures have been put in place. Cameras that track the footage of most areas of the school premises are common and school lock-down procedures during which no child or adult is allowed to enter or exit the building establishes better safety procedures (Boehlke, 2010). It is commendable that schools in Nandi -North consider having such measures in place as a way of ensuring safety in their schools.

Schools have been prompted to take safety measures such as requiring students to wear uniforms, visitors sign-in, adopting zero tolerance policies, using metal detectors and

offering students various types of violence prevention programs. (U.S Department of Education, 2002) Despite the effectiveness of these measures, developing countries like Kenya may not be able to adopt some of the measures like the metal detectors technology and use of cameras because of the financial implications. However, school Administrators may depend on regular inspections of students' belongings purposely to find out if they are in possession of dangerous tools such as knives or bangles that might be used as weapons. Since cameras too may not be readily available in Kenyan schools, teachers and other staff, especially security officers need to be more vigilant in monitoring the movements of students in school so as to minimize any undesired behavior. The study sought to find out whether schools in Nandi -North keep the visitor sign-in/sign out records and whether such regular inspections as a safety measure are carried out in schools. In cases where such records are kept, there is need to assess their effectiveness.

2.2.2 School Safety in South Africa

According to the South African School of the Race relations (SAIRR-2008), South African schools are the most dangerous in the world. SAIRR published statistics from the 2006 Progress in International Reading Literacy Study (PIRLS) - a study by the U.S.-based Institute for Education Sciences (IES) in 30 countries worldwide, in which South Africa was ranked last in school safety. In another report on Kwazulu-Natal Department of Education statistics survey, Simpson (2007), reveals a grim picture: 10 killings, 273 rapes, 2504 cases of drug possession, 2164 assaults and 75 cases of learners carrying guns to school in 2006. A Western Cape learner stabbed to death another learner with a

pair of scissor at Eersterivier high school, while another one stabbed and killed a teacher at Merriam Hill in front of other learners in the classroom.

Squelch (2001), contends that many South African school buildings and facilities are inadequately maintained by the SGBs (School Governing Boards) as required of them by the schools Act, thus contributing to the creation of an unsafe environment. Squelch also remarks that South African schools are not safe, and that both the SBG and the state need to do more to ensure safe schools (Eberlein, 2009).

Netshitahame and Van Vollenhoven (2002), call the problem of violence in South African school "…one of the most pressing educational issues in schools. Their study in the Northern Province found that, most of the schools in that area had inadequate or poorly maintained facilities. Most of the principals interviewed had very little understanding of and use for safety policies at their schools. Only 10% of the schools they visited had safety policies. They therefore recommended that schools should pay attention to safety issues and compile comprehensive safety plans and strategies (Eberlein, 2009).

As a way of ensuring school safety, certain projects have been put in place in S.A. One such project is the Independent Project Trust (IPT) (1999). The project states that a secure school environment has very low risk of physical, emotional and psychological injury to its occupants. IPT compiled a practical guide on the improvement of school safety. The guide aimed at the SGBs, suggest the following actions to assist in creating a safer environment in South African School:

- Working together with the police.
- Creating functioning and well-informed school safety committees
- Developing a written school safety plan
- Improving relationships with the communities surrounding the school.

The Safe Schools Project was also launched in 2000 to create a safe learning environment. Subsequently, the regulations for safety measures at public schools were published in the government gazette no. 22754 on 12th October 2001.

The Safe School Project focused on the development of policies on school safety, the management of drug usage in schools, and a National sexual harassment policy (Jouerbert, 2007). The project however, did not explain how the policy was to be implemented to ensure maximum safety in schools. It is necessary that all schools be encouraged to develop safe school projects because they help to enhance safety.

The Education laws Amendment Act, no. 31 of 2007, deals with the seizure of items found during the course of search. It makes it lawful for certain school staff to search suspected groups of pupils for illegal drugs, knives or other weapons without the learners' consent (Government gazette, 2007).

2.2.3 School Safety in Uganda

School fires are common incidents in Uganda as earlier mentioned. Besides the fires, road accidents are cited as another major threat to school children's safety. According to a survey carried out by Injury Control Centre, (ICCU-2004), the top cause of severe injuries among urban children under 20 years in Uganda is traffic (46%). About 400

children die and about 1200 are seriously injured on the roads every year (Lulua et al, 2007).

To minimize this, children have been sensitized on road safety in schools. Teachers have been trained in first aid and in basic injury prevention and control. The school traffic wardens have been sensitized on road safety and environmental safety has been reinforced by putting in place speed humps and zebra crossings. The school buses are also required to have sweeping lights, like those used by ambulances and police vehicles, to safeguard students from road accidents (Jaramogi, 2010). In Kenya, protection of students/pupils while traveling has been an issue of major concern. As a result the Kenya Government came up with a circular Ref. No. DQS/A/2/1A/VOL.11/98 (ROK, 2009), reminding head teachers to ensure that all institutional vehicles used by schools to transport learners, adhere to the required Ministry of transport guidelines. The aim of this study is to establish whether this circular has been implemented by the schools.

Jaramogi further stated that school dormitories in Uganda would be redesigned to have double exits without burglar proofs to enable students escape with ease in time of disasters like fire and that the Government would track down on schools and buildings without safety standards. This is the step that the Kenyan government has taken through the provision of the safety Standards Manual for schools. Adherence to the guidelines would enhance safety in all schools. However, issuing of circulars without follow ups to evaluate their implementation limits the achievement of safety in schools. Regular assessments need to be done to ensure that all schools adhere to the requirements in the circulars. Another study by action Aid International (2004), found that 84% of pupils

reported to have observed or experienced violence against girls, whereas 76% of pupils had observed or experienced violence against boys and teachers were identified as perpetrators by 17%, (Action Aid International, 2004).

Cases of students getting hurt by their teachers in the process of administering corporal punishment have severally hit the headlines in the dailies and media houses in Kenya despite the government's ban on corporal punishment. In Uganda, over 200 schools have adopted the Safe School Contract Strategy (SSCS) (Lulua et al,2007) in which students sign the contract as a binding agreement to become "Safe friends" while teachers pledge to protect pupils from all forms of abuse and lead by example (Safe School Contract Guidelines, 2004). In this regard, the study sought to establish whether schools in Nandi-North have such measures that promote peaceful co-existence among members of the school community.

2.2.4 School Safety in Kenya

Tragic fires, as well as school violence and unrest, have heightened the need for crisis and emergency preparedness in Kenya. There is no longer a guarantee that schools can remain safe from the tumultuous violence present in today's world. Schools must therefore, be prepared for a wide range of emergency situations (Librera, 2004). Due to the rampant incidents of school disasters, the government has taken measures to ensure that schools remain safe for the learners by issuing circulars to schools to update them on any new requirements relating to safety.

An example is the circular issued after the Kyanguli secondary school tragedy entitled: "Health and Safety Standards in Educational Institutions" (ROK, 2001). The circular contained guidelines on issues relating to school safety and disaster management. It can be argued that the policy guidelines were not implemented by many schools judging from the 2008 incidents, when many strikes hit the country and many schools were burned. It came out clearly that firefighting equipment were not available in many schools.

As a result of the 2008 school's unrest, the Ministry of Education introduced new rules to improve safety in schools. The new rules are in the Safety Standards Manual for schools in Kenya (R.O.K., 2008). Besides issuing the Manual, the education minister directed that all national and provincial secondary boarding schools be given between 150,000 and 350,000 shillings to buy firefighting equipment and implement the new policies (Kumba & Shiundu, 2009). Some of the guidelines in the manual touch on disaster and emergency preparedness, and the need for training on how to handle emergencies including fires, floods and any other catastrophe which may occur. Other measures deal with school/community relations, infrastructure and policies on doorways, spacing, windows and school patrol.

The provision of the manual was a positive move by the Ministry of Education to enhance school safety in the country. However, the manual failed to address important issues such as the financial implications of modification and reconstruction of the infrastructure. There was also no clear strategy of monitoring the implementation, and there is no mention of consequences for schools that fail to implement the policies. The manual also failed to take into account the fact that many schools were constructed many

years back and may not be easily adjusted to the new requirements. Since, the implementation of the guidelines requires a lot of finances, it was necessary to undertake such a study in order to establish what school managers with the foregoing constraints had done or were doing to enhance safety preparedness in their schools.

2.2.5 School Safety in Nandi North District

The state of school safety in Nandi North is not different from that in the other districts in the country. Many cases of student deaths have been reported thus making it necessary for the study to be carried out to find out what schools are doing to eradicate the menace in the district**.**

2.3 Safety in Physical Infrastructure

A school that is well planned and maintained fosters an environment that enables teaching and learning to take place effectively. It also promotes safety and reduces the likelihood of accidental injury (Jenne & Greene, 1976). The location of a school directly affects the safety, well-being and educational experience of the student. If a school site is selected in a haphazard manner, the educational experience for both the teacher and the student is likely to be less optimal. To enhance school safety, new buildings should be designed by, and the remodeling of older ones should be supervised by an architect who specializes in or who has experience in the design and remodeling of school buildings. The architect should be assisted by a school building planning committee (Jenne & Greene, 1976). If schools would adhere to these recommendations, then most disasters would be prevented, but most schools do not hire architects because of the financial implications, thus the reported cases of falling constructions. In South Africa, for

instance, an 11 year old learner died when a wall of a prefabricated classroom under construction collapsed, pinning him underneath and also injuring four girls (Xaba, 2006).

According to the Safety Standards Manual (R.O.K.,2008), schools' physical infrastructure should comply with the provisions of the Education Act (cap 211), Public Health Act (cap 242) and ministry of public works building regulations/standards. These provisions should be adhered to if schools are to be safe for learners**.** In order to observe safety in school buildings, the following guidelines are recommended:

1. The doorways should be adequate for emergency purposes, open outwards and windows must be without grills.
2. The buildings should be properly lit, ventilated and each block should be fitted with serviced fire extinguishers.
3. Regular inspection should be done to eliminate hazards and immediate measures taken to correct any problems noticed.

If these measures were effectively implemented, schools would be much safer in case of emergencies or disasters, but unfortunately, this is not the case because many schools have disregarded and taken the guidelines for granted**.**

2.4 School Violence

School violence according to Vulindlela (2004) is "the exercise of power over others in school-related settings that results in, or has a high likelihood of resulting in injury, death, psychological harm, mal-development or deprivation". Violence in school is a problem that needs to be addressed, and preventive measures that may help should be thoroughly

considered (Lord, 1999). Causes of school violence have been addressed by: (Day, 1996; Kopka, 1997; Goldstein and Conoley, 1997; Lord, 1999; Bennet, 2000; Del Prete, 2000; Poland, 2000; Grapes, 2001; Wangai, 2001; and Koech, 2008).

a) Causes of School Violence

Respondents to the 1995 "Annual gall up poll of the public's attitude towards the public schools" ranked the following as causes of increased violence in schools: the increased use of alcohol and drugs by youth, the easy availability of weapons, the growth of youth gangs, a breakdown of the family, schools lack ability to discipline and an increased portrayal of violence in the media (Kopka, 1997). Family problems such as divorce, drug abuse, poverty, unemployment, illness and family violence (Day, 1996) may also lead to violence in school children.

According to Goldstein & Conoley (1997), the nature of governance and leadership in a school can have a major connection with the violence that takes place inside its wall. A principalship style of leadership that is firm and fair has been shown to be related to low levels of student aggression. Schools experiencing high levels of student aggression tend to be the schools that have a high level of arbitrary leadership and severe disciplinary actions. School size is another connection to school violence. There is a higher per-capita violence rate in a larger school. This may come from the idea that it is easier to identify students in smaller schools (Goldstein & Conoley, 1997). Crowding in schools has a big connection to school violence.

Another cause of violence in schools may be sheer boredom of the students and use of drugs (Day, 1996). Crime rates are highest at schools where illegal drugs and alcohol are easily obtained. Violence in schools has also been associated with excessively easy access to fire arms, (Grapes 2001). Countless studies have determined that there is an irrefutable link between violence in the media and violent behavior in school children (Bennet, 2000). In Kenya, the Wangai task force (2001) and Koech (2008), found out that unrest in schools was caused by poor communication between the ministry and schools, drug abuse, lack of co-curricular activities, inadequate facilities, poor parenting, political interference, poor school management, negative influence from the mass media and entertainment centers and that the education act was outdated and required an overhaul.

b) Preventive Measures to School Violence

Placing school safety on the educational agenda is one of the strategies for preventing school violence (Goldstein & Coloney, 1997). The schools should have a comprehensive and system wide safety plans. There should be a district wide plan with individual plans for each school (Stephen 1995). The development of these plans should be in collaboration with parents, students, law enforcement officials, probation and social services, religious, corporate and community leaders (Bucher & Manning, 2003). The school compound and the surrounding should be modified for better supervision. This can be done by placing convex mirrors in hallways and stairways to increase supervision (Goldstein & Coloney, 1997).

To prevent school violence, (Poland, 2000), suggests that school administrators should do more to personalize schools and provide better counseling services to students who may be troubled. He also suggests that teachers should set aside a small amount of time each

day to interact with students. The problem with this suggestion is that most schools do not have the resources to provide counseling services to students and at the same time, many schools spend most of their time in trying to improve the mean grade so that no time is left for social interaction between teachers and students.

According to Del Prete (2000), the best approach to violence prevention is to create a more friendly community atmosphere in schools. Metal detectors are a popular form of violence prevention in U.S. schools. However, metal detectors do not address the nature of the problem of violence; instead, schools should create a climate that teaches peaceful resolution (Del Prete, 2000). Metal detectors not only reinforce the feeling that schools are unsafe, but they also instill a sense of humiliation to students.

In Kenya, before the Kyanguli incident, school violence aroused little concern, beyond the news of the events themselves. People were shocked, but each incident soon fell out of the public consciousness. However, after the Kyanguli fire incident, the nation was changed and school violence became part of an ongoing national concern about school safety.

Kopka, (1997), summarizes causes of violence in schools as follows: increased use of alcohol and drugs by the youth, the easy availability of weapons, the growth of youth gangs, a breakdown of family, lack of discipline and an increased portrayal of violence in the media. Goldstein & Coloney, (1997), identified leadership styles and school size as other causes of violence.

The first important step towards preventing school violence is setting up programs to identify students who are potential threats to school safety. Lord, (1999), and Del Prete, (2000), suggest that the best way to prevent school violence is by providing troubled students with counseling. Goldstein & Coloney, (1997), Bucher & Manning, (2003), underscore the need for schools to place safety on the educational agenda as a strategy for preventing school violence and to have a comprehensive and system wide safety plans.

2.5 Safety Policies and Procedures

School safety policies and procedures are set in place to make schools safe and to have a course of action to take in the event of unsafe situations (Trump, 1996). Students, staff, as well as parents, should understand the policies and procedures that are meant to help schools maintain safety. Schools should therefore enact policies to ensure safe, protective and inclusive learning environments (Child Friendly Schools Manual, 2010).

Safety procedures help to keep students safe in unpredictable circumstances (Trump 1996). In most schools, policies are set by school boards, principals and teachers. However, other policies are formulated by the ministry and passed down to schools for implementation. The upshot is that ministerial guidelines are issued but are never implemented in many schools. A case in point is the safety guideline issued to schools after the Kyanguli secondary school tragedy, but due to lack of follow-up, many schools disregarded them. This particular situation is not unique to the Kenyan situation alone. Elsewhere studies carried out by Netshitahame & Van Vollenhoven 2002; Xaba, (2006) indicate that schools in South Africa had adopted safety policies, but that they were not being implemented at all.

Rules are set to discourage inappropriate behavior in schools. Schools therefore should ensure that the set rules, adequately deal with safety issues such as preparedness, favorable environment for learning, drug abuse and violence in general. For rules to be effective, they should clearly indicate the kind of consequences to be meted upon those who break them. Safety policies and crisis prevention programs should be investigated to establish their existence in schools in Nandi –North District.

It is the duty of every principal of a public school to formulate, promulgate, implement and monitor a school safety policy at his or her school. This policy must be based on the safety measures and regulations prescribed by the ministry and must aim to make practicable these measures in order to ensure the safety and security of the learners in their charge (Xaba, 2006).

2.6 Crisis Response Plan

The domain of crisis preparedness and intervention has received increased attention during the past decade (as evidenced by a growing school crisis intervention literature) (Jimerson et al., 2005). Schools should have a crisis response plan and a crisis response team. A comprehensive school crisis Plan should address a range of events and hazards caused by both nature and by people (Dorn, 2006). Some of the crisis situations that may emerge following natural disasters may include: fires, severe weather, earthquakes, tornadoes, and outbreak of disease. Those from human generated situations include bombing, shootings, bus accidents and school violence (Jimerson et al., 2005). A review of crisis literature reveals that experts employ four phases of crisis management as follows:

1. Mitigation/prevention that addresses what schools and districts can do to reduce or eliminate risks to life and property. Although schools have no control over some of the hazards that may impact them, they can take action to minimize or mitigate the impact of these incidents.
2. Preparedness focuses on the process of planning for the worst- case- scenario. Good planning facilitates a rapid, coordinated, effective response when a crisis occurs. Being well prepared involves an investment of time and resources. Every school needs a crisis plan that is tailored to its unique characteristics. Since Schools are located in different areas, problems that may be common in one place may not be there in another place. Schools in Nandi -North should identify the kind of calamities that are likely to affect them, and then come up with a plan that corresponds to these problems.
3. Response is devoted to the steps to take during a crisis. A school needs a crisis response team which includes individuals who work within the school and those from the community. The team's key function is to identify the types of crises that may occur in the school and to determine which crisis events are likely to require or benefit from a team response.
4. Recovery deals with how to restore the learning and teaching environment after a crisis. This last section can be effectively handled by the Guidance and counseling Department in schools. After a crisis, students take time before they can settle down to the normal routine, but with some counseling, this process can be made faster so as to reduce wastage of learning hours.

Crisis plans should be developed in partnership with other community groups, including law enforcers, fire safety officials, emergency medical services as well as health and mental health professionals (U.S.D.E., 2007). It is advisable that all staff be provided with ready access to the plan so that they can understand its contents and act on them when the need arises. Developing a crisis plan and failing to avail it to the staff and students may prove useless because they won't know what to do in case of a crisis, since they are not conversant with the steps articulated in the plan.

Developing an effective crisis response and building a strong school-based crisis response team is important (Schornfeld, 2003). A crisis may emerge that needs immediate attention and relying on people from outside would delay the response. It is therefore recommended that teachers be in the school crisis response team because they have an ongoing relationship with and knowledge of the students, their parents and community.

In Kenya, the ministry has provided a common safety standards manual for all schools to give guidance in readiness and in the event of a crisis, but to meet their own unique needs, schools need to have their own internal safety policy to supplement the manual's, since the manual may not cover all the areas on safety. This study sought to investigate the existence of such guidelines in schools in Nandi North and to establish whether members of staff are conversant with their application.

2.7 School Administrators' and Safety Committees' Role in School Safety

According Hurwitz (1996), administrators need to establish a system for tracking and recording school crime and violence by creating a strong intelligence network which could either be formal or informal. In some schools, head teachers use students as spies to accomplish this. For instance, a head teacher of Larmudiac secondary school in Molo district confessed that he had to give a student informer 50 shillings to reveal a plan by students to burn down the school (Kamotho et al., 2009). This helped the principal to have the culprits arrested just before the arson attack. If this can prove successful in other schools as it did in this particular case, the head teachers should go ahead and adopt the strategy so as to keep schools safe from violence, but extra care should be taken to protect the lives of the informers from the wrath of fellow students.

Principals can play a major role in violence reduction by establishing school norms of non-violence and by developing sincere, caring relationships with groups of students and individuals (Kadel & Follman, 1993). Unfortunately, this is not always the case in most schools. On the contrary, students view their school administrators with a lot of fear, a factor that makes them not to forward their grievances, but instead resort to violence.

Most head teachers concentrate on academic matters in their schools to the extent that they ignore other areas or leave them in the hands of concerned teachers. This is because promotion of head teachers is mostly based on the academic performance of their schools. This should however not be the case, because education is not just about

academics alone, and academic excellence cannot be achieved if other aspects such as safety are not put in place.

The safety standards manual (2008), recommends for the establishment of a school safety committee whose role is to identify the safety needs of the school with a view to taking the necessary action and mobilizing resources required by the school to ensure a safe, secure and caring environment for learners, staff and parents. The unfortunate thing however, is that these members are not given any prior training to enable them carry out the task effectively. There is need for the members of the School safety committee to be trained so that they can be more effective and efficient in promoting school safety.

2.8 Community's Role in School Safety

The crisis situations that affect the local schools also affect the local community. This is because the school is an integral part of the community. Since members of the local community have children in the local schools, the community will respond to the needs of the school and the school will in turn, respond to the needs of the community during a crisis such as, fire or school violence. The primary responders to a school crisis are: Law enforcement, fire services, local community and emergency services such as ambulance services and hospitals. All these come from within the community.

The community can help schools reduce violence by students. Schools can collaborate closely with community social service agencies to provide children and their families with timely and affordable access to counseling, financial assistance and protection (Kadel & Follman, 1993). Sharing information with police and planning anti-gang

interventions with the school community are vital to preventing gang-related youth violence. If a preventive approach to school violence is going to work, schools and communities must stand together in every aspect of its implementation (Cantrell & Cantrell, 1993).

It is arguable that schools which experience the greatest number and more severe incidents of crimes and violence are located in communities that also exhibit these negative characteristics. This is because whatever students learn from the society is transferred to the school and this further explains why many schools near urban centers have more disciplinary cases than those in the rural set up.

The National School Safety Centre (NSSC, 2001), points out that school safety is a community concern requiring community response and that school administrators should facilitate and coordinate community efforts which promote safe schools. The centre stresses the need to involve the community in school issues, because the local residents can help to make schools safe. Although many schools are generally considered safe, the violence that occurs in the neighborhoods and communities finds its way inside the school compounds.

With the current quota system of Education in Kenya, most students in schools are residents of the district where the school is situated, for this reason, parents will be willing to participate in school safety since it touches on their children and therefore they should be involved in school issues as much as possible. The education act (CAP 211) part 111 also provides for school community collaboration in the management of schools.

The Safety manual also encourages members of the local community to cooperate with schools in ensuring learners and staff safety. In this study, the aim is to establish whether the community plays any role in enhancing safety in secondary schools in Nandi- North District.

2.9 Awareness and Training on School Safety

Torrington, Hall & Taylor (2005), emphasized the importance of training by stating that training increases awareness of the rules, improves self-confidence and self-discipline. According to Trump (1996), professional development training for school administrators, teachers, school safety officials, school support staff, parents, public safety and community agency partners helps participants learn how to prevent and manage school violence, reduce security risks and liability, and improve school-community relations.

The training sessions should include: Presentations, workshops and seminars, facilitated school safety and crisis preparedness plan team meetings and table top exercises among others. Training helps schools to be aware and prepared. Preparedness includes emergency drills, such as fire drills and crisis exercises for staff, students and emergency responders. According to Comolotti (1999), school fire drills prepare students for what they need to know in case of a fire outbreak. They allow students and staff to plan for their escape in advance. Chances of responding appropriately in a crisis will be much greater if all players have practiced the basic steps they will need to take (Trump, 1996). In San Diego, California, school district, for instance, staff feels that practice and training should constitute the majority of the crisis planning process. In their formula for success,

practice accounts for 50% of the process, training for 30% and planning 20%.While the percentages are flexible, training and drills are essential.

At least once a year, schools should provide crisis response training for teachers and staff. Schools should go through the crisis plan and procedures in order to familiarize all school personnel with it. To enhance preparedness all stakeholders and families should be given literature corresponding to the crisis plan.

While actual drills and training are essential, it is also helpful to have group brainstorming activities that can be conducted informally around a table. Many districts are adopting table top exercises in the U.S.A. Table top exercises are informal and stress-free exercises intended to facilitate the testing, evaluation and practicing of a school facility's crisis response plan and promote group problem solving. Table top exercises are useful in practicing and testing the procedures specified in the crisis plan. They help schools gauge how these plans would work in a real emergency, as school staff and emergency responder sit around a table discussing the steps they would take to respond to a crisis**.**

2.10 Summary of Measures that Enhance Safety Preparedness in Schools

Squelch (2001) propounds that a safe school is characterized by the presence of certain physical aspects such as a secure wall, fencing and gates, buildings that are in a good state of repair and well maintained school grounds. Other indicators of school safety are good discipline, a culture conducive to teaching and learning, professional teacher conduct and good governance.

Other procedures of promoting school safety include establishing school safety committees (SSC), designing and producing school safety policies (SSP), monitoring and implementing the policies (Stephens 1995; IPT, 1993; Vienings et al, 2001; Calabrese, 2000). This relates to making sure that the right people know what the school safety plan (SSP) entails and what role each of them should play in carrying it out. (Xaba, 2006)

While school safety is the responsibility of all stakeholders, the school principal and educators (teachers) are obliged to ensure learner safety during school hours (Prinsloo, 2005; Botha, 1994). The role of both the BOG and educators illustrates the importance of collaborative efforts regarding school safety. Vienings et al. (2001) put emphasis on the fact that for safety measures at a school to work; all the stakeholders need to be involved so as to create ownership and pride.

Some of the safety measures and procedures that should be put up include: systems for drainage and sanitation, waste disposal and management, electricity, fire alarms, communication systems, emergencies and evacuations, access control and intrusion detection (Szuba & young, 2003). Others include identifying damages and repairing safety systems, for example; fire alarms, drainage and sanitations, securing fire systems such as Extinguishers, fire-horses and sprinklers in appropriate locations, establishing access control systems, that is equipment control, access to facilities, enacting and simulating emergency drills and establishing monitoring supervision systems for play grounds (Szuba & Young, 2003).

Collaboration with agencies from outside school Includes collaborative relationships among school managers, educators, learners, parents, law enforcement officers and various social service personnel (Bucher & Manning, 2003). Stephens (1995) goes further and advocates for the development of a district-wide safe school plan, complemented by one for each school. Surveillance entails monitoring the whole school environment. This involves determining who gains access to the school and its facilities, establishing authority and control over the school environment and establishing clear border definitions between the school and the surrounding neighborhood. Safety in this sense implies that the school grounds must be free of any safety threats, both to property and people at the school (Xaba, 2006).

2.11 Summary of Literature Reviewed

The literature review has addressed earlier researches on school safety in different parts of the world. Countries covered include the U.S.A., U.K, S.A, and Uganda in comparison to Kenya. The need to have safety measures and procedures put in place in schools to enhance school safety has been captured by the following (Librera, 2004; Xaba, 2006; Lulua et al., 2007; Calefati, 2009; Boehlke, 2010; and Omolo & Simatwa, 2010). The literature review has also identified the variables which when manipulated can result in enhanced school safety. These includes; Safety in physical infrastructure (Jenne & Greene, 1976; ROK, 2008); School safety policies and procedures (Trump, 1996); crisis preparedness and response (Schornfeld, 2003; Jimerson et al, 2005; Dorn, 2006; U.S. Dept. of Ed., 2007); the different roles played by the different stake holders in enhancing school safety (Hurwitz, 1996); and school violence prevention (Day,1996; Kopka, 1997; Lord,1999; Del Prete, 2000 and Poland, 2000). The study employed the chaos theory and

disaster response management. A conceptual framework which shows the relationship between the variables of the study has been illustrated. The framework indicates that several factors and mechanisms have to be put in place for safety to be achieved. The guidelines stipulated in the safety standards manual (ROK, 2008), have also been highlighted. It is evident from the existing literature that there is a deficiency in so far as the implementation of safety measures is concerned. The study therefore sought to fill this deficiency in the literature. The study further, sought to establish the existing challenges and to explore the possible strategies for enhancement of school safety in the district.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction to the chapter

This chapter presents the procedures that were used to obtain data for the study. It entails the study area, the research design and the target population. The sampling techniques and procedures, the research instruments and pilot study are also highlighted. The validity and reliability of research instruments, research variables, data collection procedures and data analysis procedures are presented and finally ethical considerations are discussed.

3.2 Location of the Study

The study was carried out in Nandi North District in Rift valley Province in Kenya. The area measures a total surface area of 563km^2 and has a total population of 498,883 people. The district is surrounded by four Districts; to the North is Eldoret West, to the East is Wareng, to the South is Nandi Central and to the West is Kakamega North District. It comprises three administrative divisions, namely, Kosirai, Kipkaren and Kabiyet. The District has a total of 39 secondary schools, 5 of which are boys' boarding, 9 are girls' boarding, 4 mixed boarding and the rest 21 are mixed day schools. The District has approximately 6,595 students. The district was chosen because of the reported cases of student deaths.

3.3 Research Design

The study used both qualitative and quantitative research methods, but was skewed toward quantitative method to determine the state of safety in secondary schools in Nandi North District. The study specifically used descriptive survey design for data collection. The design involved the use of more than one research instruments, which included: the questionnaires, interview schedule and observation checklist. Descriptive survey is concerned with describing the state of affairs as it exists. This design was therefore appropriate because it allowed the researcher to collect factual information that describes the state of safety in the selected secondary schools in the district. The design was also chosen because the results needed to be generalized over a large population.

3.4 Target Population

The study targeted all the public boarding secondary schools in Nandi North District. The district has 17 public boarding secondary schools. All these schools that constitute 43.5% of the total number of secondary schools in the district were used for the study. The boarding schools were selected purposely because they are more appropriate since students spend most of their time in school and are therefore more prone to school insecurities than day schools. Secondly, the funds for firefighting equipment from the government were given to the boarding schools. The respondents comprised of head teachers, teachers, students and security officers from the selected schools.

3.5 Sampling Technique and Procedure

In this study, stratified and purposive sampling were used. All the 17 public boarding secondary schools in Nandi North District were stratified into four types: girls' boarding,

boys' boarding, mixed boarding and both boarding/day. All these boarding schools were used as the sample because of the small size of the population. In the selected schools, all head teachers were included in the sample and purposive sampling was used to select teachers in charge of discipline, boarding masters, boarding prefects, sanitation/environmental prefects and school security officers. The sample was purposively selected because they have vital information concerning school safety.

3.6 Research Instruments

The following three instruments were used as the main tools of collecting data: Questionnaires, interview schedules and observation checklist. The selection of these tools was guided by the nature of data to be collected, as well as by the objectives of the study. The instruments were used to get information on the existing school safety measures, levels of awareness, challenges and solutions to school safety.

3.6.1 Questionnaires

Questionnaires were used to elicit responses from head teachers, teachers and students. They had both open and closed ended items. The questionnaires were divided into three parts; part A gave the demographic characteristics of the respondents, part B sought to solicit information on school safety measures and awareness, while part C covered questions on challenges and suggested solutions to school safety. One advantage of the instrument is that it is free from bias of the researcher and it is convenient since it collects a lot of information from a large sample over a short period of time. The instrument also gives the respondents adequate time to give well thought out answers.

3.6.2 Interview Schedule

The interview schedule was designed for the security officers consisting of 6 questions. The study employed the respondent type of interview where the interviewer retained all control throughout the process

The method was used because some officers could not respond to the questionnaires due to their level of literacy as observed in the pilot study. This was done through semi structured questions that were read out to them. The semi- structured interview, as opposed to standardized open ended interview format, was employed as it "increases the comprehensiveness of the data…" (Cohen et al, 2002). Interview schedule was used to supplement information which may not have been captured in the questionnaire and for further clarification of what was observed in schools. One major advantage of this instrument is that it guards against confusion because the questions can be clarified. Secondly, interview schedules are more flexible and provide an in-depth data which is not possible to get using questionnaires.

3.6.3 Observation Checklist

The study used a constructed observation checklist to assess the level safety preparedness in schools. The researcher made a list of items to be observed in the assessed schools. The checklist allowed the researcher to see the situation as it was, gain firsthand information, record information as it occurred and notice unusual aspects as far as availability of safety measures was concerned. It was also to be a tool for the triangulation of the data responses so as to enhance their veracity.

The checklist was also used to ascertain whether the safety measures were adequate enough to enhance school safety. The researcher made observations of the physical environment, that is, access to schools, the buildings, school fence, sanitation facilities and availability of fire extinguishers. What was observed was noted down as useful data for analysis to support and confirm information from the other instruments.

3.7 Pilot Study

A pilot study was carried out in three secondary schools representing the identified types of schools from the neighboring Nandi Central District. The feedback obtained from the pilot study aided the researcher in revising the questionnaire to ensure that they covered the objectives of the study adequately. Piloting also ensured as much as possible that the items elicited the kind of responses the researcher intended to get.

3. 8 Validity of Research Instruments

Validity relates to precision and accuracy, therefore the standard deviation and the error term were determined within the sample to ensure that there was minimal variance. The validity of the instruments in the study was addressed by research method experts in the School of Education, who reviewed the instruments for suitability of format and content. The recommendations were then used to improve the quality, content and the structures of the instruments. Piloting was also done and the feedback was used to refine the questionnaires and interview schedule to ascertain validity.

3.9 Reliability of Research Instruments

Reliability refers to the degree to which scores obtained from an instrument are consistent measures. The reliability of the instruments in this study was enhanced through a pilot study in three schools outside the district of the study. Test-retest technique was administered twice in a period of two weeks. Thereafter the reliability coefficients were calculated using Pearson product moment correlation formula. Since the r (reliability index) was 0.7, the instruments were deemed reliable. The purpose of pre-testing was to ensure that there is clarity of the questions to the respondents.

3.10 Data Collection Procedure

The researcher got a letter from the school of Education, Moi University, addressed to the permanent secretary, Ministry of Education. Thereafter, a permit was issued by the Ministry of Education, Science and Technology to the researcher. The researcher then reported to the DEO's office in Nandi North District where she was issued with a letter to the heads of the selected secondary schools informing them of the study. With the help of the head teachers, the researcher was able to get the respondents and the data collection process took place.

3.11 Data Analysis

Data analysis was based on the objectives and questions of the study. Descriptive statistics that was employed include frequencies and percentages, while in inferential statistics, correlation and regression analysis were utilized. Correlation was used to show the relationship between the different variables in the study while Regression analysis was used to determine the influence of each independent variable (IV) on the desired

outcome, Dependent variable (DV). Data was presented in form of tables and graphical presentations such as pie charts and bar graphs. Microsoft Excel and the statistical packages for social sciences (SPSS) version of program assisted in data analysis.

3.12 Ethical Considerations

The researcher assured participants of total confidentiality and anonymity. The nature and purpose of the research was explained to the respondents by the researcher. The respondents were given assurance that information gotten from them was to be used for intended purpose only. This was guaranteed by ensuring anonymity where respondents were not required to write their names.

Permission to carry out the study was acquired from the appropriate educational authority, the Ministry of Education. The researcher complied with the professional standards governing the conduct of the research. Access to the participants was through respective gatekeepers and the school authority at the research sites.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION, INTERPRETATION AND DISCUSSION

4.0 Introduction to the chapter

This Chapter deals with data analysis, interpretation and discussion based on the responses to the items in the questionnaires, interview schedules and observation checklist. Full details of the analysis are broken down into categories based on the objectives of the study so as to enhance comprehension.

4.1 Response Rate

The study had 170 respondents comprising 17 head teachers, 68 teachers, 68 students and 17 security officers, from 17 boarding secondary school in Nandi North District. The researcher however, did not get back all the questionnaires. The questionnaires returned were as follows: 94.12% for the head teachers, 95.5% for teachers and 97% for the students. The researcher was able to interview 14 school security officers translating into a return rate of 82.35% which was adequate for data analysis. Table 4.1 shows the response rate.

Table 4.1

Response Rate

Respondents	Sample size	Return rate
Head teachers	17	94.12%
Teachers	68	95.5%
Students	68	97%
Security officers	17	82.35%

From the results, the return rate is very encouraging as most of the questionnaires were received back thus making it possible for data to be analyzed.

4.2 Demographic Characteristics of Respondents

This section covers the background information of the respondents including their type of school, gender, years at current station and their teaching experience. The study sought to investigate the demographic information of the respondents since it helps to gauge the reliability of the data obtained.

4.2.1 Respondents from the Different Schools in the Study

Table 4. 2

Respondents from the Different Schools in the Study

Respondents	Boys' boarding	Girls' boarding	Mixed boarding	Day and boarding	TOTAL
Head Teachers	5 (31.1%)	8 (50%)	2 (12.5%)	1 (6.3%)	16
Teachers	19 (29.2%)	32 (49.23%)	10(15.38)	4 (6.2%)	65
Students	18 (27.3%)	32 (48.5%)	12 (18/.18%)	4 (6.06%)	66

The respondents involved in the study comprised of eight (50%) head teachers from girls boarding and 32 (49.23%) teachers, five (31.1%) head teachers and 19 (29.2%) teachers from boys boarding schools. From the mixed boarding, there were two (12.5%) head teachers and 10 (15.38%) teachers while from the day/boarding there was one (6.3%) head teacher and four (6.2%) teachers. Among the students involved in the study 48.5% were from girls boarding, 27.3% from boys boarding, 18.18% were from mixed boarding and 6.06% came from day/boarding. The findings indicate that majority of the

respondents were drawn from girls boarding thus indicating that boys boarding are underrepresented in the district. This implies that more boys' boarding schools need to be established so as to balance with the girls' schools. Data in this section is presented in Table 4.2.

4.2.2 Class of Study

The study sought to identify the classes from which the respondents were drawn from. The findings in Table 4.3 indicate that a fairly average number of students 45.5% involved in the study were Form Threes and 43.9% were Form Fours while the least 10.6% were drawn from the Form Two classes. In most schools the prefects come from the top classes, this explains why we have most of the respondents in Form Three and Form Four classes.

Table 4. 3

Class of Study

Class	F 2	F 3	F 4	Total
Frequency	7	30	29	66
Percent	10.6	45.5	43.9	100

The learners from the chosen classes, the researcher assumed, would have more knowledge on the study given their length of stay in their schools.

4.2.3 Gender

The findings indicate that among the head teachers involved in the study, 56.25% were female and 43.75% were male, while 55.4% of the teachers were male and the rest 44.6%

were female. On the part of the students, 60.6% were female and 39.4% were male. The findings indicate that there was gender disparity in the distribution of teachers, head teachers and students in the study. This has been attributed to the higher number of girls' schools in the district compared to the boys' schools. These findings are shown in figure 4.1

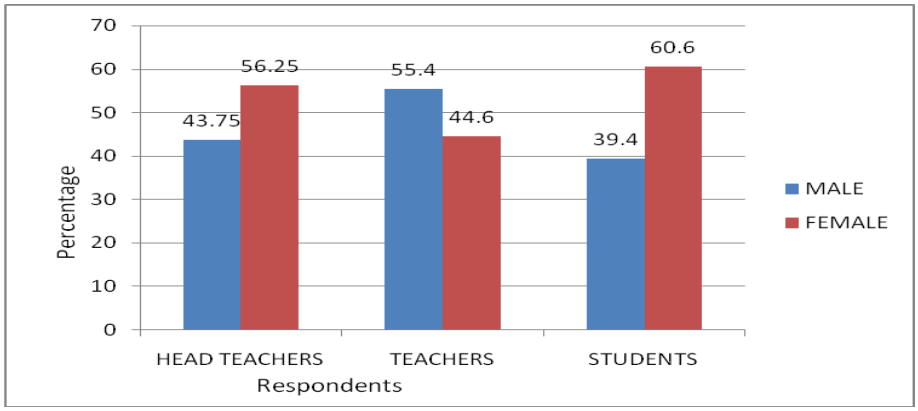

Figure 4.1. Gender

4.2.4 Duration at the Current Station

The study sought to establish the number of years the respondents had taught in their current stations. The number of years that the head teachers and teachers had taught in their current station was varied as summarized in figure 4.2. A fairly average number of head teachers 43.8% had taught in their current station for less than five years, 43.8% had taught for between six and 10 years, 6.3% had taught for between 16 and 20 years and another 6.3%, had taught for over 20 years. Majority of the teachers 73.8% had taught for less than five years, with 12.3% having taught for between six and 10 years and the least 7.7% had taught for between 11 and 15 years. These findings revealed that both head teachers and teachers had enough teaching experience to enable them to handle safety matters adequately.

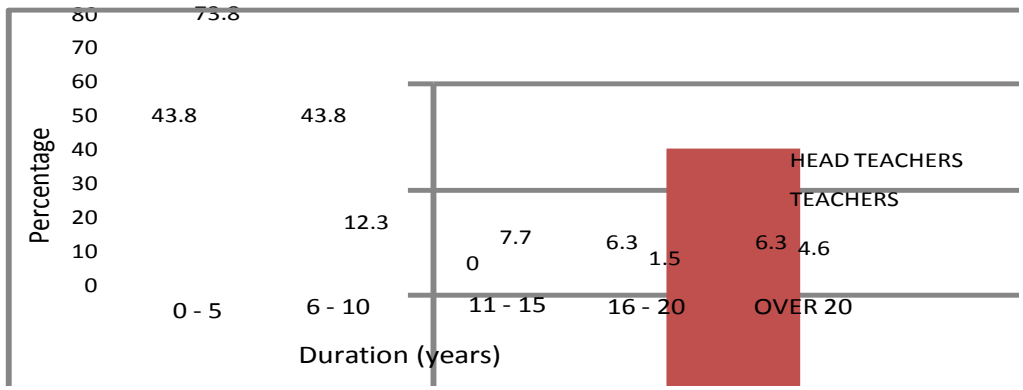

Figure 4.2. Years at Current Station

4.3 Safety Measures Available in Schools

4.3.1 Safety Standards Manual

The first question in the study sought to establish the safety measures available in schools in Nandi North District. To answer this question, the head teachers were asked whether they had a copy of the safety standards manual in their schools. It was important to establish whether schools had the manual because this is where the guidelines are found. The findings indicated that 81.3% of the schools had the safety manual against 18.8% who did not have. Different schools kept the manual in different places as indicated by the results. An average of 56.3% schools, kept the manual in the head teachers` office while 18.8% kept it in the library where everybody could access it and the least 6.3% indicated the staffroom and another 6.3% identified the secretary's office. The others did not have the Manual.

The fact that the government saw it fit to provide all schools with the manual is a clear indication of the manuals' importance. Therefore keeping the safety manual in the office prevents all staff from accessing the information and the guidelines stipulated in the

manual which is purposed for them to know. A more central place should be identified in all schools where all the members of the school community can access and know the contents as a way of enhancing preparedness in case of an emergency.

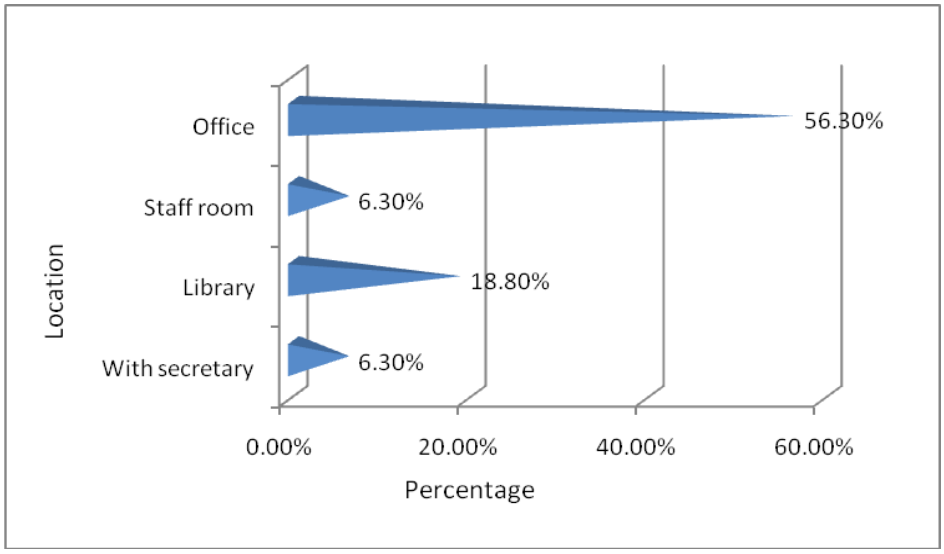

Figure 4.3. Where the Manual is Kept

4.3.2 Presence of a School Dispensary, Nurse and First Aid Kits

The head teachers were asked whether they had a school dispensary, a trained school nurse and first aid kits in their schools. Their responses were as follows:

A good number of head teachers, 68.8% reported that they had a dispensary against 31.3% who did not have, 62.5% had a trained school nurse while 37.5% did not. A considerate proportion 81.3% of the head teachers reported that they had a first aid kit in their school while 18.8% did not have. The presence of a dispensary, trained school nurse and first aid kits are indicators that a school is prepared to handle health and safety appropriately. However, the schools that do not have these facilities need to do so, to enhance health and safety preparedness in their schools. See Figure 4.4

It was however, noted that even in schools with a nurse, the nurse resided outside the school compound as shown in the results. In six (37.5%) schools, the nurse resided outside the compound while in only four (25%) did the nurse reside within the compound, meaning if something happens at night, he/she may not be reached or it might take time before responding to the students` needs. Availability of a dispensary, trained school nurse and first aid kits is a sign of preparedness for emergency. On the contrary, absence of the same facilities is not only an indication of unpreparedness but a risk in case of an outbreak of a disease

The findings reinforce those of the (ROK, 2008) found in the manual which state that it is the responsibility of every school administration to provide a healthy school environment. To promote good health and hygiene among the learners, the school should have an adequately trained teacher in health education. Boarding schools should have sanatora (sick bay) and ensure working and adequate first aid kits and facilities to provide emergency care in schools.

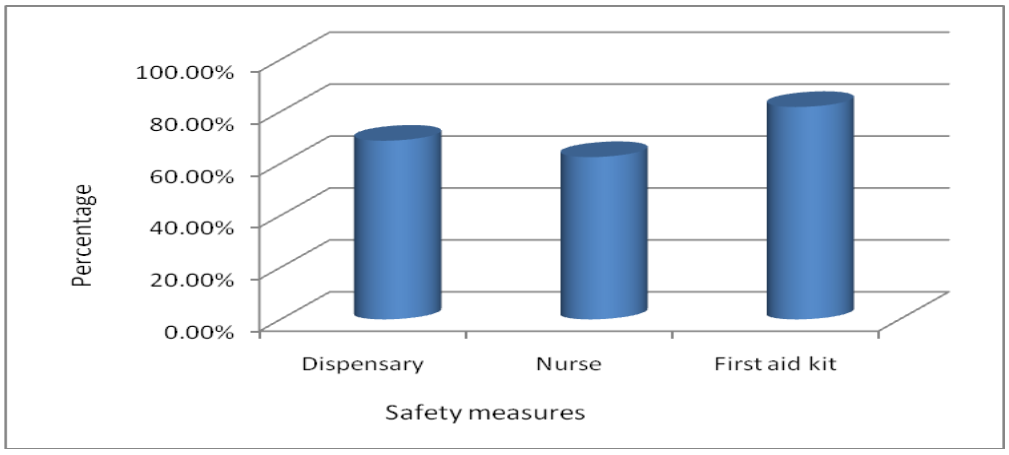

Figure 4.4. Presence of a School Dispensary, Nurse and First Aid Kits

4.3.3 School Bus

The study sought to find out the number of schools that had a bus. From the findings in Figure 4.5, 68.8% of the schools had a bus, while 31.3% did not. The frequency of servicing the bus was mentioned by 37.3% as being very regular, 25% said the service was regular, 6.3% were not sure about the servicing, while 31.3% indicated not applicable since they had no bus to service

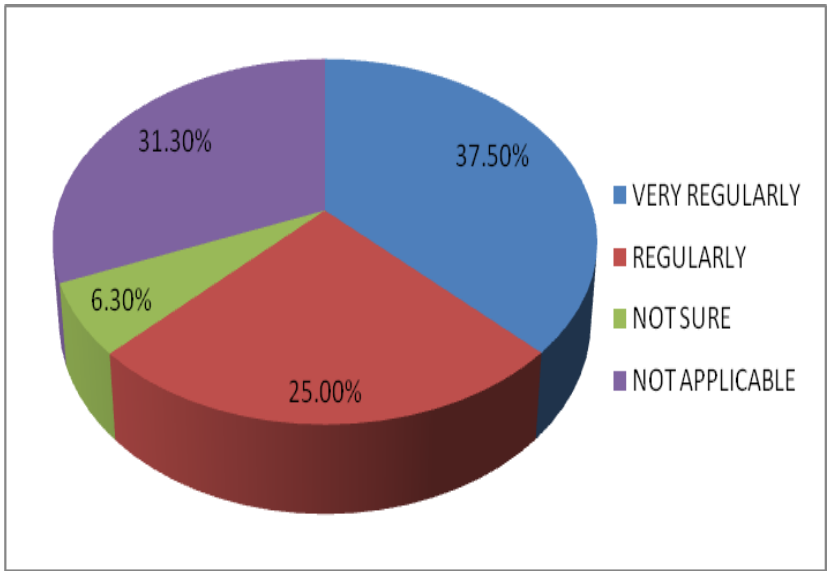

Figure 4.5. Frequency of Servicing the Bus

Regarding the drivers' refresher courses 50% of the head teachers admitted that their drivers did not go for refresher course. Refresher courses for drivers are necessary because they refine and update their skills hence, the need to have them in-serviced. This finding is in line with the Circular Ref. No.DQS/A/2/ R1A/VOL.11/98 from the ministry of Education to all PDEs, DEOs, and MEOs asking them to ensure that all institutional vehicles used by schools to transport learners adhere to the ministry of transport guidelines.

It is important that every school should have their own buses so as to ensure safety of the learners and staff when travelling. It is very convenient for schools to plan for trips when they have their own bus. The servicing of the bus is equally important as it keeps the bus in good mechanical condition thus reducing chances of road accidents. See figure 4.6

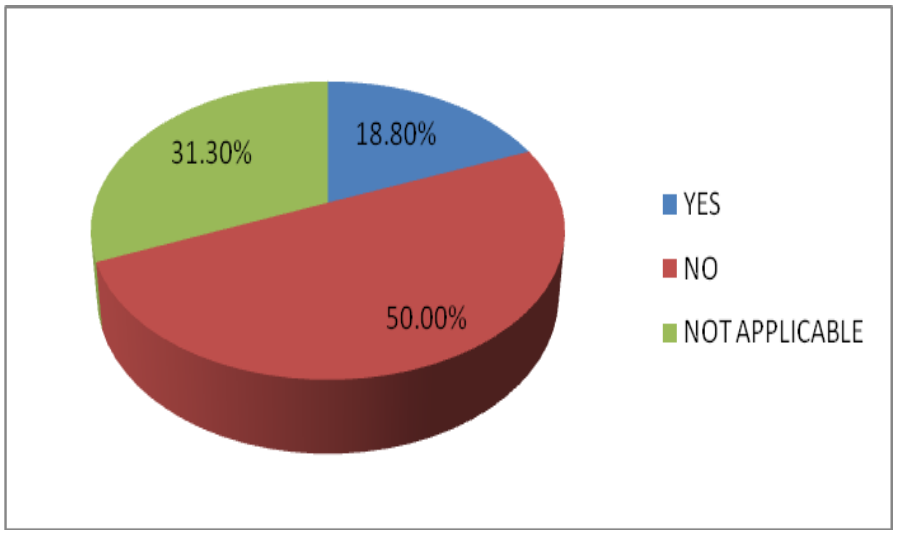

Figure 4.6. Drivers Refresher Courses

4.3.4 Involvement of the Local Community

To establish the extent of involvement of the local community in school activities, the head teachers were asked whether they involved the local community in matters relating to school safety. The response indicated that only 37.5% of the schools involve the local community, while the majority 62.5% did not, see Figure 4.10. Despite the fact that the local community has a role to play in school safety, many schools have not taken the initiative to actively involve them in school safety matters. There is need not only to bring on board the local community to participate in school activities, but also to empower them to take up important roles in enhancing school safety.

The education act (CAP. 211) part 111 provides for school - community collaboration in the management of schools in Kenya through school committees. The guidelines in the Safety Manual also recommend that members of the local communities should be encouraged to cooperate with schools in ensuring learners' and staff safety. The schools that have not involved the local community in their school matters should be advised to comply with this important requirement in the manual. The findings of this study contrast those of Bucher and Manning (2003), Goldstein & Coloney (1997), and Vienings et al. (2001) who emphasized the need to have all stakeholders involved in the implementation of safety measures in schools. According to Cantrell & Cantrell (1993), if a preventive approach to school violence is going to work, schools and communities must stand together in every aspect of its implementation.

4.3.5 Schools' Assessments by QASO

In relation to assessment, the study sought to find out the number of times the schools had been assessed in the last two years prior to the study. The findings showed that 56.3% of the schools had been assessed once, 37.5% had been assessed twice and 6.3% had not been assessed at all over the last two years. The findings in Figure 4.7 imply that assessments were not adequately carried out, thus limiting the effectiveness of the exercise in ascertaining the safety standards in the schools. This therefore calls for a concerted effort on the part of the government to ensure that the QASOs carry out assessments regularly to make sure that the schools implement the policies as a way of enhancing preparedness.

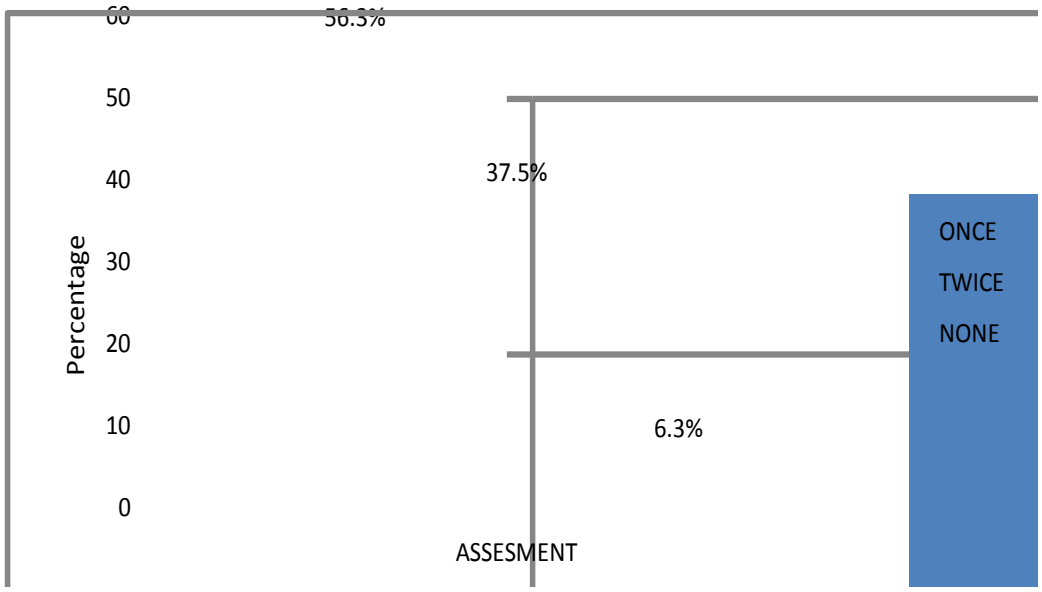

Figure 4.7. Assessment by QASO

The finding affirm the assertions made by Rugut (2003), Omolo & Simatwa (2010), who observed that QASOS were inefficient in their jobs, a sentiment that this study confirms given that some schools had not been assessed at all in the last two years prior to the study.

4.3.6 Safety Notices and Emergency Exits

The study sought to establish whether schools had safety notices and emergency exits. From the findings, 56.3% of the schools had safety notices prominently displayed in the school buildings while 43.8% did not. Emergency exits were reported to be available in only 18.8% schools, while the majority 81.3% did not have them. Refer to table 4.4.

Table 4. 4

Presence of Emergency Exits and Safety Notices

Notices		Frequency	Percent
Presence of emergency exit	Yes	3	18.8
	No	13	81.3
Presence of Safety Notices	Yes	9	56.3
	No	7	43.8

The display of safety notices helps to warn learners of impending dangers and therefore be in a position to avoid them and remain safe. Lack of safety notices and emergency exits, may expose learners to risks that could otherwise have been avoided, while buildings with exits allow for easy escape of the occupants in case of an emergency.

Safety signs play a real practical role in preventing injury and ensuring that staff and students are aware of the dangers and hazards awaiting them at given points. Without them most students would lack essential direction in times of crisis. They ultimately instill caution when it is required most and serve as one of the main means of communicating health and safety information. Safety signs should therefore be provided where necessary to warn of hazards, to prevent dangerous practices and indicate safe exit routes and safe practices. (www.healthyworkinglives.co.advice/...)

4.3.7 Toilets

The student to toilet ratio of 30:1 was exceeded in only four schools, but the other 13 schools complied with the policy and had enough toilets in their schools. This is a commendable move in Nandi North District schools as earlier studies by UNESCO

(2005), Aketch & Simatwa (2010), revealed that elsewhere schools did not have adequate toilets for the learners. The findings affirm the MOEs' recommendations as stipulated in the manual. The few schools however, which did not meet this requirement should emulate the rest and ensure that students have enough toilets.

4.3.8 Engaging a Qualified Architect

Insecurity caused by poorly constructed buildings constitutes an infringement of the right of learners to learn in a safe environment; therefore the researcher wanted to establish whether schools engage a qualified architect in the planning and supervision of school constructions as a way of enhancing school safety. From the findings in Figure 4.8, 56.3% of the schools employed a qualified architect, whereas 25 % did not, 18.8% stated that they sometimes engage an architect when funds were available and did not when they did not have enough funds. This finding contravenes Greens & Jennes (1976), who highly recommended that schools should employ a qualified architect. The Safety manual (2008), clearly stipulates that all school buildings should be constructed in accordance with the ministry guidelines and public works regulations, which includes having an architect to design the plan. Engaging architects will help to reduce ugly incidents like the one cited by Xaba (2006), where an 11 year old learner died when a roof under construction collapsed pinning him underneath and injuring four other girls in a South African school.

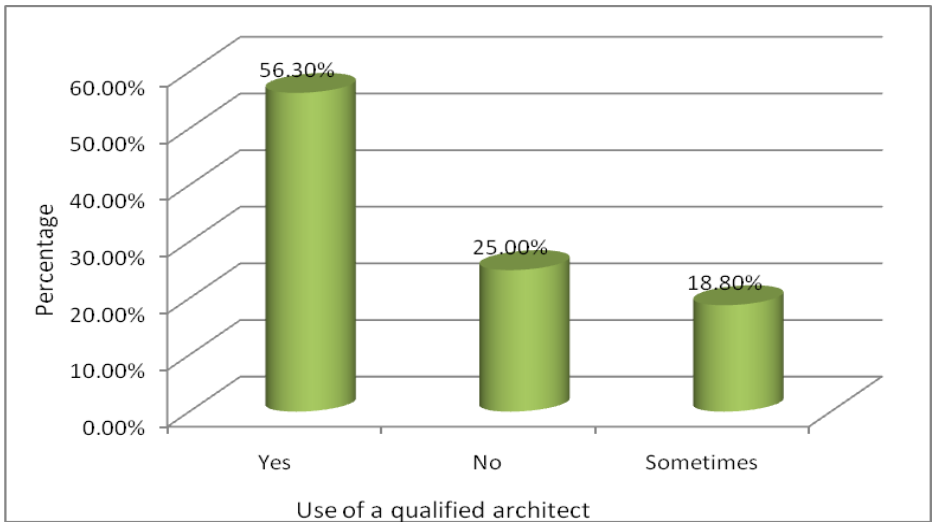

Figure 4.8. Employment of a Qualified Architect

4.3.9 Water Treatment

The study sought to establish the source of water in the schools and to know whether the water was treated. The findings revealed that despite the serious consequences of using contaminated water, only 12 (75%) admitted to treating the water used in their schools against four (25%) who did not. All schools should be encouraged to treat water as a measure to control water borne diseases and to avoid a repeat of what happened in Chesamisi High school in 2004, when there was an outbreak that resulted in the death of seven students and hospitalization of three teachers (Omolo & Simatwa, 2010).

The findings correlate well with (ROK, 2008) which stipulates that schools should make sure their sources of water are at least 15 meters away from pit latrines, to avoid contamination, a rule that all schools in the study observed. Schools are also required to provide adequate and safe water for drinking and use by learners and staff; and ensure

that the MOE and MOH do regular inspections and certification for all water sources for school use.

4.3.10 Safety Policy, Safety Committees and Crisis Response Plan

An alarming finding was that despite the many reported incidents of insecurities in schools and the provision of the Safety Manual by the ministry of Education requiring schools to form safety committees, most schools still did not have a school safety policy and the safety committee. A total of 22 (33.8%) teachers indicated that they had the policy in their school, while the majority 43 (66.2%) did not. More puzzling is the fact that only five (7.7%) teachers affirmed the presence of a safety committee in their schools, whereas the majority 60 (92.3%) reported on the negative yet this is a government requirement. The findings reinforce those of Netshitahame and Van Vollenhoven (2002), and Xaba (2006), who established that most schools in South Africa had safety policies, but they did not implement them at all. Adopting policies and failing to implement them makes the whole process of enhancing school safety fruitless.

When teachers were asked whether their schools had a crisis response plan, 36 (55.4%) of them confirmed that they had the plan, whereas 29 (44.6%) reported that they did not. However, even in schools where the plan was available, the teachers were not involved in its preparation. It is necessary that teachers be involved in the preparation so that they can understand it to be able to use it when the need arises. Only 35.4% of the teachers attested to being involved in the preparation of the plan, and the rest 56.9% were not involved in any way. A crisis response plan is a very important tool in enhancement of safety preparedness and hence the need to have it in schools. According to Schonfeld

(2003), Dorn (2006), and USDE (2007), every school needs a crisis plan that is tailored to its unique characteristics. Absence of the plan means that much still needs to be done to ensure that schools are prepared to handle emergencies. Therefore the schools which do not have the plan should consider developing one. See Table 4.5

Table 4. 5

Presence of Safety Policy, Safety Committees and Crisis Response Plan

Measures		Frequency	Percent
Safety policy	Yes	22	33.8
	No	43	66.2
Safety committee	Yes	5	7.7
	No	60	92.3
Crisis response plan	Yes	36	55.4
Teachers involvement	Yes	23	35.4
	No	37	56.9

4.3.11 Frequency of School Violence

The study sought to establish incidents of school violence and their frequencies in the district. In responding to this, a majority of the teachers 58 (89.2%) reported that no incident of violence had been reported in their schools in the last two years preceding the study. However, seven (10.8%) reported incidents of violence. On frequency of violence, 24.6% reported that violence took place rarely in the schools, while 3.1% were not sure of the frequency and another 4.6% stated less frequency.

The negligible number of school violence in Nandi North secondary schools is very commendable as it depicts a picture of safe schools, which provide good learning environments for learners. This is in contrast to Day (1996), Netshitame and Vollenhoven (2002), and Xaba (2006), who identified school violence as a major threat to school safety in South African schools. They emphasized that it was one of the most pressing educational issues in the country.

4.3.12.1 Firefighting Equipment

To further determine schools' levels of preparedness, students were asked to confirm whether the following firefighting equipment were available in their schools. Figure 4.9 shows the responses. Only 22.7% indicated that fire alarms were available, while 77.3% reported absence of the same in their schools, 21.2% confirmed the presence of water horse hydrants, against 78.8% who did not have. Asbestos blankets were said to be available in schools by only 12.1% as compared to 87.9% who reported that their schools did not have them. Fire extinguishers were however reported to be available by 92.4% of the students. The availability of basic safety equipment in a school enhances safety preparedness. It can be deduced from the absence of most of the equipment, therefore, that most schools are not in a position to counter any emergencies that may arise in their compounds.

Although most schools recorded that fire extinguishers were available, the numbers were inadequate in all schools. Moreover, other equipment like water horse hydrants and asbestos blankets were available in very few schools. These findings correspond with

previous studies by Xaba (2006), and Rono & Kyalo (2007), who found out that most schools had a negligible number of extinguishers.

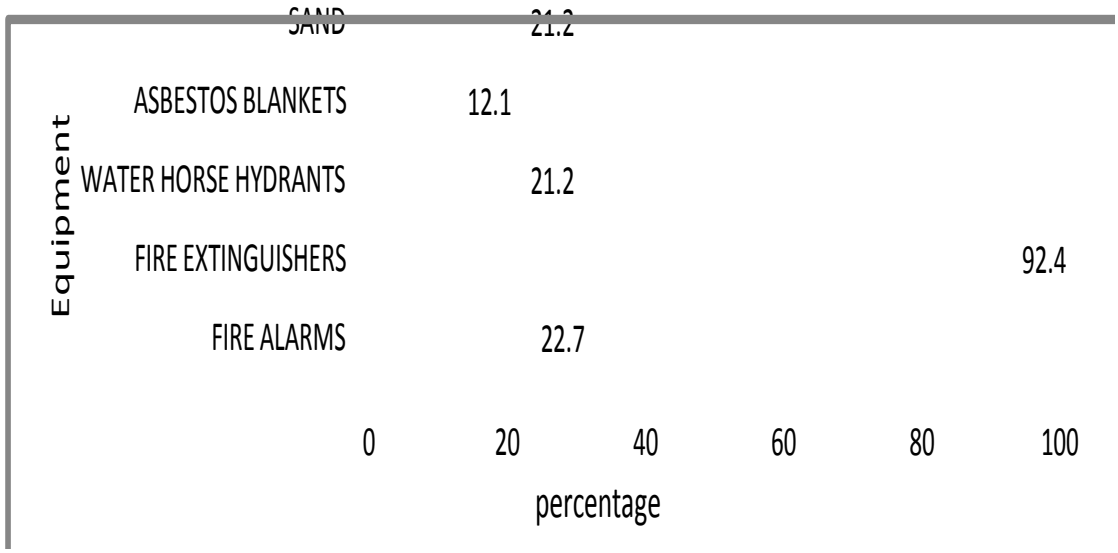

Figure 4.9. Availability of Firefighting Equipment

4.3.12.2 Servicing of Fire Extinguishers

Another question asked was on the frequency of servicing of the fire extinguishers. From the findings, a fairly average number of head teachers 43.8% reported that the extinguishers were serviced very often, 25% stated that the service was often, 12.5% were not sure, while 18.8% indicated less often.

The availability and servicing of fire extinguishers is critical in the enhancement of school safety. It is not just enough to have the extinguishers installed, but it is equally important to have them functional in readiness for any eventuality. If they are not serviced, it beats the purpose of installing them in the first place. Even though some head

teachers reported that the fire extinguishers were serviced, observation reveals no signs of servicing of the same. See Figure 4.10

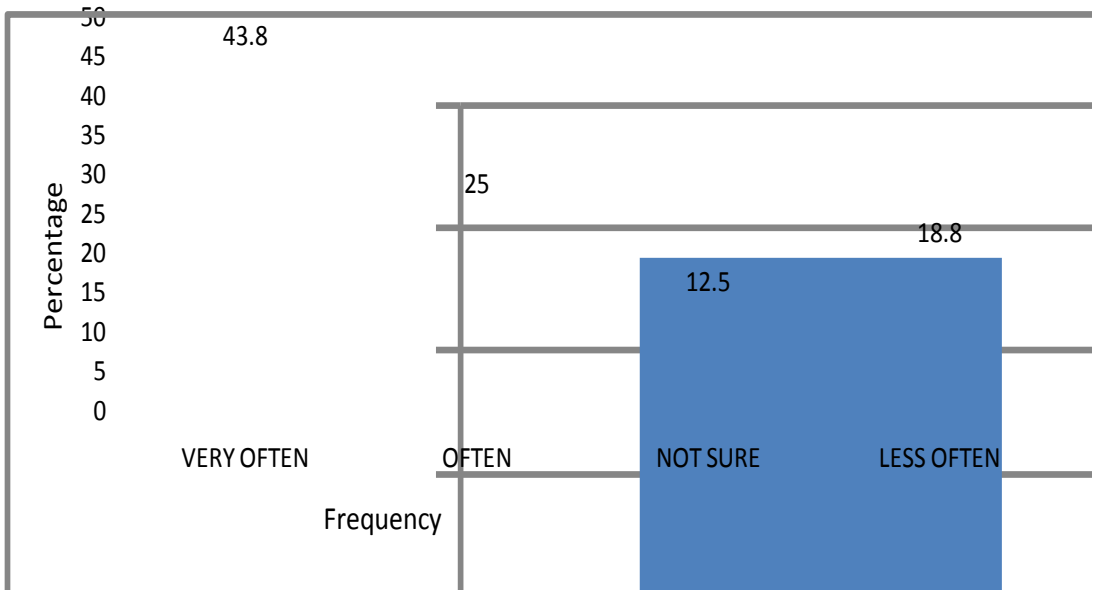

Figure 4.10. Servicing of Fire Extinguishers

4.3.12.3 Location of Fire Extinguishers

As a way of ascertaining the schools' levels of preparedness to counter fire out breaks, the students were asked to identify areas where fire extinguishers were located in their school and 40 (60.6%) students reported that they had fire extinguishers in the dormitories, 63 (95.5%) identified the laboratory, 39 (59.1%) cited the library, 38 (57.6%) mentioned the kitchen while 62 (93.9%) indicated that extinguishers were found in the administration block See Figure 4.11

The responses indicate that most schools concentrate on availing fire extinguishers in the laboratories and the administration blocks, possibly because of the high risk posed by

chemicals in the laboratory and the important documents kept in the administration block. A smaller percentage of extinguishers are placed in other areas. However, this should not be the case since the dormitories are equally important given that they house students at night, so priority should be placed here to ensure safety of learners in case of a fire outbreak at night. This findings contrast the Safety Standards Manual (2008), which specifies that "fire extinguishing equipment should be available in the dormitories, be functioning and placed at each exit with fire alarms fitted at easily accessible points".

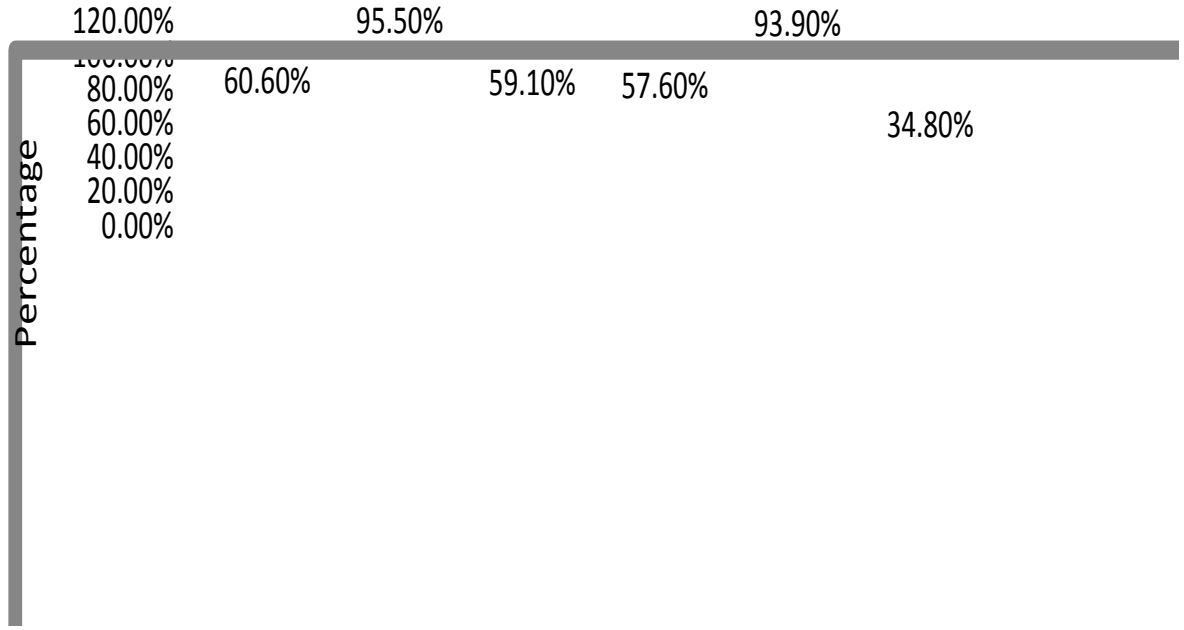

Figure 4.11. Location of Fire Extinguishers in Schools

4.3.13 Physical Infrastructure

It was necessary to establish whether schools had implemented the safety guidelines on schools physical infrastructure as stipulated in the Safety Standards Manual. To know this, students were asked to identify measures that had been put in place in their schools.

In responding to this, 71.2% of the students indicated that doors in their dormitories did not open outwardly, while 18.2% reported having two doors in their dormitories against a majority 81.8% who did not. From the findings, 34.8% of the students reported that their dormitory windows had grills while 57.6% had grills in the classrooms. See Figure 4.12. Presence of these grills poses a danger to the learners' lives as it will not allow for easy escape in case of an emergency. Furthermore, the guidelines in the manual clearly state that all dormitory and classroom windows should have no grills, a rule that many schools have contravened.

Since students spend most of their time in school, the physical structures should be up to standard and should comply with the provisions of the Education Act (cap 211), Public Health Act (Cap 242) and Ministry of public works building regulations/standards (R.O.K, 2008). This will help reduce deaths or accidents in case of an emergency.

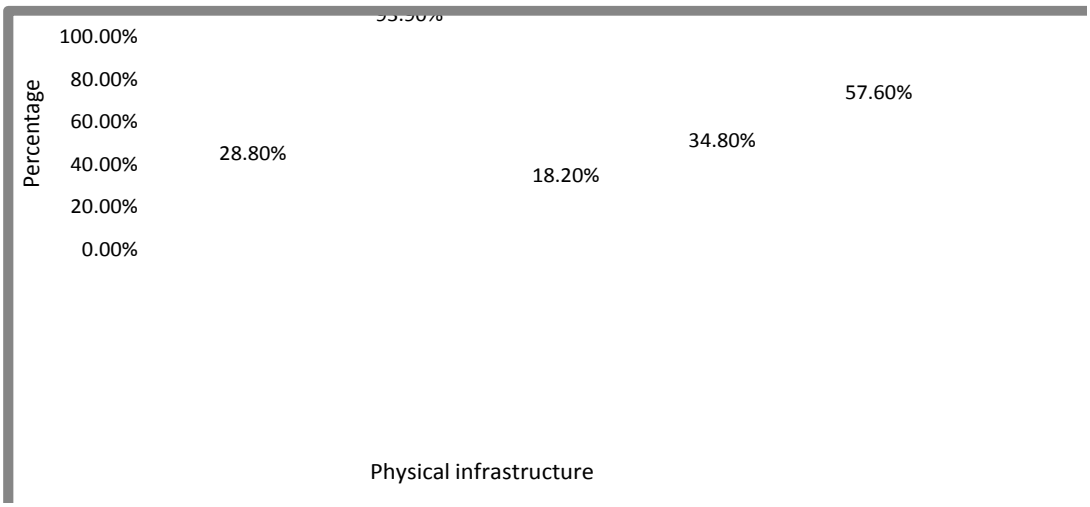

Figure 4.12. Safety in Physical Infrastructure

4.3.14 School Inspections

In a bid to establish possible existence of illegal substances in schools, students were asked whether teachers carried out impromptu inspections of their belongings. From the findings, 86.4% of the students admitted that they had inspections while 13.6% did not. Regarding inspection frequency, 37.9% reported that the inspections were done termly, 24.2% were not sure, while fortnightly and weekly inspections were reported by 0.09% students. It is commendable that most schools carry out inspections, since this helps to reduce chances of students sneaking in and keeping illegal objects and substances in school. From the findings in Figure 4.13 however, most schools do inspections termly. This may impact negatively on the students who know that once the inspection has been done it will not be repeated till the next term, so they might be tempted to sneak in illegal substance and objects. To take care of this, inspections should be carried out more frequently in all schools. The practice of searching students' belongings is legalized by the South African Education Laws Amendment Act no.31 of 2007 (Eberlein, 2009). The same should be emulated by other countries, Kenya included, so as to minimize chances of students having illegal substances in their custody.

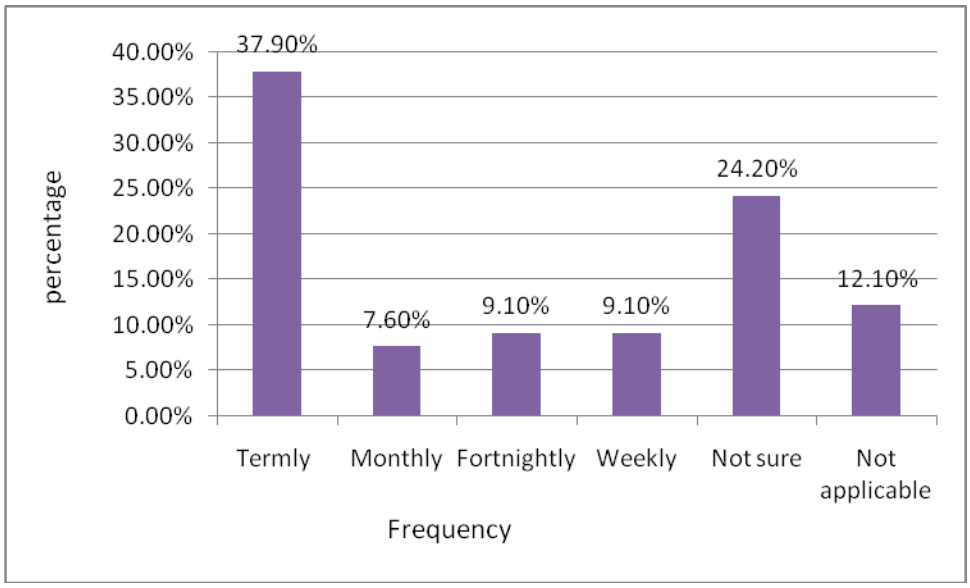

Figure 4.13. Inspection Frequency

4.3.15 Qualitative Outcome

The school security officers were asked whether fire extinguishers were accessible to them in case of an emergency and all of them agreed that they were. It was however sadly noted that none of them had been trained on how to use the fire extinguishers except for one who had gone through the National youth service training earlier before being employed by the school. In all schools the interviewed security officers expressed a need to employ more personnel as they complained that the current numbers were inadequate to enable them work effectively.

4.3.16 Alternative Sources of Lighting

The officers were asked to identify other sources of lighting used in schools in case of a power blackout. In their responses 50% indicated that in case of a power blackout the school used lanterns, 21.43% use gas lamps and 7.14% use pressure lamps, candles, automatically rechargeable lamps and a generator. From the 14 interviewed security

officers, all schools had security lights though not adequate to light up all the dark areas of the school. Only one school reported that they had enough security lights.

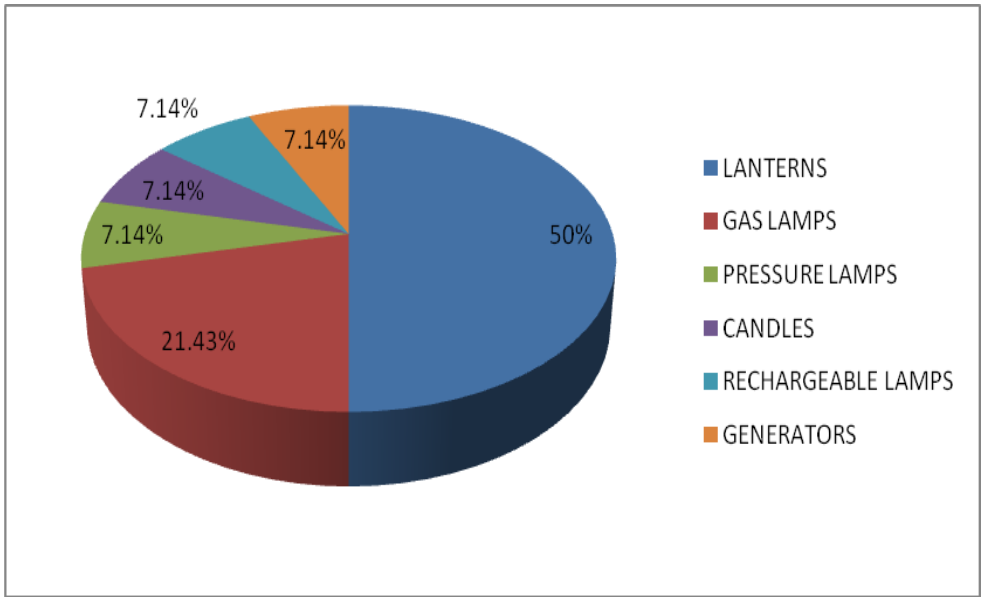

Figure 4.14. Sources of Lighting

4.3.17 Observations made in the check list

The researcher made the following observations in the field. All the selected schools had a gate, a security officer at the gate and visitors signing in/out, however only six (35.29%) schools issued identification cards to visitors. All schools except for one, had some form of fence which was either live (natural fence, Kay apples or cypress) or barbed wire, though most of them had barbed wire fence. This cannot guarantee proper safety of learners, as it cannot fully deter intruders from entering the school. A strong and sturdy fence is symbolic of a safe and secure school (Omolo and Simatwa, 2010). Most schools had an adequate number of toilets except for 25%, who had few. The researcher observed that only 11.76% of the schools had containers with water near the toilets that

were improvised to serve as hand washing basins while 47.06% had good drainage systems. The Child Friendly Schools Manual (2010) recommends that schools should provide hand-washing facilities with soap close to the latrines, a policy that many schools contravened.

4.3.18 Further Observations made in Schools

The general observation affirmed that most schools had inadequate safety measures in place. For instance, in as much as many schools had fire extinguishers, they were not found in all required buildings and no evidence of servicing though some head teachers claimed they were serviced. The researcher further observed that the condition of doors and windows in some schools was not good. A number of broken windows could be seen in buildings and some doors did not have handles, meaning they could not be locked to ensure safety of learners. In some of the schools that claimed they had Dispensaries, very small rooms were used for the purpose. While Boelhke (2010) underscores the need to have surveillance equipment in schools, the researcher did not observe any surveillance equipment in schools except for the watchmen who manned the gates. Schools should be encouraged despite their financial constraints to purchase surveillance equipment to ensure the safety of staff and learners at all times within the school compound.

Table 4. 6

Observation Checklist Results

	AVAILABLE	NOT AVAILABLE
AREAS OF OBSERVATION	percentage	Percentage
1. Access to the school		
- Presence of a gate	100	0
- Watchman at the gate	100	0
- Signing in/out	100	0
- Issue of ID cards	35.29	64.71
2. Architectural designs		
- Doors opening outwardly	76.47	23.53
- Grilled windows	11.76	88.24
- Adequate ventilations	94.12	5.88
3. School environment		
- Presence of a fence	94.12	5.88
4. Fire extinguishers		
- Availability	100	0
- Service	47.06	52.94
5. Sanitation		
- Toilets	100	0
- Cleanliness	88.24	11.76
- Hand washing basins	11.76	88.24
- Drainage systems	47.06	52.94
6. Source of water		
- Taps	64.71	35.29
- Wells	29.41	70.59
- Rain water (Tanks)	5.88	94.12

4.4 Training and Awareness Courses Offered in Schools

The second objective sought to assess the level of awareness and skills- levels of the staff and students on school safety. To achieve this, teachers and students were asked whether they had been trained on how to handle safety equipment in the school. This was necessary in order to draw conclusions on their level of preparedness.

4.4.1 Types of Training Offered

The teachers, learners and security officers were asked questions on the type of training they had undergone on school safety and their ability to effectively use firefighting equipment in case of an emergency. Significant similarities were noted between the responses to this question from teachers, students and the security officers, as most of them indicated that they had not been trained on safety measures. This implies that teachers and students are not in a position to handle emergencies since they have not been trained.

Table 4. 7

Types of Training Offered to Teachers

Respondents	Yes		No	
Teachers	Frequency	Percent	Frequency	Percent
Training in fire fighting	22	33.33	44	66.67
Training in violence prevention	7	10.8	58	89.2
Training on handling the first aid kit	19	29.2	46	70.8
Training on guidance and counseling	47	72.3	18	27.7

On violence prevention, only 10.8% teachers admitted that they had been trained, against the majority 89.2% who had not, 70.8% had not trained on the use of the first aid kit, 72.3% had however trained on guidance and counseling. See table 4.6

The importance of training is reinforced by Trump (1996), USDE (2007), Torrington et al. (2005), who assert that training increases awareness of the rules, thus improving self-confidence and self-discipline. The results from this study show that most teachers had not been trained as a way of enhancing their preparedness to handle emergencies and even in cases where the training was offered, it was not as exhaustive as it should be. It should therefore be mandatory for all schools to make sure that their staff is trained so that they can acquire the necessary skills they need to prevent violence.

It is the responsibility of every school to provide regular, comprehensive trainings for teachers, students and other staff, at least once a year. Training will be more effective if the staff will go through the crisis plan and procedures in order to familiarize themselves with it. It's recommended that staff should be periodically reminded of signals and codes and be provided with literature corresponding to the crisis plan. While actual drills and training are essential, it is also helpful to have group brainstorming activities that can be conducted informally around a table (table top exercises) Trump (1996), and USDE (2007).

4.4.2 Sensitization Programs

The study further sought to establish how often the sensitization programs were offered to teachers in schools. From the results, the majority of teachers 70.8% reported that

awareness courses were rarely offered in their schools, 73.8% indicated that fire drills were rarely offered, 66.2% confirmed that in- service courses on safety preparedness were rarely offered, while 50.8% reported that first aid training was also rarely offered in their schools. The statistics revealed in the responses above do not augur well with the enhancement of school safety. See figure 4.15

Commoloti (1999) stated that school fire drills prepare students and staff for what they need to know in case of a fire outbreak. They allow students and staff to plan for their escape in advance. On the contrary, most schools have shown lack of preparedness for a safe escape. Lack of frequent drills leaves the students and staff ignorant on the steps they should take in case of a fire outbreak. This therefore calls for greater awareness creation whereby all schools are encouraged to take the exercises very seriously and create time for the same in their programs.

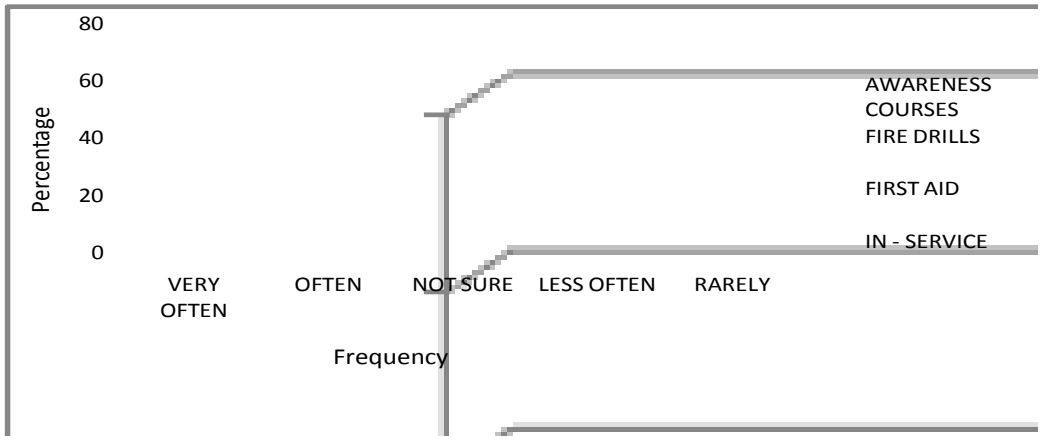

Figure 4.15 Frequency of Sensitization Programs

4.4.3 Knowledge on the Use of Fire Extinguishers

In order to establish the skills levels of the respondents, teachers and students were asked whether they could effectively use a fire extinguisher in case of an emergency. From their responses, 33.8% of the teachers admitted that they could, while the majority 66.2% could not. Students' responses indicated that only 36.4% knew how to use a fire extinguisher while 63.6% did not. These findings imply that a lot more needs to be done by all schools to ensure learners and staff are in a position to effectively use extinguishers otherwise there would be no need of installing them in the first place if they are of no help when a fire breaks out.

4.5 Challenges encountered in implementing safety measures in schools

A list of common challenges to school safety was given to teachers and head teachers and they were required to identify the challenges that are experienced in their schools. From the findings, inadequate finance was cited by most head teachers 93.8% as posing the biggest challenge, followed by lack of awareness which was reported by 62.5% of the head teachers, 87.7% of the teachers pointed out lack of training, while 75% head teachers and 75.4% teachers identified inadequate safety equipment as a challenge to school safety. Faulty equipment was mentioned by five (31.3%) head teachers and 19 (29.2%) teachers. Vandalism was cited by four (25%) head teachers and only one (6.3%) identified intrusion by the local community. Lack of Cooperation from school administration was mentioned by 20.0% of the teachers as being a challenge. From the findings, it can be deduced that schools indeed encounter a lot of challenges that make it hard for safety to be fully achieved. Refer to Figure 4.16 for the findings.

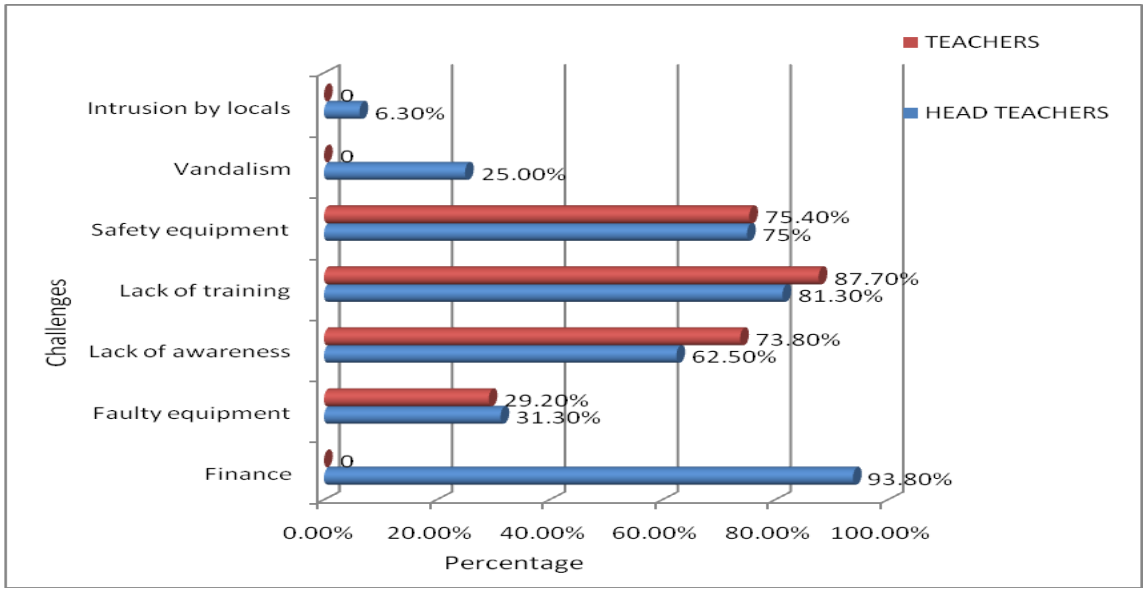

Figure 4.16 Challenges in the Implementation of School Safety

From the data collected, three out of the four head teachers who complained of vandalism came from the boys' boarding schools and one came from the mixed boarding. This therefore implies that vandalism is not an issue of concern in girls' schools as it is in boys' schools. Most heads pointed out lack of finance which is true given that the manual was issued after many schools had been built and secondly, head teachers have to respond to a greater diversity of student needs amidst resources that are relatively scarce. To renovate schools to the recommended standard requires money which many schools did not have.

4.5.1 Problems Cited by Security Officers

A number of security officers 42.86% complained of too much work and no off, because they were few. The same number 42.86% also complained of being under paid, 21.43% cited lack of co-operation from the teaching staff and the least 14.29% mentioned student

indiscipline and lack of modern equipment as an issue. There is need to pay security officers well since good salary enhances motivation of a worker. Too much work will only lead to ineffectiveness and inefficiency since the security officers will always be fatigued and may end up sleeping on the job. If this is allowed to happen, the security of the learners may be at risk.

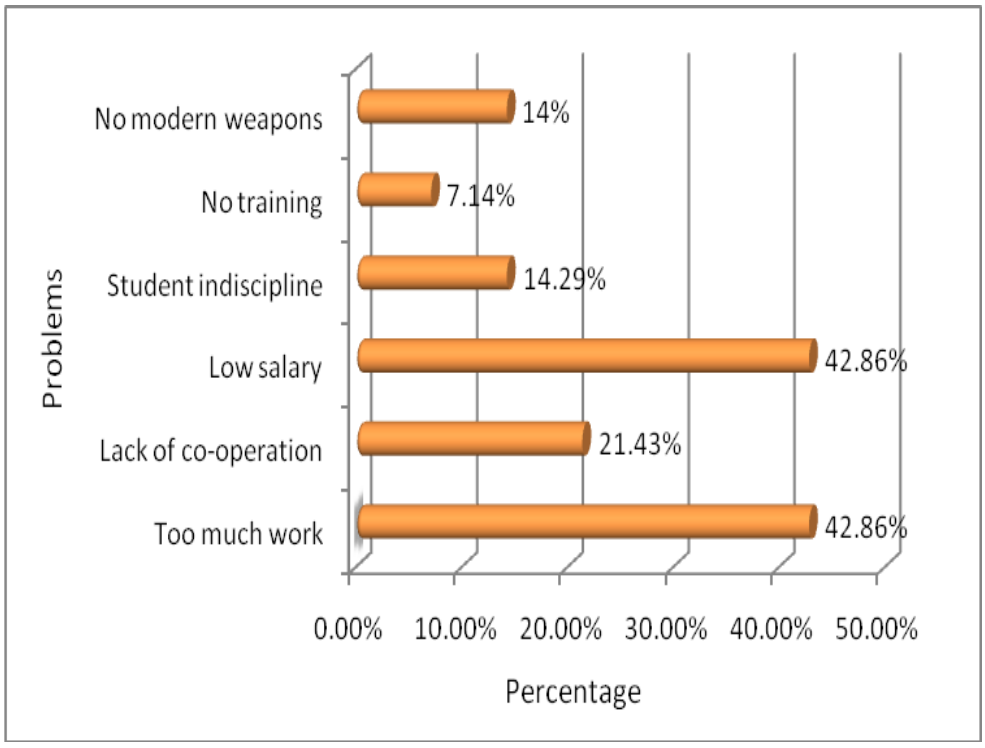

Figure 4.17. Problems Cited by Security Officers

4.6 Strategies Devised for Enhancement of School Safety by School Administrations

The head teachers were asked to state the strategies they had devised in their schools as a measure to enhance safety. In response, 50% of the head teachers identified proper fencing as their main strategy, while 31.25% identified the creation of awareness and

provision of safety equipment, 18.75% cited recruitment of more security staff and 12.5% mentioned police involvement or patrol as one other strategy.

The least number of head teachers identified implementing safety measures such as regular inspections and strict enforcement of discipline as some of the strategies they had devised in their schools. Besides the strategies identified by head teachers, others such as integrating safety policies into the school routine should be considered. Training staff on emergency preparedness, conducting regular fire emergency drills, organizing seminars and workshops on safety and taking heads for regular in-service training on safety implementation should be enforced (Omolo and Simatwa, 2010).

4.6.1 Suggestions on Improvement of School Safety

The study sought the opinions of the head teachers and teachers on how they thought safety could best be improved in schools. From the data collected, 56.3% of the head teachers and 58.46% of the teachers suggested as a priority that training on safety preparedness should seriously be enforced in the school curriculum. The issue of finance also came out strongly when seven (43.75%) head teachers and 15 (23.07%) teachers proposed that funds should be availed by the government for the purchase of safety equipment. Another suggestion given by five (31.25%) head teachers and 29 (44.61%) teachers was the creation of awareness on the need for safety measures in schools. The least number of head teachers one (6.25%) advanced that there was need to introduce and implement safety policies, train school nurses, provide proper fencing, use water paints especially in dormitories, involve the police in matters of school safety, encourage

teamwork, reinforce guidance and counseling and abide by the ministry of works' regulations on the construction of school buildings.

4.6.2 Suggested Solutions from the Security Officers

Among the officers involved in the study, 28.57% were of the opinion that cooperation (through joint meetings) should be encouraged between teaching and non-teaching staff, to avoid situations where the security officers feel undermined by the teaching staff. Some few 14.29% strongly proposed that adequate safety equipment such as alarms, lightning arrestors, whistles and purchase of better weapons should be availed in schools. The least 7.14% suggested that proper fencing should be done rather than relying on the barbed wire fence, which they felt were weak and allowed for students' sneaking. Since all security officers had not received any form of training, one strongly recommended that all schools should make arrangements to have their security officers trained so that they can be more effective and efficient in their duties. Furthermore, training leaves them more prepared since they will know what to do in case of an emergency.

Table 4. 8

Solutions Cited by Security Officers

Solutions	**Frequency**	**Percentage**
Review security officers salary	5	35.71
Provide adequate safety equipment such as alarms, lightning arrestors, whistles etc.	2	14.29
Purchase better weapons.	2	14.29
Consider training watchmen.	1	7.14
Encourage cooperation. (Hold joint meetings with all staff).	4	28.57
Proper fencing of the compound.	1	7.14

4.7 Inferential Statistics

4.7.1 Correlation Analysis

The researcher sought to establish whether there were any relationships between the following pairs of variables in the study: School safety and safety policies, School safety and Awareness, School safety and Training, and School safety and the safety committee.

Pearson product moment correlation was used to calculate and determine these relationships and the output was a correlation matrix in Table 4.9.

Table 4.9

Correlation Matrix

		School Safety	Safety Policy	Safety committee	Training	Awareness
School safety	Pearson Correlation	1	.556**	-.067	.526**	.476**
			.000	.597	.000	.000
Safety policy	Pearson Correlation	.556**	1	.038	.470**	.423**
		.000		.767	.000	.000
Functional safety committee	Pearson Correlation	-.067	.038	1	-.110	-.050
		.597	.767		.385	.695
Training	Pearson Correlation	.526**	.470**	-.110	1	.562**
		.000	.000	.385		.000
Awareness	Pearson Correlation	.476**	.423**	-.050	.562**	1
		.000	.000	.695	.000	

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

N=65

Using the data in this matrix, the researcher established that: There was a statistically significant strong positive relationship between school safety and school safety policies at 1% level of significance($r=.556$, $p<0.01$). It was also observed that there was a strong positively significant relationship between training and school safety($r=.526$, $p<0.01$) while awareness and school safety had a fairly weak, but positive relationship ($r=.476$, $p<0.01$). However from the matrix there is no statistically significant relationship between school safety and school safety committees($r=-.067$, $p>0.01$).

Judging from the findings above, the researcher therefore concluded that since school safety policies, awareness and training, had a positive significant effect on school safety, they should be enforced in all schools as a way of enhancing school safety.

4.7.2 Regression Analysis

The study sought to establish whether it was possible to predict the influence of the following independent variables: safety policies, training, awareness and school safety committee on school safety (Dependent variable). To achieve this, a multiple regression was carried out using a model which combines the above selected variables.

Table 4. 10

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.813	.643		-1.263	.212
Safety policy	1.654	.144	.807	11.520	.000
Training	.593	.264	.173	2.248	.028
Awareness	-.034	.070	-.036	-.482	.632
Safety committee	.036	.221	.010	.162	.872

a. Dependent Variable: School Safety

Table 4.10 above shows the estimates of β values and gives an individual contribution of each predictor to the model. The β value tells us about the relationship between school safety with each predictor. The positive β values indicate a positive relationship between

the predictors and the outcome whereas a negative coefficient represents a negative relationship. The β value for awareness had a negative coefficient thus indicating a negative relationship. However, school safety committee, safety policy and training were positive, indicating a positive relationship. From the coefficient table in the multiple regression output, the unstandardized coefficients were substituted into a regression equation as shown below.

SS= -.813+.807SP+.173T+-.036A+.010SC…….Equation 4.1

The t test was used as a measure to identify whether the predictors were making a significant contribution to the model. The t-test results for the individual regression coefficient are shown in Table 4.10. Safety policies ($t = 11.52$, $p<.05$), training ($t = 2.25$, $p<.05$), Awareness ($t = -.482$, $p > .05$) and school safety committee ($t = .162$, $p<.05$). This means the regression coefficients for these variables were statistically significant at 0.05 level.

Table 4. 11

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.887[a]	.787	.769	.46954

a. Predictors: (Constant), Functional school safety committee, Safety policy, Awareness and Training

b. Variable: School Safety

From the model, the R^2 and the adjusted R^2 value of .787 and .769 respectively both indicated that over 70% of variance in the dependent variable (school safety) can be explained by the regression model.

4.7.2.1 ANOVA

Analysis of variance was used to test whether the model could significantly fit in predicting the outcome**.**

Table 4.12

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	48.088	4	9.618	43.623	.000[a]
	Residual	13.008	59	.220		
	Total	61.095	64			

a. Predictors: (Constant), Functional safety committee, Safety policy, Awareness, and Training

b. Dependent Variable: School Safety

The F. ratio was 43.62 with a significance of .000.This meant that the probability of this results occurring by chance was less than .0005. Therefore a significant relationship was present between school safety (dependent variable) and safety policies, training, awareness and school safety committee (Independent variables). This implies that the four predictor variables are not equal to each other and could be used to predict the dependent variable.

The findings show that there is a relationship between school safety and availability of safety measures such as safety policies, safety committee, training and awareness. This is reflected in the Safety Manual (ROK, 2008) which attributes enhancement of safety to implementation of safety measures in schools.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Summary

This chapter will discuss the following areas of the research project; the summary of the findings, conclusions, recommendations, the limitations of the study and areas for further research. The purpose of this study was to establish the safety measures available and determine the level of safety preparedness of secondary schools in Nandi North District. This was influenced by the researcher's and public concern over the deteriorating safety and security conditions in Kenyan secondary schools and in Nandi North District in particular. To determine the level of safety and emergency preparedness in schools, the following research objectives were used: to establish the available safety measures in schools, to assess the awareness and skill level of the staff and students on school safety, to identify the challenges faced in the implementation of school safety and to determine the strategies devised for future enhancement of school safety in Nandi North District. The mixed research method was used in data collection.

5.1 Summary of Findings

5.1.1 Safety Measures Available in Schools

The first research question sought to establish the safety measures available in public boarding secondary schools in Nandi North district. From the findings of the study, certain facts came out very clearly that indicate the schools' lack of preparedness. For instance, despite the provision of the Safety Standard Manual (2008), to schools by the ministry of education detailing fire and other emergency procedures, most schools were

still found to be unprepared for the eventuality of a fire. At no school were fire extinguishers found in all recommended places. The few that were available did not have signs of being serviced, an indication that they may not be functional. Only 7.7% of the teachers indicated the presence of a safety committee in their schools yet this is a government's requirement, and another 33% said they had their own school safety policy beside the Safety Manual. The other finding that indicates lack of preparedness is the absence of a Crisis Response Plan in 29 (44%) schools. This limits the ability of many schools to deal with emergency situations as lack of a plan indicates lack of practice and knowledge on steps that should be taken in case of an emergency.

On the schools' physical infrastructure, most schools are yet to implement all the safety requirements such as having doors opening outwardly and having grills removed from the windows. From the findings, 47 (71%) students indicated that doors in their dormitories did not open outwardly; while another 23 (34.8%) reported that their dormitory and classroom windows had grills. The findings are contrary to the requirements stipulated in the Safety Manual (ROK, 2008).

5.1.2 Awareness and Skills Levels

The second research question sought to assess the awareness and skills levels of the staff and students in the selected schools. The findings from this question indicated that there was lack of training and awareness in most schools. From the findings, only seven (10.8%) teachers acknowledged that they had been trained on violence prevention, while only 33% of the teachers and 36.4% of the students knew how to use a fire extinguisher.

On the frequency of sensitization programs, majority of teachers 46 (70.8%) reported that awareness courses were rarely offered in their schools, 73.8 % indicated that fire drills were rarely offered and 50.8% reported that first aid training was also rarely offered. The findings correspond with those of (Rono and Kyalo, 2007), who established that most teachers and students did not know how to use fire extinguishers.

5.1.3 Challenges faced in the implementation of School Safety

Implementation of safety policies is said to have been very slow because of the challenges encountered in schools. The biggest challenge cited by eight (50%) school head teachers is that of inadequate finances. Lack of training was mentioned by 57 (87.7%) teachers while lack of awareness was identified by 10 (62.8%) head teachers.

5.1.4 Strategies and Suggestions on how Safety can be improved

The head teachers and teachers gave suggestions on how safety could best be improved in schools. The majority of the head teachers nine (56.3%) and 38 (48.5%) suggested that training on school safety should be enforced, while seven (43.8%) head teachers and 15(23.07% teachers suggested that more funds should be allocated and availed to schools by the government for the purchase of safety equipment and training; and that awareness courses should be provided in schools.

5.1.5 Limitations

The study focused on physical safety of learners in schools but psychological safety could not be discussed. Secondly, students' indiscipline which has been linked to school violence has also not been addressed.

5.2 Conclusions

Based on the findings, the study concluded that although some efforts are being made to ensure learners' safety, most of the schools have not been able to fully implement all the measures as stated in the manual as a step towards enhancing school safety preparedness.

1. All schools involved in the study were inadequately prepared both in terms of equipment and planning for emergencies such as fire out breaks as evidenced by the inadequate firefighting equipment and lack of a crisis response plan.

2. The study revealed that, teachers and students lacked the skills to adequately respond to emergencies because they have not been trained to do so.

3. From the sentiments of Head Teachers, it can be concluded that schools' failure to fully implement the safety policies and thus enhance preparedness has mainly been contributed by lack of finance.

5.3 Recommendations

The results of the study made the researcher to make the following recommendations regarding school safety preparedness:

1. All head teachers should ensure that they purchase the required safety equipment for their schools such as the first aid kits and firefighting equipment to enhance their preparedness.

2. The government should design and implement a compulsory school safety training course for principals, teachers, students and all staff on first aid, firefighting and other emergency trainings and drills.

3. The Ministry of Education through the QASOs should actively monitor the effective implementation of safety policies at the schools within their jurisdiction. More support is also needed from the ministry in form of funds and organizing regular seminars and workshops on school safety.

5.4 Suggested Topics for Further Study

1. Further research should be done on the role of the local community and other stakeholders outside the school in enhancing school safety.
2. A research should be done on the role of school discipline in combating violence in schools.

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APPENDICES

APPENDIX I: INTRODUCTION LETTER

JEMIMA MARITIM
MOI UNIVERSITY
PO Box 3900
ELDORET.

DATE……

TO THE PRINCIPAL

…….

Dear Sir/ Madam,

RE: PERMISSION FOR DATA COLLECTION FOR RESEARCH PURPOSES

I am a post graduate student of Moi University pursuing a Master of Philosophy Degree in the Department of Educational Management and Policy Studies. I am currently carrying out a research on school safety preparedness in public boarding secondary schools in Nandi- North District. I am kindly requesting that you allow me to use your school as one of the study centers. The study will involve the head teacher, the disciplinary master, and the boarding master, boarding prefects, sanitation /environmental prefects and the school security officers. The information provided will be treated with a lot of confidentiality and will only be used for the purpose of this study.

Thank you.

Yours Faithfully

Jemima Maritim.

APPENDIX II: QUESTIONNAIRE FOR HEAD TEACHERS

You are kindly requested to respond to all items in the questionnaire as honestly as possible. The information you provide will be strictly confidential. Your honest response will be very useful for the success of this study. Please do not write your name on it.

PART A: BACKGROUND INFORMATION

Please tick [√] as appropriate.

1. What is the type of your school?

   Boys boarding [ ] Girls boarding [ ] Mixed boarding [ ] Day/Boarding school [ ]

2. What is your gender? Male [ ] Female [ ]

3. How long have you been at your current station?

   0-5 Years [ ]
   6-10 years [ ]
   11-15 years [ ]
   16-20 years [ ]
   Over 20 years. [ ]

4. Please state the number of years you have been teaching

   0-5 [ ]
   6-10 [ ]
   11-15 [ ]
   16-20 [ ]
   Over 20 [ ]

PART B: SAFETY MEASURES AND PREPAREDNESS IN SCHOOLS

Please respond to the following questions as appropriate

5. How many students do you have in this school?_____

6. (a) Does your school have a copy of the Safety Standards Manual?

   Yes [ ] No [ ]

   (b) If the answer is yes, where is the copy kept? Please tick as appropriate.

	Yes	No
i) In the office	[ ]	[ ]
ii) In the staffroom	[ ]	[ ]
iii) In the library	[ ]	[ ]
iv) With the secretary	[ ]	[ ]
v) At the deputy head teacher's office	[ ]	[ ]

vi) Any other (specify)……

7. Please answer the following questions by ticking the appropriate answer.

	Yes	No
(a) Does your school have a dispensary?	[ ]	[ ]
(b) Does your school have a trained school nurse?	[ ]	[ ]
(c) Does your school have a first aid kit	[ ]	[ ]

8. Where does the school nurse reside? Please tick as appropriate.

a) Within the school compound [ ]

b) Outside the school compound [ ]

9. How many toilets are available for learners in the school?.....

10. a) Identify the source of water in the school by ticking as appropriate.

	Yes	No
i) Rain	[ ]	[ ]
ii) Well/borehole	[ ]	[ ]
iii) Taps	[ ]	[ ]

b) Is the water treated to prevent waterborne diseases? Yes [ ] No [ ]

11. a) Do you have a school bus? Yes [ ] No [ ]

If the answer is yes, please answer question (b), if no skip to question 13.

b) Please state how regularly the school bus is serviced to ensure it is in excellent mechanical condition as a measure to minimize road accidents and enhance safe travel for learners.

Key: Very Regularly [ ] Regularly [ ] Not sure [ ] Less Regularly [ ] Almost never [ ]

12. Do drivers receive regular refresher courses on road safety? Yes [ ] No [ ]

13. How often are the fire extinguishers serviced in the school?
Key: Very Often [ ], Often [ ], Not sure [ ], Less often [ ], Rarely [ ]

14. Are there instances when the local community is called upon to participate in issues relating to safety in school? Yes [ ] No [ ]

15. Does the school employ a qualified architect to design and supervise the construction of new buildings? Yes [ ] No [ ] At times [ ]

16. How many times has the school been assessed by the Quality assurance officers over the last two years? Please tick as appropriate. Once [ ] Twice [ ] None [ ]

17. Do all school buildings have emergency exits for safe escape in case of an emergency? Yes [ ] No [ ]

18. Are safety notices prominently posted in the relevant buildings and areas within the school premise? Yes [ ] No [ ]

19. How many of your staff members have a first aid qualification?.....

PART C: CHALLENGES TO SCHOOL SAFETY

20. The following are possible challenges to school safety.
Please indicate with a tick [√] the appropriate answers as they apply to your school.

	Yes	No
a) Inadequate finances	[ ]	[ ]
b) Faulty safety equipment	[ ]	[ ]
c) Lack of awareness on the need for safety measures	[ ]	[ ]

d) Training on the use of safety equipment	[ ]	[ ]
e) Inadequate safety equipment	[ ]	[ ]
f) Vandalism	[ ]	[ ]
g) Intrusion by the local community	[ ]	[ ]

Any other (specify)……

21. What strategies has your school put in place to enhance safety?

……

……

22 Give any other suggestions on how safety can be improved in schools.

……..

Thank you for answering these questions.

APPENDIX III: QUESTIONNAIRE FOR TEACHERS

This questionnaire is designed as a tool to obtain information on school safety preparedness in secondary schools in Nandi -North district in Kenya. Your school has been chosen as a study sample and therefore you are requested to respond to all items in the questionnaire as honestly as possible. The information you provide will strictly be treated with a lot of confidentiality and used only for research purpose. Your response will be very useful for the success of this study. Please do not write your name on this paper.

PART A: BACKGROUND INFORMATION

Please Tick [√] where appropriate

1. What is the type of your school?

Boys boarding [ ] Girls boarding [ ] Mixed boarding [ ] Both Day /Boarding [ ]

2. What is your gender? Male [ ] Female [ ]

3 How many years have you been at your current station?

0 -5	[ ]
6-10	[ ]
11-15	[ ]
16-20	[ ]
Over 20	[ ]

4. For how long have you been teaching?

0-5	[ ]
6-10	[ ]
11-15	[ ]
16-20	[ ]
Over 20	[ ]

PART B: SAFETY MEASURES AND PREPAREDNESS

Please respond to the following questions as appropriate

5. What do you understand a safe school to be?.....

6. (a) Does the school have a crisis response plan that clearly explains what steps one should take in case of an emergency?

Yes [ ] No [ ]

(b) If the answer is yes, does it incorporate responses to the following areas?

	Yes	No
Fire	[ ]	[ ]
Natural disasters	[ ]	[ ]
Violence	[ ]	[ ]
Gang threats	[ ]	[ ]

(c) Are teachers involved in the preparation of this crisis response plan?

Yes [ ] No [ ]

7. Does the school have a safety policy? Yes [ ] No [ ]

8. Does the school have a functional safety committee? Yes [ ] No [ ]

9. a) Has there been any incident of violence in your school over the past two years?

Yes [ ] No [ ]

b) If so, how frequent?

Very frequently [ ] Frequently [ ] Not sure[ ] Less frequently [ ] Rarely [ ]

10. Which factors are present in your school that enhance the safety of learners and staff? Please tick as appropriate.

	Yes	No
a) Physical infrastructure	[ ]	[ ]
b) Safety policies	[ ]	[ ]
c) Awareness and sensitization programmes	[ ]	[ ]

d) Training programmes [ ] [ ]

e) Location of the school [ ] [ ]

f) Any other (specify)……

11. Do teachers receive the following types of training in regard to school safety?

Please tick as appropriate.

	Yes	No
(a) Training in violence prevention	[ ]	[ ]
(b) Training on the use of basic safety (first Aid) kits	[ ]	[ ]
(c) Training on guidance and counseling	[ ]	[ ]

12. How often does the school conduct sensitization programs on school safety?

Please tick as appropriate using the provided scale below.

Type	1	2	3	4	5
a) Awareness courses					
b) Fire drills					
c) First aid					
d) In-Service					

Key: Very often (1), Often (2), Not sure (3), Less often (4), Rarely (5)

13. Do you know how to effectively use a fire extinguisher in case of an emergency?

Yes [ ] No [ ]

PART C: CHALLENGES TO SCHOOL SAFETY

14. The following are possible challenges to school safety.

Please tick [√] Yes to indicate the challenges that you encounter in your school and tick No for the others.

	Yes	No
a) Cooperation with the administration	[ ]	[ ]
b) Faulty equipment	[ ]	[ ]
c) Lack of awareness on the need for safety measures	[ ]	[ ]
d) Lack of training on the use of safety equipment	[ ]	[ ]
e) Inadequate safety equipment	[ ]	[ ]

f) Any other (specify)……..

15. Give suggestions on how safety can be improved in this school.

.....

Thank you for answering these questions.

APPENDIX IV: QUESTIONNAIRE FOR STUDENTS

The Researcher is carrying out a study on school safety preparedness in secondary schools in Nandi -North District in Kenya. You are kindly requested to respond to all items in the questionnaire as honestly as possible. The information you provide will be held with a lot of confidentiality. Your response will be useful for the success of this study, because the comments you give will be used to make suggestions towards the improvement of safety in schools. Please do not write your name on this questionnaire.

PART A: BACKGROUND INFORMATION

Please tick [√] as appropriate

1. Which is your class?

FORM ONE	
FORM TWO	
FORM THREE	
FORM FOUR	

2. What is your gender? Male [ ] Female [ ]

3. What is the type of your school?

Boys' boarding [ ] Girls' boarding [ ] Mixed boarding [ ] Both day and boarding [ ]

PART B: SAFETY MEASURES AND PREPAREDNESS.

Please Tick [√] where appropriate

4. Indicate whether fire extinguishers are available in the following school buildings?

Buildings	Available	Not available
Dormitories		
Laboratories		
Library		
Kitchen		
Administration block		
Dining hall		

5. (a) Indicate whether the following basic requirements that enhance safety preparedness are available in the school.

Requirements	Available	Not available
Watchmen		
Fire alarms		
Fire extinguishers		
Water horse hydrants		
Asbestos blankets		
Sand (for firefighting)		

6. a) Do teachers inspect students' lockers and personal effects, for dangerous objects and substance?

Yes [ ] No [ ]

b) If the answer is yes, how often is the inspection done?

Termly [ ] Monthly [ ] Fortnightly [ ] Weekly [ ] Not sure [ ]

8. a) The following objects are kept and used by students in school. Please tick as appropriate

		Yes	No
i.	Knives	[ ]	[ ]
ii.	Heavy bangles	[ ]	[ ]
iii.	Bottles	[ ]	[ ]
iv.	Razorblades	[ ]	[ ]
v.	Needles	[ ]	[ ]
vi.	Any other (specify)…….		

b) Please tick the answer that best describes your opinion.

Students have access to the following illegal substance in school.

	Yes	No
Alcohol	[ ]	[ ]
Cigarettes	[ ]	[ ]
Bhang	[ ]	[ ]
Heroin	[ ]	[ ]
Miraa	[ ]	[ ]
Kuber	[ ]	[ ]

Any other (specify)……

9. The following are basic safety requirements for schools in Kenya. Please indicate whether your school meets these requirements.

	Yes	No
i) Doors in the school buildings open outwardly	[ ]	[ ]
ii) There are two doors in the laboratory	[ ]	[ ]
iii) There are two doors in each Dormitory	[ ]	[ ]
iv) Windows in the school dormitories have grills	[ ]	[ ]
v) Windows in the classrooms have grills	[ ]	[ ]

10. Do you know how to use the following firefighting equipment?

	Yes	No
i) Fire extinguishers	[ ]	[ ]
ii) Water horse hydrants	[ ]	[ ]
iii) Asbestos Blankets	[ ]	[ ]
iv) Sand	[ ]	[ ]

Thank You for answering these questions.

APPENDIX V: INTERVIEW SCHEDULE FOR SCHOOL SECURITY OFFICERS

1. a) Please identify areas where firefighting equipment can be found in the school.
   b) Can you easily access them in case of an emergency?
2. Have you undergone any form of training that enables you to effectively use a fire extinguisher in case of an emergency?
3. a) Besides electricity, what other source of lighting is available in school that can be used in case of a power failure?
   b) Please explain whether the school has enough security lights installed to light up dark areas at night.
4. Please identify the safety measures that have been put in place to prevent intruders from entering the school.
5. What problems do you face in school that stops you from doing your work effectively?
6. Suggest ways of solving these problems so that safety can be improved in schools.

Thank you for answering these questions.

APPENDIX VI: OBSERVATION CHECKLIST

Safety measures put in place in secondary schools in Nandi -North District.

Statement	**Available**	**Not available**
1. Control/Access areas within the school i) Presence of a gate……..… ii) Security officer at the gate…….…….. iii) Signing in/out…… iv) Issue of identification card/badge……		
2. School's Architectural designs i) Doors opening outwardly……..…… ii) Grilled windows ……..…… iii) Spacing in the dormitories and classrooms… iv) Adequate ventilations……..		
3. School environment Presence of a fence…….…….		
4. Fire extinguishers i) Availability…….…… ii) Condition (serviced)…….…… iii) Distribution/ strategic position…….		
5. Sanitation i) Provision of toilets …….…… ii)Cleanliness of the toilets…… iii) Hand washing basins/ taps…….…… iv) Drainage systems……..…. v) Detergents…….…….		
6. Check for availability of taps and wells for clean water.		

APPENDIX VII: LIST OF SECONDARY SCHOOLS IN THE STUDY

1. LELMOKWO BOYS'
2. LABORET BOYS'
3. KABIYET BOYS'
4. KURGUNG' BOYS'
5. MOI SIRGOI BOYS
6. ITIGO GIRLS'
7. St. FRANCIS GIRLS'
8. NDALAT GAA GIRLS'
9. St. TERESA of AVILAS GIRLS'
10. TULWO GIRLS'
11. EISERO GIRLS'
12. STEPHEN KOSITANY GIRLS'
13. St. BRIGITA GIRLS'
14. St. MONICA KAPKOROS
15. KEBULONIK SECONDARY SCHOOL
16. NGECHEK SECONDARY SCHOOL
17. CHEPTIL SECONDARY SCHOOL

APPENDIX VIII: RESEARCH PERMIT

PAGE 2

THIS IS TO CERTIFY THAT:

Prof./Dr./Mr./Mrs./Miss.....JEMIMA.....

.....CHEMELI MARITIM.....

of (Address) ...MOI UNIVERSITY.....

...P.O. BOX 3900, ELDORET.....

has been permitted to conduct research in .....

.....Location,

.....NANDI NORTH.....District,

.....RIFT VALLEY.....Province,

on the topic..School safety preparedness

.in kenya:An assessment of Public

.Boarding..Secondary..Schools in....

.nandi..North..District.....

.....

for a period ending..31ST AUGUST....,20..11..

PAGE 3

Research Permit No.....NCST/RRI/12/1/SS-011/215.....

Date of issue.....07/03/2011.....

Fee received.....SHS 1,000.....

.....
Applicant's Signature

.....
Secretary
National Council for Science and Technology

APPENDIX IX: RESEARCH AUTHORIZATION

REPUBLIC OF KENYA

NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

Telegrams:"SCIENCETECH", Nairobi
Telephone: 254-020-241349, 2213102
254-020-310571, 2213123.
Fax: 254-020-2213215, 318245, 318249
When replying please quote

P.O. Box 30623-00100
NAIROBI-KENYA
Website: www.ncst.go.ke

Our Ref: **NCST/RRI/12/1/SS-011/215/4**

Date: **7th March 2011**

Jemima Chemeli Maritim
Moi University
P. O. Box 3900
NAIROBI

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on **"School safety preparedness in Kenya: An assessment of public boarding secondary schools in Nandi North District"** I am pleased to inform you that you have been authorized to undertake research **in Nandi North District** for a period ending ***31st August 2011.***

You are advised to report to **the District Commissioner and the District Education Officer, Nandi North District** before embarking on the research project.

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

P. N. NYAKUNDI
FOR: SECRETARY/CEO

Copy to:

The District Commissioner
Nandi North District

The District Education Officer
Nandi North District