INFLUENCE OF PRINCIPALS' MANAGEMENT PRACTICES ON ADHERENCE TO SAFETY STANDARDS IN PUBLIC SECONDARY SCHOOLS IN NANDI NORTH SUB-COUNTY, KENYA

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DECLARATION

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

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

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DEDICATION

I dedicate this work to my loving and caring husband David K. Sum and my children Delvis, Dennis and Denver for their encouragement and patience that made it possible for me to pursue and complete this course.

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LIST OF ABBREVIATIONS

BOM	Board of Management.
HODs	Heads of Department.
MoE	Ministry of Education
PTA	Parent Teacher Association
SPSS	Statistics Package for Social Sciences.
SQASSO	Sub County Quality Assurance and Standards Officer

ABSTRACT

This study was to investigate the influence of principals' management practices on adherence to safety standards in public secondary schools in Nandi North Sub-county, Kenya. The study was guided by the following objectives: to establish the influence of availability of safety infrastructure and equipment on adherence to safety standards, to find out the influence of teachers' training on adherence to safety standards, to determine the influence of principals' involvement of stakeholders on adherence to safety standards, and to establish the influence of principal's involvement of teachers on adherence to safety standards in public secondary schools in Nandi North Sub-county, Kenya. The study was based on the systems theory. The study also relied on the descriptive survey research design method. The research used two-stage cluster sampling method to generate the sample for the study. Questionnaires were used to collect quantitative and qualitative data from principals and school Heads of Departments. The SQASSO was interviewed to get in-depth information so as to triangulate the data collected. A checklist was used to collect quantitative data. The data was analyzed using descriptive statistics such as percentages and frequencies. Also, the Statistical package for social science (SPSS version 25) was used to compute correlation coefficients. To find the relationship between the variables the study employed correlation analysis. Based on the first objective, the relationship between availability of safety infrastructure and equipment and adherence to safety standards, it was found to be statistically significant by principals (M=3.91, r=0.0.545,r^2=0.297; $p<0.05$), HOD(M=3.29, r=0.628,r^2=0.394; $p<0.05$) Based on the second objective of the study which was to establish the relationship between teachers' training and adherence to safety standards, it was found to be statistically significant by principals (M=3.65, r=0.498, r^2=0.248; $p<0.05$), HODs (M=3.77, r=0.736, r^2=0.541; $p>0.05$) Based on the third objective of the study which was to establish the relationship between principals' involvement of stakeholders and adherence to safety standards, it was found to be statistically significant by principals(M=3.82, r=0.589, r^2=0.346; $p<0.05$), HODs (M=3.78, r=0.632, r^2=0.399, $p<0.05$) Based on the fourth objective of the study, which was to establish the relationship between principal's involvement of teachers and adherence to safety standards, it was found to be statistically significant by principals (M=4.02, r=0.314, r^2=0.09 $p<0.05$), HODs(M=4.93; r=0.467, r^2=0.218 $p<0.05$). From the study findings it was concluded that: adequate and properly constructed school structures enhances school safety, training of teachers enhances the observance of school safety practices by both the teachers and leaners. Principal's involvement of stakeholders is crucial in enhancing school safety, and that principals play a critical role in ensuring school safety. It was recommended that schools should construct more health facilities to enhance school safety. It was also recommended that MoE should come up with a policy on enhancing school health facilities.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Children spend most of their childhood at school. It is in these institutions where students acquire knowledge, skills, attitudes and aptitudes that will forever impact their future lives. For these children to perform at their optimum at school, they need a safe and secure environment. However, children are vulnerable and most often unable to fully observe safety standards on their own. They have little control over their immediate environment, including at school. Therefore, they heavily depend on adults to maintain their safety and enable them endure various types of risks (Ismail, 2016).A common challenge for school administrators is managing school safety so as to reduce physical injuries and also create a learning environment that embraces the physical, emotional, and social wellbeing of school members at an individual level and also within the school community (Vicario & Sallan, 2017).

Hundreds of students die, while at school, each year from injuries sustained in the institutions of learning while many more suffer serious injuries leading to permanent disabilities. Most injuries are caused by falls, burns, drowning, and road accidents while to or from school. It is noted that most injuries can be prevented (Ismail, 2016). In addition, staff members at school are also prone to injuries and have also suffered causalities. Researchers have identified the main causes of injuries at school and have made recommendations on how to contain them. Based on the foregoing, many authorities have enacted policies, standards, and procedures which are aimed at preventing accidents within school institutions. In this regard, school safety is defined as the measures

undertaken by teachers, learners, parents and other stakeholders to minimize or eradicate risk factors or threats that may cause accidents, bodily injuries, emotional as well as psychological distress (Ministry of Education, 2008). Therefore, there is need for ensuring a safe teaching and learning environment in learning institutions

Makhtar et al. (2018) carried out a study on safety culture and its contributing factors in education sector in Malaysia. They established that the factors that contribute to safety at school include: a safety policy, safety procedures that are not only observed but continually adhered to, safety training for both students and teachers, and having a safety committee at school that regularly reviews the safety standards and procedures. Another study by Ismail et al. (2016), established that school management played a greater role in the design of school safety standards and communicating them to students. The study also indicated that school administrators (84%) regularly reminded students about risk behavior and emphasized the importance of safety at school. Also, 87% of the respondents informed teachers, students, and non-teaching staff members on the safety guidelines. Additionally, 53% of school administrators indicated that they periodically collected data on school safety, analyzed it and designed new strategies to improve school safety, based on the findings. Moreover, 78% of the respondents indicated that they conducted safety training and campaigns at school especially to orient new staff and students.

Diaz-Vicario and Sallan (2017) carried out a case study on the management of school safety in Spain. The findings indicated that school safety was not always clearly identified as an integral objective for school administrators.

Nevertheless, it was established that all school members were involved in safeguarding and observing school safety standards. Besides, there were various managerial and institutional measures in place to confer physical, emotional, and emotional safety. However, the study established that, though there were commendable approaches to ensure school safety, the school administrations did not observe an all-inclusive school safety management approach. Besides, some administrators were not fully trained on the school safety standards and therefore, could not communicate them effectively to the school community

Vallinkoski and Koirikivi (2020), carried out a study on enhancing basic education school safety and security management in Finland. The study established that the existing safety and security documents and plans were overly complex. This created a challenge for administrators in communicating the safety standards to staff members and students, more especially for those who were not there when they were formulated. Also, the study found out that documentation of the safety standards was fragmented. Another serious concern identified was the ability of strangers accessing school premises without much hindrance. This was a consequence of the Finish culture, where they highly esteem openness. Besides, anyone has a right to attend lessons in any school of their choice in Finland. Also, the school administrators had not identified the relevant stakeholders on school safety. Moreover, stakeholders were not viewed as relevant actors on school safety. In one school, it was indicated that safety standards were verbally agreed upon and had not been documented down, hence difficult to maintain especially with staff transfers. In addition, pupils were not involved safety and security discussions so as to

get their views on safety and security standards. Also, none of the sampled schools had ever conducted safety and security drills. Hence, a recommendation was made to include all school community members in the design of safety and security standards.

Donkor (2018) investigated safety concerns in primary schools located within Northern Ghana. 90% of the respondents indicated that they were not prepared to handle any safety emergency within their schools. Other respondents indicated that, should there be an emergency, they will inform the police, fire department, or the National disaster authority. The respondents identified safety risks within their institutions such as: poor electrical installations, inaccessible paths to their schools for emergency response vehicles, dilapidated buildings, inadequate exits and entry points, open gutters within their school compounds, overcrowded classrooms, lack of security personnel, and lack of training on safety and emergency handling. Ministry of education officials indicated that the main security concerns were the lack of adequate school fencing, encroachment of residential houses into school compounds, poor security plans or policies within schools, and poorly maintained school buildings. The study recommended that: there is need to carry out safety and security training for all school members, rehabilitation of rundown buildings, fencing of school compounds, and enactment of safety policies that would be enforced in all schools.

A school fire killed 10 students in a secondary school in Uganda in 2018 (Masaba, 2018). Consequently, the Ugandan policy advanced several measures that schools should observe to ensure school safety such as:

installing fire hydrants, emergency assembly points, firefighting equipment, and training of school community on firefighting. Other safety guidelines indicated that schools should set up safety committees for staff and students, controlling access of school premises for strangers, creating security and safety awareness to the school community, and setting up of crime prevention clubs.

Several researches have been carried out in the republic of Kenya to establish the safety status of schools. Njoki (2018) carried out a study to establish the link between school safety and the teaching and learning process. She found out that physical structures in Nyeri and Nairobi county schools were not safety. Besides, 75% of the respondents indicated that most of the classes in their schools were overcrowded, while 90% indicated that the classrooms were poorly ventilated. Moreover, it was observed that in 50% of the schools, the windows could not open and that in 66% of the schools the windows were grilled and 91% of the doors opened into the class rather than outwards. Additionally, 77% of the classroom furniture was observed to be inappropriate for use by learners. School dormitories were also congested with triple decker beds being used in some public secondary boarding schools. Also, in some schools, fencing was poorly done while the playgrounds were not safe for students use. The researcher recommended that school administrators should implement and enforce the safety guidelines enumerated in the safety manual by the ministry of education.

1.2 Statement of the Problem

The ministry of education launched a safety and security manual that if implemented in schools could see a significant improvement on the health and safety of students, teachers and other non-teaching staff (Ministry of Education, 2008). However, there have been several security lapses in many schools across the country. According to Houreld and Ndiso (2017), more than 350 secondary schools caught fire in 2015 and 2016. In September 2017, Moi Girls High School in Nairobi caught fire, killing nine girls as a result (Wanzala, 2017).

About two decades earlier, 24 girls from Bombululu Girls secondary school died in a fire tragedy when their dormitory caught fire. Three years later, a deadly fire killed 69 boys while they were sleeping in their dormitory at Kyanguli Boys High School (Rowan, 2001). Also, cases of school building collapsing have led to several deaths in learning institutions. At least seven students died when a floor collapsed at precious Talent Academy in Nairobi (Omondi, 2019). The structure lacked structural integrity, hence should not have been used as a school. Barely six months later, 14 pupils died in a stampede at Kakamega Primary school while 39 others sustained grave injuries.

Chepkonga (2015) carried out a study in Nandi County and identified lack of modern working equipment in public secondary schools. She further established that most schools lack a safety policy. Moreover, she found out that the physical working conditions of some secondary schools did not meet the set safety standards. Additionally, she identified that most schools lacked

safety equipment and facilities such as hand washing points, lightning arresters, fire extinguishers, lockable school gates and first aid kits. Besides, most teachers had not been trained on handling emergencies and risk reduction. Moreover, a report from the QASSO office at the Nandi North Sub-County Education office, for the period between 2016 and 2018, indicates that 75% of secondary schools have not adhered to the Ministry of education safety standards policy. The researcher therefore, sought to investigate the following objectives: to establish the availability of safety infrastructure and equipment in secondary schools in Nandi north sub-county, to find out the influence of teachers' training on adherence to safety standards, to determine the principals' involvement of stakeholders on adherence to safety standards; and to establish the influence of principals' involvement of teachers in decision making and adherence of safety standards in public secondary schools in Nandi North Sub-County, Kenya.

1.3 Purpose of the Study

The purpose of this study was to investigate the influence of principals' management practices on adherence to safety standards in public secondary schools in Nandi North Sub-county, Kenya.

1.4 Research Objectives

The following guided the study:

i. To establish the influence of availability of safety infrastructure and equipment on adherence to safety standards in public secondary schools in Nandi North Sub-County, Kenya.

ii. To find out the influence of teachers' training on adherence to safety standards in public secondary schools in Nandi North Sub-County, Kenya.

iii. To determine the influence of principals' involvement of stakeholders on adherence to safety standards in public secondary schools in Nandi North Sub-County, Kenya.

iv. To establish the influence of principals' involvement of teachers on adherence to safety standards in public secondary schools in Nandi North Sub-County, Kenya.

1.5 Research Questions

i. What is the influence of availability of safety infrastructure and equipment on adherence to safety standards in public secondary schools in Nandi North Sub-county, Kenya?

ii. What is the influence of teachers' training on adherence to safety standards in public secondary schools in Nandi North Sub-county, Kenya?

iii. How does the principals' involvement of stakeholders influence the adherence to safety standards in public secondary schools in Nandi North Sub-county, Kenya?

iv. In which ways does the principals' involvement of teachers influence the adherence to safety standards in public secondary schools in Nandi North Sub-county, Kenya?

1.6 Significance of the Study

Information from this study will be of great significance to teachers and learners as they will learn from the findings on how to promote their adherence to safety standards at school. Additionally, school administrators will benefit from the study since it will inform them on how to improve the communication of and adherence to safety standards in their institutions. Also, the board of management will find the study findings beneficial because they will learn the challenges that are constraining the school community from adhering to safety standards, thereby improving the safety standards of their school. The Ministry of Education will find the study useful as it will help identify gaps in the school safety legislation and thereby make necessary adjustments that will enable all stakeholders to adhere to school safety standards. Besides, MOE will get to know how the policy is being implemented in schools and thereby learn from its successes and possible challenges. Further, it is foreseen that other researchers will benefit from the increased body of knowledge that will be developed.

1.7 Limitation of the Study

The researcher faced a challenge of delivering the instruments in hardcopies due to the COVID-19 pandemic. However, to alleviate the challenge, the researcher developed electronic questionnaires using the Google documents application which were then administered electronically. Respondents used smartphones and or their computers to complete the instruments in which the data was collected instantaneously. It was also projected that respondents would be unwilling to divulge information about their institutions and administration. However, the researcher mollified their fears by assuring them

that their responses and identity would be kept confidential and that the data would be used only for research purposes.

1.8 Delimitation of the Study

The study was delimited to public secondary schools in Nandi North. This is because administrators of those schools are required by law to implement safety standards within the institutions. The study was narrowed down to establishing the influence of principal's management practices on adherence to safety standards. The respondents of the study were Heads of Departments who are expected to adhere to safety standards and school principals who directly supervise the implementation of the safety policy.

1.9Assumptions of the Study

The main assumption of this study was that respondents would truthfully answer all research questions and positively participate in the study. Another assumption was that principals 'management practices influence the adherence to safety standards in Nandi North sub-county, Kenya. Moreover, there was an assumption that public secondary schools in Nandi North sub-county were implementing school safety standards.

1.10 Definition of Key Terms

Adherence: In this study, this refers to the commitment of the school community to observe the laid down safety standards in their entirety.

Classroom furniture: These refer to all chairs, desks, tables, stools and sketching boards used by learners during the learning process.

Infrastructure: In this study, this refers to the basic physical layout of the school facilities, all facilities including fences, roads, pathways, walkways,

buildings and playgrounds within the school under the disposal of the school community.

Management: In this study, this refers to the various principals a school administrator uses to plan for, organize, direct, control and make available various resources required to implement safety standards.

Learning: In this study, this refers to all processes by which learners acquire the desired knowledge, skills, attitudes that will lead them to a change of behavior.

Physical infrastructure safety: Physical infrastructures refers to school classrooms, dining and social halls, dormitories, libraries, laboratories, playgrounds, fences, walkways and other buildings at school. The safety of these structures therefore, refers to measures in place to ensure their physical integrity such as routine maintenance, cleaning and routine repairs.

School safety: In this study, it refers to the emotional, psychological, physiological, and spiritual wellbeing of members of the school community.

Safety infrastructure: in this study, this will refer to such facilities as safety ramps for wheelchairs, railings along corridors, paved walkways, and fume chambers in laboratories, fire extinguishing equipment, and ergonomic furniture.

Social environment safety: In this study, social safety refers to all interactions between members of the school and the surrounding community. These interactions are student-student, teacher-student, teacher-teacher, teacher-administrators, parents-teachers, school-neighboring community. Negative interactions include: drug use, physical violence, verbal and emotional violence, theft, and student strikes.

Standards: This refers to the measures, routine, and regulations from both the national government and internally enacted ones that guide on the observance of school safety.

Teaching: In this study, it refers to all activities by which instructors impart knowledge, skills, and attitudes to learners so as to lead to a desired change of behavior.

1.11 Organization of the Study

This research report is organized into five chapters. Chapter one comprises of a background to the study, statement of the research problem, purpose of the study, research objectives and questions, limitations and delimitations of the study, significance of the study, definition of terms, and organization of the study. Section two encompasses literature review of the study. It examined existing literature on influence of principal management practices on adherence to safety standards. It also has a summary of the literature review, a conceptual framework, and a theoretical framework.

Chapter three covers research methodology. Specifically, this chapter entails: the research design, target population, sample size and sampling procedures, instruments of data collection, instrument validity and reliability, data collection procedures, and data analysis techniques.

Chapter four of the study presents study findings, data analysis, interpretation of the findings, and discussion of the results. Chapter five encompasses a summary of the research findings, a conclusion, recommendations, and suggestions for further study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This Section looks into literature related to the influence of principal's management practices on adherence to safety standards in public secondary schools. In particular, the review analyses the influence of availability of safety infrastructure and equipment; influence of teachers' training on adherence to safety standards; influence of principals' involvement of stakeholders on adherence to safety standards; and influence of principals' involvement of teachers in safety practices in public secondary school in Nandi North Sub-County, Kenya. Further, the section contains a summary of the literature, a theoretical framework and a conceptual framework

2.2. Concept of Adherence to Safety Standards in Public Secondary Schools

School safety refers to a secure and enabling environment in which optimal teaching and learning can take place. Besides, a safe environment prevents threats that can physically and psychologically harm students and staff at school (Kimani, 2016). Besides, a safe school environment enables the school community to achieve their objectives (Ronoh, 2018). However, school safety depends on various factors. First, it is the preparedness of the school community to address safety issues and secondly, preventive actions to alleviate safety issues from taking place or from worsening are crucial in enhancing school safety. However, it is the ability of implementing safety strategies that would greatly determine the success of safety at school. For instance, having in place safe infrastructure, training stakeholders in addressing safety issues, and having policies that elaborate on the modalities

of addressing school safety, is key. Therefore, school safety is dependent on several factors such as safety training, having appropriate infrastructure and equipment, having policies to address safety, and implementation of these policies to ensure safety at school is assured.

2.3 Availability of Safety Infrastructure and Equipment by Management on Adherence to safety standards.

Safety in school means having an effective structure that is free from any potential and physical harm, absence of violence and capable of nurturing, caring and protecting of the staff and students (Masitsa, 2011). Safety is a significant aspect for human life in reducing and mitigating risks in any situation (Brand et al., 2008). School safety and leaning are components that cannot be separated as they affect the delivery of services (Mooji et al., 2011). School safety can only be guaranteed in areas where schools are prepared by having infrastructures that adhere to the provided standards (Hundeloh & Hess, 2003). The objective of each school is to have an excellent performance. However, excellent performance can only be made effective if the learning environment is conducive and safe for learning for both the learners and the staff (Kipngeno, 2009). It is therefore, necessary for all the stakeholders to take up the responsibility in ensuring school safety threats are minimized (Penker & Elston, 2003).

Most countries have got standard requirements and policies that govern how schools should be built (Nyakundi, 2012). Student and staff safety is key in any government thus making it to be a serious issue (Mburu, 2012). The government of Kenya has set up the guidelines through the ministry of

Education which are wide and comprehensive that addresses the student needs, the school personnel and the school surrounding communities (Mwenga, 2008). Further, to make them effective, there are international treaties that have been signed to ensure that school safety is well adhered to (Bosworth et al., 2011). The school standards manual has got the following aim of high retention rate of enrolled learners, has a strong focus on the teaching and also the learning which is reflected by better academic performance, development and improvement of the learner's performance. School safety and standards manual promote high level of interactions between the staff, learners, sponsors, parents and rights of every individual (Ababio et al., 2016).

A school that is well planned and maintained enables teaching and learning to be effective because safety is assured (SSekiwa & Kabanda, 2014). This is because it will promote safety and reduce the likelihood of one causing or an injury occurring (Armenta & Stader, 2011). The school site should not be selected haphazardly. This is because it will make the learning and teaching experience less optimal for both the teacher and the leaner. Therefore, to enhance better learning in school, new buildings should be built and designed with close monitoring of a certified architect who has an experience of how schools should be constructed (Manning& Bucher, 2005). If most schools were to adhere to the set standards, it could have reduced incidences of accidents in schools and also falling of constructions (Wanyama, 2011). Therefore, the school physical planning and infrastructure should comply to both health and education ministries guidelines (Juvonen et al., 2006).

There are basic and standard guidelines that have been provided that include having doorways that are adequate for emergency response and should be open towards the windows that should not have grills that will make it difficult for one to run away during an emergency. Also, the buildings are supposed to be properly lit and also ventilated to enable enough lighting in each room. This should be accompanied by fitting of the fire extinguishers that are well serviced in each block. Finally, there is the need to have a regular inspection of the structures to ensure that all hazards that may be there are eliminated and any correction required is adhered to. If these kind of measures are taken seriously and implemented by each school, the school environment could be the best and safer during emergencies (Juvonen et al., 2006). However, we will continue to experience some of the unfortunate incidences because some schools have disregarded the guidelines provided (Lethoko, 2001). However, the effectiveness of those plans can only work if the learners and the teachers are made to understand how the physical planning should be and how to be utilized in order to reduce accidents that maybe occurring (Leinhardt &Willert, 2002). Finally, each location and school has got their own unique needs (Masitsa, 2011). As a result, there is the need to have school internal guidelines of safety in order to supplement the provided guidelines for effective performance (Patterson, 2007).

2.4 Influence of Teachers' Training and Adherence to Safety Standards

Teachers are the key resource in any learning institution (Mncube, 2009). It is the duty of the teachers to cooperate with school management to ensure that safety for everyone is adhered to (Masitsa, 2011). Research shows that

teachers are the ones who can easily point out where an issue of safety is and propose safety measures because they will be affected (Pisaniello et al., 2013). Developing guidelines for schools without having teachers understand them will make them ineffective (Brand et al., 2008). Teachers may not be involved in the major guidelines but will be key in ensuring that those guidelines are followed in school by teachers and students (Moooji et al., 2011). When teachers are clear about the guidelines that should be followed, it becomes easy to implement it (Hundeloh& Hess, 2003).

It is the role of the teachers to ensure students adhere to the safety guidelines in school (Kipngeno, 2009). Teachers have got responsibility to train students on how to apply the safety standards and discipline those that are not obeying (Penker &Elston, 2003). Some students can defy the safety measures as if they were not told nor were guided on them (Nyakundi, 2012). Teachers require support from administration when they want to implement safety measures (Nyakundi, 2012). When there is a missing link between the two groups in school, it becomes difficult for teachers to implement safety measures if the support of administration is not there (Mburu, 2012). Mwenga, 2008 states that lack of support from the administration has made many teachers to have a low commitment in ensuring compliance to safety measures in school (Bosworth et al., 2011).

Teachers should not be treated as third parties when it comes to developing those guidelines (Ababio et al., 2016). When teachers are represented from the beginning of drafting of the guidelines, it becomes easy for them to embrace (SSekiwa& Kabanda, 2014). The school safety concerns should not be about

students alone but also the wellbeing of the teachers (Armenta & Stader, 2011). The teachers view matters when drafting guidelines (Manning & Bucher, 2005). They are always with the students and they know what is best for the school and that which they can manage (Wanyama, 2011). Teachers can only teach students of the safety measures which they themselves understand and know that they work well for them (Juvonen et al., 2006). Teachers understand the students' needs and know how to prepare them for those safety measures. Therefore, the success of the implementation of the safety measures will depend on the on the cooperation between teachers and students (Lethoko, 2001).

Safety measures should be part of the curriculum of teachers while they are from the learning institutions (Leinhardt & Willert, 2002). Getting familiar with the safety measures while they are in school will lead to better understanding and easy for application (Masitsa, 2011). Further, when there will be regular review of the curriculum, there will also be an opportunity of reviewing those measures (Patterson, 2007). Moloi, 2002 reported that teachers who have learnt about safety measures in college are familiar with them and got no problem when it comes to their implementation. Teachers can give a suggestion on where the measures are not working well and on what should be done order to make them effective (Goldkind & Farmer, 2013). Teachers have a stronger interaction with the students and the learning environment (Garner & Thomas, 2011). It is easier for teachers to identify how classrooms are unsafe because most of the time they will have to go to classes and tell what is happening (Gwiji, 2016). The close interaction with classrooms has made it possible for teachers to suggest to administration how

the classes have become unsafe for both teachers and students (Steinberg et al, 2011). It is easier for students to update the teachers on how the classes have become weak than reporting it to administration (Brand et al., 2008). Since teachers are like foot soldiers, it becomes easy to check on the safety risks that is awaiting the students and the school community and give suggestions on what should be done in order to reduce those risks (Mncube, 2009). Teachers are the first ones to provide safety plans that work specifically for each class based on the local requirements (Pisaniello et al., 2013). Teachers are key in personalizing safety plans for each school thus making it easier for both students and other subordinate staff to embrace it (Brand et al., 2008). In order to ensure the safety measures are well implemented, it has been the role of teachers to conduct safety drills that will help in preparing the minds of the students just in case they happen (Moooji et al., 2011). Schools where teachers have continuously held drills for students, the students have been found to have an idea on how the safety measures should be applied (Hundeloh & Hess, 2003). Kipngeno, (2009) reports that schools where safety incidences have not been followed, it has been largely blamed on teachers especially the teacher on duty who should ensure that those safety measures are adhered to (Penker & Elston, 2003).

2.5 Principals' Involvement of Stakeholders on Adherence to Safety Standards.

The education sector has so many stakeholders (Nyakundi, 2012). These are individuals who are investing in the welfare and the success of the school and the students at large. The stakeholders include the staff members, parents, students, families, community members, local leaders and school board

members among others (Mburu, 2012). Stakeholders are key in the progress and maintenance of schools (Mwenga, 2008). The board of management has the greatest role in ensuring school safety is implemented (Bosworth et al., 2011). It is the board of management that ensures that standard structures are built and maintained (Ababio et al., 2016). They approve structures that will be built as per the available resources and ministry of education requirements (SSekiwa& Kabanda, 2014). They will ensure that any construction in any school is meeting the expected standards and can be maintained while upholding the standards of safety for everyone (Armenta & Stader, 2011). They have the right to stop any construction and what any contractor is doing and is not meeting the required standards (Manning & Bucher, 2005). Due to the growing number of students in the country and globally, the demand for structures is also on the increase (Wanyama, 2011). It is the responsibility of the board of management to ensure that safety guidelines during construction are adhered to (Juvonen et al., 2006).

Also, the Board of Management have the responsibility of leadership and management of schools (Lethoko, 2001). They have the power to carry out management activities in all public secondary schools within the legal framework that governs schools (Leinhardt & Willert, 2002). They have the responsibility of inspecting teachers and students outside the class, can accompany students for academic trips and organize other functions of the school (Masitsa, 2011). The board also has the responsibility of ensuring that all the activities that are under their watch are done in a safe and secure manner (Patterson, 2007). Anything that is done in school and everyone feels it is not safe, it becomes their responsibility to check out and deal with it in

order to help remove any risks that might be arising (Moloi, 2002). Since the various schools might be having unique issues concerning the safety of the members of the school, it is their responsibility to approve a safety framework that can be able to work for the schools without compromising the ministry of education established guidelines (Goldkind & Farmer, 2013).

The parents are also key figures in the success of the school management and implementation of school safety measures (Garner& Thomas, 2011). Parents are known to influence classroom decisions, promoting communication between teachers and students, participating on social events of the school and adding their voice on school policies (Gwiji, 2016). Parents are also key in ensuring the school undertakes their management role as expected and also monitoring how schools are running (Steinberg et al, 2011). Parents should be told of the safety measures that are being held in school so that they can be sure their children are safe (Brand et al., 2008). Since most of the parents are aware of the safety measures that might be involved, they should be keen if the schools where their children are learning are implementing them (Mncube, 2009).

Parents are also involved in funding of school projects (Pisaniello et al., 2013). It is their responsibility to ensure that the project that they funded is safe for their children (Masitsa, 2011). This can be done by parents doing regular checks if the structures are complying with what was presented to them early (Brand et al., 2008). It has been found that parents can only be comfortable to send their children to schools where they will feel their children are safe (Moooji et al., 2011).

Another stakeholder is the government and its related agencies. Schools are regulated by the government through policy and regulations (Hundeloh & Hess, 2003). The government has the responsibility of developing and designing regulations that govern schools (Kipngeno, 2009). It is the role of the ministry of education to come up with policies that will be used in governing school safety. If the school safety is left to schools without regulation of the government, it will lead to schools having different ways of handling safety which is not standardized (Penker& Elston, 2003). Therefore, the Ministry of Education has developed safety procedures that will be used in all schools (Nyakundi, 2012). There is no school which will run and operate without the adherence to the ministry of education regulations (Mburu, 2012). The Ministry of Education has the responsibility of checking if all schools are following the guidelines of safety before construction and after construction of any infrastructure in schools.

Another significant group in school safety is the donors. These are individuals or groups who are concerned with the better development of schools (Mwenga, 2008). They contribute in the wellness of the school, teachers and students (Bosworth et al., 2011). Since they invest their resources in the schools, they have to be concerned on the better utilization of resources and also if they adhere to the laid standards (Ababio et al., 2016). Many donors have stopped funding schools where they have ignored to follow the stated regulations (SSekiwa & Kabanda, 2014). Most donors will want to see their projects well done and assure safety to the users (Armenta & Stader, 2011). The greatest concern of the donors is to ensure whatever they are doing is well implemented according to the standards of the ministry of education (Manning

& Bucher, 2005). Failure to do so is a recipe that will see their projects lead to a death trap in case of anything (Wanyama, 2011).

The Ministry of Health is another key stakeholder for the school safety and guidelines. Most of the guidelines can only be implemented with guidance from the ministry of health (Wanyama, 2011). Most of the health standards are provided by the ministry of education because they are of health nature (Juvonen et al., 2006). The Ministry of Education has to rely upon the ministry of health to provide those standards and how they will be used in school (Lethoko, 2001). Further, ministry of education has its officers in various parts of the country to check on those safety measures (Leinhardt & Willert, 2002). They should work together with the ministry of education in ensuring the provided standards are adhered to.

Students are also stakeholders when it comes to the application of safety standards (Leinhardt &Willert, 2002). Most of the safety standards have got a direct impact upon them (Masitsa, 2011). There is the need for the students to be guided of those standards so that they know how to handle them (Patterson, 2007). Having the standards without explaining to the students on how they should be used does not help (Moloi, 2002). When the students are familiar with the guidelines, it will become easy to apply them and maintain safety of every student because they understand (Goldkind & Farmer, 2013).

2.6 Principals' Involvement of Teachers on Adherence to Safety Standards.

The principal is the manager of the school (Goldkind & Farmer, 2013). He has the responsibility of running the school in a manner that will lead to success

(Garner& Thomas, 2011). The greatest responsibility is to ensure that the school follows the set guidelines of safety and both the staff and teachers are safe whenever they are in school (Gwiji, 2016). However, the implementation of the school safety program is dependent on the leadership of the principal and also how he relates with the teachers (Steinberg et al, 2011). Brand et al., 2008 states that schools where the principal and teachers are working together, adherence to the school safety rules and is easy and minimal accidents are reported. Schools where teachers and principal do not get along together, it becomes hard for the teachers to be involved in supervision and also the principal cannot direct them because the relationship is flawed (Mncube, 2009).

In order to have the principal involve his teachers, there are several mechanisms he should use so that they can work with him effectively (Pisaniello et al., 2013). One of the key areas is leadership style. A principal manages a school and his leadership style will determine how the teachers will cooperate with him when it comes to implementation of the of the safety standards (Hill et al, 1994). A democratic leadership will make teachers to become self-confident, friendly, firm and focused when executing the school responsibilities (Biamba, 2012). When the principal issues orders on how the teachers should implement the safety measures, the teachers become resistant and uneasy since none wants to be dictated (Celikten, 2001). The head of a school can better lead when he involves and consults the teachers and students from time to time in order to reach a decision (Belle, 2016). When individuals feel they are part of the process, they will naturally join him and support him (Lethoko et al., 2001).

The principal should be able to encourage open policy with teachers and students where anyone can see them and inquire any issue about their safety (Cotton, 2003). When anybody is free to explain their problems or the challenges they are facing while they try to implement the safety measures will lead to development of a solution that will improve safety measures in that school (Lethoko et al., 2001). Teachers can face difficulties when implementing the safety measures, it will be the duty of the principal to guide them and make all protocols needed safe for everyone that need to implement them (Belle, 2016).

Celikten, 2001 states that the principal should take his teachers to a regular training and refresher courses about safety in schools. A principal should set aside funds that he will use to take his teachers for such training so that they get updated on any changes that might arise (Biamba, 2012). Further, if the teachers will require some resources that will enable them to implement any of the safety measures required, the principal should not hesitate to fund them for the sake of the safety of the entire school (Hill et al, 1994).

Principals should support the teachers in the manner in which they are disciplining students who are not following safety measures (Pisaniello et al., 2013). Principals should device the best way of dealing with the students in terms of discipline so that teachers don't feel uneasy while punishing students (Mncube, 2009). Teachers who discipline students that do not follow safety measures should not be reprimanded before students but it should be done wisely for teachers to keep implementing safety measures on behalf of schools (Brand et al., 2008). Schools where principals support teachers to discipline

students on safety measures within the required standards, have been found to be successful (Steinberg, et.al., 2011).

2.7 Chapter Summary

The foregoing review on literature points out that principals' management practices are instrumental in achieving various safety standards in public secondary schools in Nandi North sub-county, Kenya. Different countries have employed standardized policies and requirements that restricts how schools should be built, since safety and learning components are inseparable as they directly affect service delivery. In order for schools to attain excellent performances, the learning and teaching environment should be conducive and safe for the staff and students. Therefore, the stakeholders and management should take it up to themselves to ensure minimal school threats. It is important to note that, teachers play a critical role in providing class safety plans thus being easy for the students and subordinate staff to implement. As a result, teachers should continuously do safety drilling to their students for them to have a clue on applying safety measures in school and the surrounding. Finally, the principal as the manager of the school is mandated to ensure running of the school is on adherence of the standardized safety measures that will lead to success. Therefore, principals are advised to encourage open policy on matters of security with teachers and students and supporting teachers in fostering these safety measures on students.

2.8 Theoretical Framework

A theoretical framework refers to a set of interconnected models or hypotheses (Borgatti, 1999). It guides a researcher in designing a study by showing which

variables will be measured and the statistical relationship between the concepts that the researcher will be collecting. This study was anchored on the 'systems theory' that was advanced by Ludwig Bertalanffy in the 1940s but became more pronounced in his 1968 publication *"General Systems Theory: Foundations, Developments, and Applications."* The theory investigates both the principles common to all complex entities and the models which can be used to describe them (Heylighen & Josyln, 1992). Golinelli (2010) avers that, a system is made up of elements which are logically connected to achieve a shared goal. The first element is that a system is made up of sub-systems which together make up the larger system. The second element is that; a system has qualities that identify it or its subsystems. Thirdly, the subsystems of a system interact internally and are organized in such a way that the anticipated goal is achieved as a whole. Lastly, the system exists in an environment and has a boundary that separates it from the environment.

Through this boundary, the system interacts with the boundary and may be significantly influenced by forces in the environment. A school can be viewed as a system. Its subsystems can include the different parts that make a school functionally coherently. In this regard, we have the school administration that provides the rules, resources and supervises the activities at school. Then we have the raw materials that include school infrastructure, learning and teaching materials that enable learning to take place. Further, we have students who are the raw materials under attention to be converted into refined products that meet societal and institutional expectations or goals. Moreover, there exists the staff that refines the raw materials into the desired products. All these parts

must interact and be available in the right quantities and right time for the intended goal to be achieved. For instance, the infrastructure should be adequate safe and appropriate for the intended learners, the learning environment should be serene and safe to ensure other components act smoothly to achieve the intended goals. Further, the teachers and students must be assured of their safety if they are to play their part in achieving the system objectives and goal. Lastly, a school exists in an environment; the internal and external environment influences the happenings in a school. Often schools have open boundaries and therefore, the environment influences it significantly. Security in the external environment positively impacts on the internal safety of the members of the school. An environment imbued with violence, drugs, and retrogressive cultural practices negatively impacts on the safety of the internal school environment and may inevitably cut on the smooth flow of the inputs and other components of the school system. This may include, teachers transferring or lower enrolment rates. At the worst, it may lead to production of finished products, in this case students, of a lower quality than the set targets. Therefore, this study looked at how components as physical infrastructure, teachers' training on safety and principals' involvement of stakeholders and teachers influence adherence to safety standards in public secondary schools in Nandi North Sub-County, Kenya.

2.9 Conceptual Framework

According to Adom et al (2018) a conceptual framework is a structure design which the researcher thinks can best explain the natural progression of the phenomenon under study.

The conceptual frame shows the relationship between dependent and independent variables. In this study, the independent variables are: provision of safety infrastructure and equipment; teachers' training on adherence to safety; principals' involvement of stakeholders on adherence to safety, and principals' involvement of teachers on adherence to safety. The dependent variable is adherence to safety standards in public secondary schools.

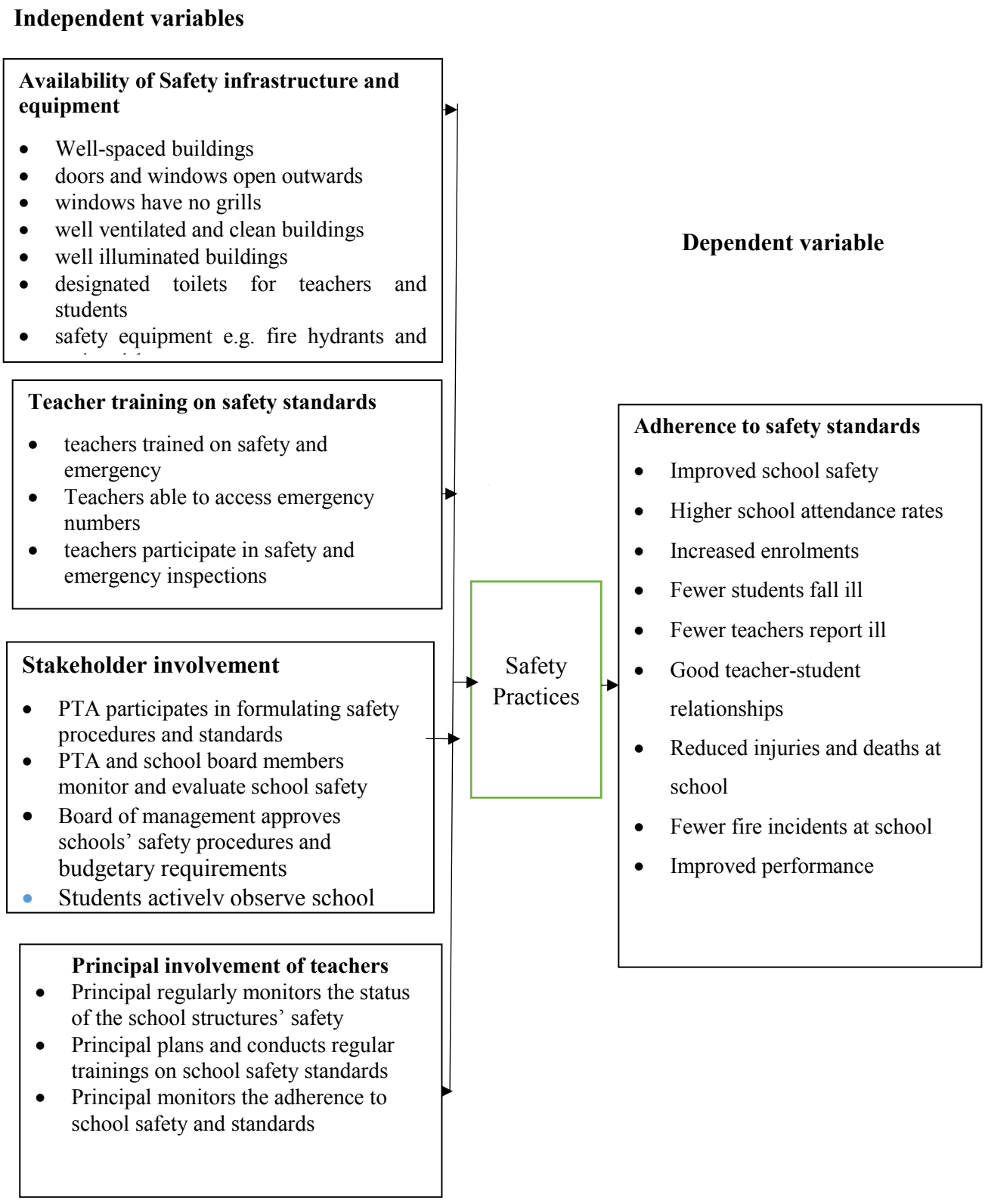


Figure 2.1: Constructs and Relationships on School Safety and Adherence to Safety Standards.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section explains the research methodology that was be used to carry out the study. This comprised of the research design, the target population, sample size and sampling technique, the research instruments, instrument validity and reliability, data collection techniques, methods of data analysis, and ethical issues in research.

3.2 Research Design

This study employed the descriptive survey research method. This is because a descriptive research method is viewed as a study design that encompasses a meticulous description of a phenomenon under study starting with the hypothetical problem and concluding with empirical measurements and data analysis (Creswell, 2013). This research design was suitable for this study because it enabled the researcher to ask respondents many questions at once, measure many variables, and examine a theory in a single survey. Moreover, descriptive design was suitable for this study due to the cross sectional nature of the data that it helped to collected, besides the data analysis that was inherently comparative.

3.3 Target Population

The target population refers to a group of people who have one or more common characteristics and have been selected as a focus for a study (Mugenda & Mugenda, 2013). The population of this study was 54 Principals, 270 departmental heads in 54 public secondary schools in Nandi North Sub-

County, and 1 Sub-County Quality Assurance and Standards Officer (SCQASO).

3.4 Sample Size and Sampling Techniques

A sample size is a representative proportion of the target population (Kothari& Garg, 2014). Moreover, Kothari and Garg (2014) refer to sampling as a process of selecting a sample from a defined population with the intention that the sample accurately represents that population. However, the researchers sought to get a representative sample from each of the six educational zones in Nandi North Sub-County. Thus a two-stage cluster sampling technique was employed to get the final sample. The sample population was grouped into two strata: school Principals and Heads of Departments. According to Mugenda and Mugenda (2013), a sample size of 30% is sufficient to represent the population. However, for a more representative sample a higher percentage should be selected. Thus, the researcher intended to use the following sample sizes of respondents in each stratum.

Table 3.1: Sample size determination

Zone	**Schools**		**Principals**		**HODs**	
	Target	Sample(30%)	Target	Sample(30%)	Target	Sample(30%)
Kabiyet	7	2	7	2	35	10
Kabisaga	11	3	11	3	55	15
Kipkaren	10	3	10	3	50	15
Chepterwai	10	3	10	3	50	15
Sang'alo	8	2	8	2	40	10
Kurkung	8	2	8	2	40	10
Total	54	15	54	15	270	75

3.5 Data Collection Instruments

Due to the limitations of the COVID-19 pandemic, the researcher was forced to use electronic questionnaires and checklist that were prepared through the Google documents applications, to collect data for analysis. The main instruments for data collection in this study were the semi-structured electronic questionnaires. They were administered to school Principals, and school heads of departments (HODs). Each category of respondents received a questionnaire with questions tailored to their particular group. The questionnaires were divided into two main categories. Part A of the questionnaire collected demographic data of the respondents: such as the respondent's title, gender, age bracket, years served in leadership position, the number of years the respondent had been at the current duty station. Whereas, part B of the questionnaire collected information on the safety practices and standards at school to evaluate despondences from respondents. The questionnaire used Likert scale with a five-point scale to measure their responses, that is, 5 for strongly agree, 4 for agree, 3 for neutral, 2 for disagree, and 1 for strongly disagree. The electronic checklist helped collect data on the status of school infrastructure. It has a two-point scale question, that is, yes and no the interview schedule helped in getting a realistic picture of adherence to safety and standards by schools.

3.6 Reliability of the Instruments

According to Mugenda and Mugenda (2013), reliability is the measure of the degree to which a research instrument yields consistent results of data after repeated trials. Orodho (2004) avers that, an instrument is considered reliable when it measures a variable accurately and consistently and obtains the same

results under the same conditions. To ensure a high degree of reliability, the researcher used the test-retest reliability method. Therefore, the instruments were administered to a sample of ten respondents from the original study, but who did not participate in the final study. Their responses were evaluated and then the exercise repeated after two weeks. Then, the results were correlated using the Pearson's correlation coefficient. A high correlation coefficient justified the reliability of the instruments which were then administered to the sample population of the study for the study.

3.7 Instrument Validity

Validity is the degree to which the empirical measure or several measures of the concept accurately measure the concepts (Orodho, 2004). It mainly entailed the establishment of whether the research instruments would collect the data they were intended to collect. To establish the validity of the instrument the pilot test was carried out involving ten participants, who did not participate in the actual study, where the questionnaires were administered to four principals and six heads of departments. The results were analyzed to check out for clarity, accuracy and suitability of the instruments. A few errors were noted in the electronic questionnaires and were rectified before the actual study. Further, the questionnaires were shared with the research supervisors who offered valuable advice on how best to structure them to suit the study objectives.

3.8 Data Collection Procedures

The researcher received an introductory research letter from the chairperson of the Department of Educational Administration and Planning of the Faculty of

Education, the University of Nairobi. Afterwards, she applied for a research permit from the Ministry of Education's National Commission for Science, Technology and Innovation (NACOSTI) and later present the permit to the Nandi county Education office. Afterwards, she booked appointments with respective school heads and departmental heads on when to administer the research tools. On the appointed day, the questionnaires were emailed to the respondents who then completed them electronically and the data was automatically collected through a Google document excel spreadsheet.

3.9 Data Analysis Techniques

The data collected was analyzed using descriptive statistics. Qualitative data was analyzed using descriptive analysis which involved the reformulation of responses given by the respondents by considering their unique contexts and experiences. It was then summarized in report form. Besides, the researcher reviewed the primary quantitative data before using the Statistical Package for the Social Sciences version 25 (SPSS) to compute the data. This software is known to produce accurate data. The quantitative data was analyzed using means and correlation coefficients and then the results summarized in means, percentages and frequencies and subsequently tabulated.

3.10 Ethical Considerations

The researcher secured a research introductory letter from the department of educational administration indicating its permit for the student to carry out the study. Additionally, the research obtained a research permit from the Nandi education office. Moreover, before the carrying out the study, the researcher secured permission from the institutional administrators and from the

respondents. Therefore, data was only collected from willing respondents who voluntarily participated in the study. Besides, the data collected was used only for the purposes intended for the study. Also, all information provided by the respondents was treated confidentially and their identity was kept confidential.

CHAPTER FOUR

DATA PRESENTATION, INTERPRETATION AND DISCUSSION

4.1 Introduction

This chapter presents analysis, interpretation, and discussion of the research findings. The data was sourced through questionnaires and checklists. Quantitative data collected through questionnaires, was analyzed descriptively with percentages and correlation coefficients, whereas qualitative data obtained through interviews was analyzed by content analysis. Other data was obtained by checklist and analyzed in percentages. Data was presented using pie charts, frequency, tables and percentages.

Specifically, the study sought to establish the influence of availability of safety infrastructure and equipment on adherence to safety standards, to find out the influence of teachers' training on adherence to safety standards, to determine the influence of principals' involvement of stakeholders on adherence to safety standards, and to establish the influence of principal's involvement of teachers on adherence to safety standards in public secondary schools in Nandi North Sub-county, Kenya..

4.2 Return Rate

Response rate refers to the total number of completed interviews divided against the total number of participants' contacted (Morton et al., 2012). Thus, factoring various circumstances, a return rate of 60% and above is deemed excellent (Morton et al., 2012). The study targeted a sample population of 15 school Principals, 75 Heads of Departments, and one sub-county Quality

assurance officer. Thus, the instrument return rate is presented in the following table:

Table 4.1: Instrument Return Rate

Respondent	Instruments distributed	Instruments returned	Percentage
Principals	15	15	100
Heads of Department	75	52	69.3
Sub-county QASSO	1	1	100

From the above table, we can infer that there was a 100% return rate of all questionnaires posted to Principals while the return rate for Heads of Departments was 69.3%. An appointment was made with QASSO hence a 100% return rate. The returned instruments were fully completed and they collected sufficient data to carry out a comprehensive analysis of the study.

4.3 Demographic Information

The study sought to collect the demographic information of the respondents based on the following parameters: gender, age, level of education and number of years the respondents had served at their current station. The findings are summarized as follows.

4.3.1 Gender of Respondents

The study sought to find out the respondent's gender distribution. The responses are summarized in the graph below.

Figure 4. 1: Gender Distribution of Respondents

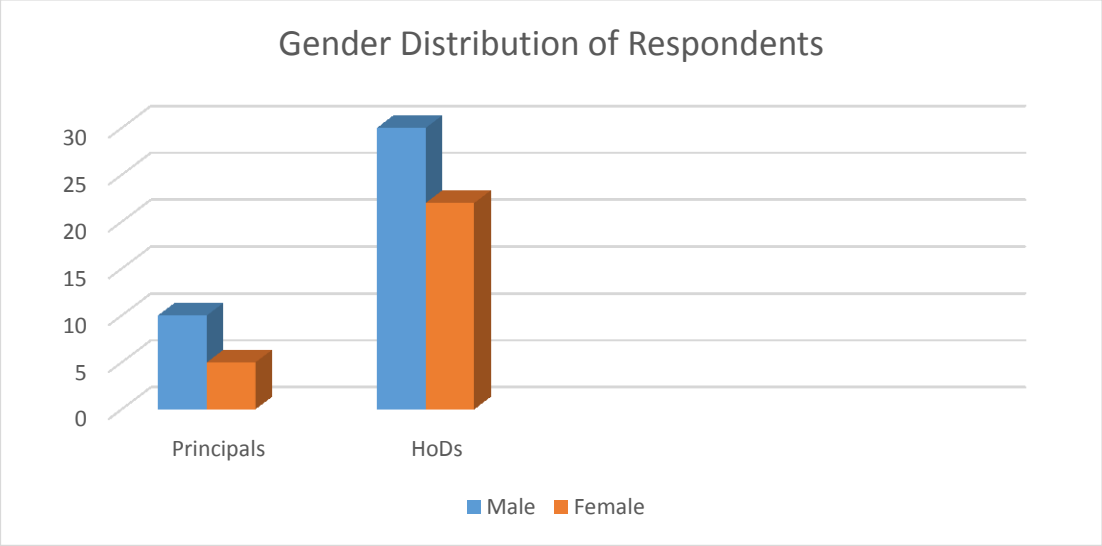


Figure 4.1 indicates that majority of the principals, and heads of departments were male while female respondents were few. Besides, all male respondents represent 62.5% of the sample population. Therefore, we can conclude that the main decision makers on safety matters in Nandi North sub-county are male.

4.3.2 Age of Respondents

The study sought to assess the age of Principals and Heads of Departments. The findings are Table 4.2.

Table 4. 2: Age Distribution of Respondents

Age	Principals		HODs		Totals	
	F	%	F	%	F	%
Above 50 Yrs.	7	46.67	4	7.69	11	16.42
41-50 Yrs.	7	46.67	7	13.46	14	20.89
31-40 Yrs.	1	6.66	29	55.77	30	44.78
21-30 Yrs.	0	0	12	23.08	12	17.91
Totals	15	100	52	100	67	100

As indicated in Table 4.3, it was established that 93.34% of the principals were aged between 41-50 years and 50 years and above. However, most of the HODs were aged between 31-40 years (55.77%). However, this could be explained by the ministry of education policy that requires principals to be aged at least 45 years and above. Besides, most HODs are appointed after they serve for at least five years as teachers which could explain why majority are within the age bracket of 31-40 years. Thus, it was concluded that the respondents were mature enough to give judicious responses.

4.3.3 Number of Years Served in Leadership Position

The researcher wanted to evaluate the number of years the Principals and HODs had served in leadership positions. The responses are summarized in table 4.3.

Table 4. 3: The Number of Years Served in Leadership Position

Years of service	**Principals**		**HODs**	
	F	**%**	**F**	**%**
Below 6 yrs.	6	40	32	61.54
6-10 yrs.	3	20	15	28.85
11-15 yrs.	5	33.33	5	9.61
Above 15 yrs.	1	6.67	0	0
Total	15	100	52	100

From Table 4.3, it was revealed that 53.33% of the Principals and 35.46 % of the HODs had served in their capacity for less than six years. Hence, this was a clear indication that they had gained thorough managerial experience that would enable them make appropriate school safety decisions.

4.3.4 Highest Educational Qualification

The study sought to assess the academic qualification of the principals. The findings are summarized in Table 4.4.

Table 4.4: Academic Qualification of Respondents

Academic qualification	Principals		HODs	
	F	%	F	%
PHD	0	0	0	0
Masters	9	60	6	11.53
Degree	7	40	43	82.69
Diploma	0	0	3	5.78
Other	0	0	0	0
Total	15	100	52	100

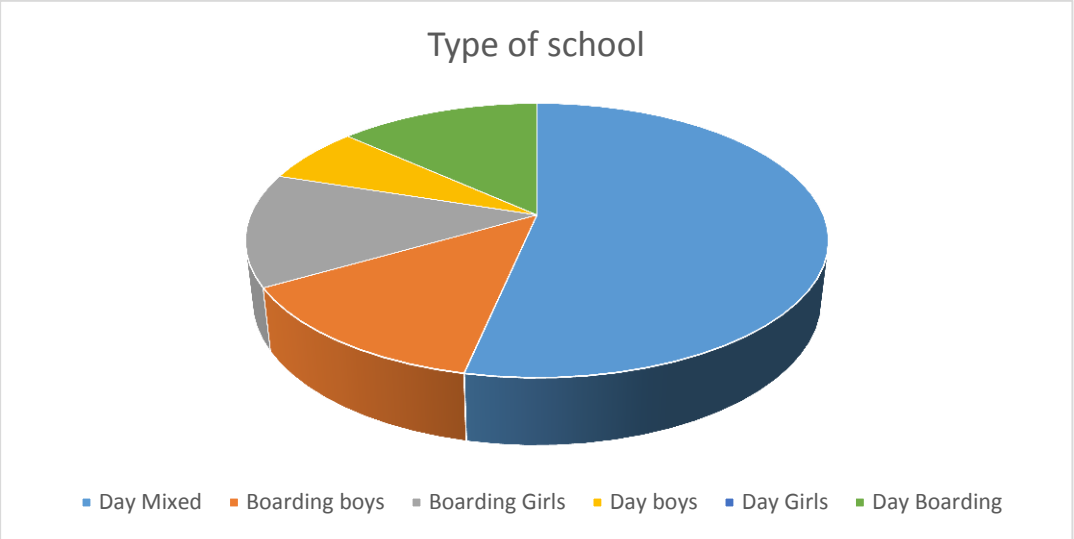
From Table 4.4, it can be inferred that majority of respondents were degree holders. Most Principals (60%) held Masters Degrees while the rest (40%) were undergraduate degree holders. However, 82.69% of the HODs held undergraduate degrees. Further, 11.53% of the HODs held Masters Degrees. Hence, it was concluded that the respondents were capable of interpreting the research instruments and provide appropriate responses.

4.3.4 Type of Learning Institution

It was important to know the type of leaning institution as each type of school was differently endowed with various resources. Besides, it would enable the researcher establish the safety of each institution based on the gender of

students or even rank of school. The findings are summarized in figure 4.2 below.

Figure 4. 2: Type of School



Majority of the principals (53.33%) were administrators in day mixed schools. Besides, respondents were Principals in two boys' boarding schools, two girls' boarding schools, and two day-boarding secondary schools. However, one of the respondents was a principal in a day boys' boarding school. Over the years, boarding schools used to receive higher capitation from the government for infrastructure development. Thus, it was expected that they had the best infrastructure overall than day secondary schools. Indeed, most of the negative responses were from day mixed secondary schools, indicating that they were less endowed with safe learning environment.

4.4 Influence of Availability of Safety Infrastructure and Equipment on Adherence on Safety Standards.

This section provides the results from the first objective of the study which sought to establish the influence of availability of safety infrastructure and equipment on adherence to safety standards in public secondary schools in

Nandi North Sub-County, Kenya. For the various categories, respondents were required to give their input on scale of 1-5 where 5 stood for strongly agree, 2-agree, 3-neutral, 2-disagree, 1- strongly disagree. The views were sought from the principals and HODs and later summarized using percentages.

Table 4. 5: Principals' Responses on Safety Infrastructure and Equipment on Adherence to Safety Standards

	SA		A		UD		D		SD			
Statements	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**Mean**	**Stdv**
School infrastructure	0	0	8	53.3	2	13.3	5	33.3	0	0.0	3.67	.34
School infrastructure meet	0	0	5	33.3	2	13.3	7	46.6	1	6.67	3.45	.40
The school has a physical	1	6.6	8	53.3	2	13.3	3	20	1	6.67	2.67	.60
The buildings	7	46.6	8	53.3	0	0.0	0	0.0	0	0.0	4.43	.67
There are adequate	1	6.67	3	20	3	20	7	46.6	1	6.67	3.86	0.12
There are adequate	3	20	5	33.3	3	20	4	26.6	0	0.0	3.56	2.01
The school compound	2	13.3	8	53.3	1	6.	4	26.6	0	0.0	3.67	.40
Damaged buildings	3	20	8	53.3	3	20	1	6.6	0	0.0	3.43	.34
Windows do not have	8	53.3	5	33.3	0	0.0	1	6.6	1	6.6	4.77	.44
Doors are adequate	8	53.3	6	40	0	0.0	1	6.6	0	0.0	4.89	0.33
Inspection of school	2	13.3	8	53.3	1	6.6	4	26.6	0	0.0	4.56	1.01

(n=15,Average Mean=3.91)

As indicated in Table 4.5, majority of the Principals (53.33%) disagree that their schools' infrastructures meet the recommended Ministry of Education

recommended standards. But, 13% of the principals resorted to remain neutral on the status of their school infrastructure. However, 53.33% of the respondents hold that the existing physical structures adequately accommodate learners and teachers. Besides, 60% of the respondents affirmed that their schools had physical plans and that structures had been erected properly. Moreover, there was a 100% consensus that, in all schools, buildings were well ventilated and illuminated. However, 53.33% of the respondents indicated that their schools lacked adequate walkways, ramps, and railings. Though 53.33% of the interviewees indicated that their schools had adequate toilets for both teachers and students, it is worrying that 26.67% of the schools were not adequately served by these facilities. Encouragingly, 66.66% of the schools are well fenced and have manned gates, though 26.67% of the schools have not erected this important structure. Also, 73.33% of the schools regularly repair damaged structures or erect new ones. Additionally, 86.66% of the schools have windows that do not have grills and 93.33% of the doors open outwards. Further, inspection is regularly done in 66.66% of the schools although it is not regularly conducted in 26.67% of the institutions. Thus, from the findings, many institutions do have safe structures and ensure they are always safe for use.

4.4.1 Correlation Analysis of Availability of School Infrastructure and Equipment on Adherence to Safety Standards

Table 4.6 sought to find out the correlation between availability of infrastructure and equipment and adherence to safety standards. The findings are summarized on Table 4.6.

Table 4.6: Correlation Analysis of the Principal's Assessment of Availability of School Infrastructure and Equipment on Adherence to Safety Standards

		SIE	ADHE
SIE	Pearson Correlation	1.000	.545
	Sig. (2-tailed)		.000
	N	15	15
ADHE	Pearson Correlation	.545	1
	Sig. (2-tailed)	.000	
	N	15	15

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

From Table 4.6 it can be deduced that there is a strong correlation between the availability of school infrastructure and equipment and adherence to safety standards (0.584), the significance level is at $P<0.05$. Therefore, this indicates having enough infrastructural facilities and equipment at school enhances school safety, while using safe structures greatly enhances the safety of learners and teachers.

4.4.2 HODs' Responses on Availability of School Infrastructure and Equipment on Adherence to Safety Standards

Heads of Department play a significant management role as they are in charge of their departments at school. Besides, they participate in formulating safety standards and policies. Also, they could be members of the Parents' and Teachers' Association and class teachers. Therefore, their responses were significant for this study.

Table 4. 7: HODs' Responses on Availability of Safety Infrastructure and Equipment on Adherence to Safety Standards

Statements	SA		A		UD		D		SD		Mean	Std. dv
	f	%	f	%	f	%	f	%	f	%		
School buildings	0	0	8	53.3	2	13.3	5	33.3	0	0.0	3.14	.02
The school walkways are wide	2	13.3	8	53.3	1	6.6	4	26.6	0	0.0	4.68	1.40
Teachers and learners have access	8	53.3	5	33.3	0	0.0	1	6.6	1	6.67	3.86	.57
School buildings have emergency	8	53.3	6	40	0	0.0	1	6.6	0	0.0	2.19	0.23
School buildings have features including windows	2	13.3	8	53.3	1	6.67	4	26.6	0	0.0	2.56	1.01

(n=52,Average Mean=3.29)

From Table 4.7, a large number of HOD's (15.38% and 40.38% respectively) agreed that school buildings are well spaced and constructed, though19.23% and 9.63% respectively held a contrary opinion. However, since majority agrees with responses from principals, it can be inferred that most secondary school structures in Nandi North sub-county are well-spaced and constructed well. Also, 42.31% and 9.63% of the HODs indicated that their schools had

well-spaced, drained, and paved walkways. However, 30.77% indicated that their schools lacked well paved and wide walkways. Additionally, 53.84% of the HODS responded that their schools afforded teachers and learners ergonometric furniture. However, since this is an average response, it is clear that a substantial number of schools lack ergonometric furniture. Also, 71.16% of the HODs cumulatively indicated that their schools had access to safety equipment like fire hydrants, fire extinguishers and first aid kits, which are a good sign that the schools are relatively well prepared to respond to emergencies. But, when it comes to doors that open outwards and windows without grills, there was an average response (15.38% and 38.46%) affirming the same. The figure is relatively lower than that posed by principals (93.33%). Hence, there is need to carry out a physical inspection of each school to ascertain the true picture.

4.4.3 Correlation Analysis on Availability of School Infrastructure and Equipment on Adherence to Safety Standards

The researcher sought to correlate availability of infrastructure and equipment, adequate infrastructure and equipment, and safe infrastructure and equipment. The results are summarized in table 4.8.

Table 4.8: Correlation Analysis of the HOD's Assessment of Availability of Infrastructure and Equipment on Adherence to Safety Standards

		HASIE	ADHE
HASIE	Pearson Correlation	1.000	.628
	Sig. (2-tailed)		.000
	N	52	52
ADHE	Pearson Correlation	.628	1
	Sig. (2-tailed)	.000	
	N	52	52

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

Table 4.8 shows that there is a strong correlation between HOD's assessment of availability of infrastructure and equipment on adherence to safety standards (0.628); it confirms that having infrastructure that is properly or safely erected enhances school safety.

The researcher conducted an interview with the Sub-County Quality Assurance and Standards Officer (SQASSO) and found out that half the schools within the sub-county have adhered to the safety standards in regard to size and other specification of buildings which include ramps, rails, and windows without grills, and doors that open outwards. Windows with grills and doors that open outwards cannot guarantee safety during an emergency. The findings agree with a study by Ronoh (2018) who established that a school's physical environment and architectural design enhances the school's safety. Besides, poor infrastructure puts leaners and teachers at risk as the

safety standards drops. Thus, safety is not limited to just having adequate infrastructure at school but the facilities must conform to safety standards.

4.5 Teachers' Training on Adherence of School Safety Standards

This study sought to establish the influence of training teachers to observe school safety on the implementation of school safety procedures.

4.5.1 Principals' Responses on Teacher Training and School Safety

To establish the influence of teacher training and observance of school safety, the study sought the replies as summarized in Table 4.9.

Table 4. 9: Principal's Responses on Teachers 'Training on Adherence to Safety Standards

Statements	SA		A		UD		D		SD		Mean	Stdv
	F	%	f	%	f	%	f	%	f	%		
Teachers are trained	1	6.67	4	26.67	2	13.33	6	40	2	13.33	3.14	.02
Teachers are involved	1	6.67	7	46.67	1	6.67	4	26.67	2	13.33	4.68	1.40
Teachers conduct safety	1	6.67	1	6.67	4	26.67	8	53.33	1	6.67	3.86	.57
Teachers identify safety	0	0.0	12	80	2	13.33	1	6.67	0	0.0	3.68	.34
The buildings have	2	13.33	8	53.33	2	13.33	2	13.33	1	6.67	3.42	1.40
Teachers identify safety	2	13.33	11	73.33	1	6.67	1	6.67	0	0.0	3.12	1.60

(n=15,Average Mean=3.65)

Majority of the principals (40% and 13.33% respectively) indicated that teachers in their institutions had not received training on safety matters. However, a similar number (53.33%) indicated that teachers in their institutions participated in formulation of safety rules and procedures. But only a small number (6.67% and 6.67% respectively) indicated that teachers in their schools regularly conducted safety drills. This indicates that safety drills are rarely conducted in secondary schools in Nandi North sub-county. However, an overwhelming majority (13.33% and 73.33% respectively) of Principals strongly agreed and agreed that teachers participate in identifying safety measures that should be observed in school. Also, 66.66% of the principals answered in the affirmative that buildings at their schools had adequate emergency exits. Therefore, what we inferred from these findings was that teacher training on observance of safety standards was largely low.

4.5.2 Principals' Correlation Analysis on Teachers' Training and Adherence to Safety Standards

The researcher sought to find out the correlation between teachers' training and adherence to safety standards. The findings are summarized on table 4.10.

Table 4.10: Principals' Correlation Analysis on Teachers' Training on Adherence to Safety Standards

		TTR	ADHE
TTR	Pearson Correlation	1.000	.498
	Sig. (2-tailed)		.000
	N	15	15
ADHE	Pearson Correlation	.498	1
	Sig. (2-tailed)	.000	
	N	15	15

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

Table 4.10 indicates a strong correlation between teacher training and adherence to safety standards (0.498), at a significance level of P<0.05, thus, training of teachers on school safety has a big impact on the overall school safety adherence.

4.5.3 HODs' Responses on Teachers' Training on Adherence to Safety Standards

This study sought to establish the responses of HODs on teachers training on adherence to safety standards. The data collected is summarized in table 4.11.

Table 4.11: HODs' Responses on Teachers' Training on Adherence to Safety Standards

	SA		A		UD		D		SD			
Statements	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**Mean**	**Std. dv**
Teachers understand	7	13.4	25	48.1	9	17.3	8	15.38	3	5.77	4.57	.18
I have participated	2	3.85	12	23.1	9	17.3	18	34.6	11	21.2	3.12	.64
There are dedicated teachers	15	28.8	17	32.6	9	17.31	7	13.4	4	7.69	4.16	.42
Teachers actively monitor	15	28.8	27	51.9	5	9.62	5	9.62	0	0.0	2.42	1.41
Teachers have access	9	17.3	23	44.2	9	17.3	8	15.3	3	5.77	4.34	1.40
Teachers have access to safety	8	15.3	20	38.4	5	9.62	14	26.9	5	9.62	4.05	1.60

(n=15,Average Mean=3.91)

According to Table 4.11, majority of HODs (13.46% and 48.08% respectively) strongly agree and also agree that teachers understand the school safety procedures. However, only 26.93% cumulatively indicated that they had ever attended any school safety training. Thus, this indicates that teachers in Nandi North sub-county rarely receive training on school safety procedures. However, 61.54% of the HODs indicated that there was a dedicated teacher who would administer first aid. However, since teachers are rarely trained, as per the findings, it is questionable how prepared they are in handling emergencies. Nevertheless, 80.77% of the HODs indicated that teachers regularly monitor students' observance of school safety rules and procedures. Moreover, 61.54% of the HODs indicate that teachers have access to safety protocols. However, the number (21.15%) of those who are unable to access the protocols is substantially large and should be addressed. Also, about half (53.84%) of the teachers are issued with protective clothing and equipment for use in the laboratory. This figure is shockingly low given the toxic chemicals they would be exposed to. Thus, action should be taken to increase the availability of such equipment.

4.5.4: HODs' Correlation Analysis on Teachers' Training on Adherence to Safety Standards

The study sought to find out the correlation between training of teachers' and adherence to safety standards. The results are summarized in table 4.12.

Table 4.11: HODs' Correlation Analysis on Teachers 'Training on Adherence to Safety Standards

		TTR	ADHE
TTR	Pearson Correlation	1.000	.736
	Sig. (2-tailed)		.000
	N	52	52
ADHE	Pearson Correlation	.736	1
	Sig. (2-tailed)	.000	
	N	52	52

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

Table 4.12 indicates that there is a strong correlation between training of teachers' and adherence to safety standards. (0.736), at significance levels of $P< 0.05$, thus, this indicates that teachers training play a crucial role in enhancing school safety and should receive adequate training on school safety practices.

Majority of the school labs were relatively safe. For instance, 80% of the laboratories have gas chambers, and a similar number have modern laboratory equipment. Besides, 86.67% of the school laboratories have adequate and appropriate laboratory tables, proper gas and water piping. Besides, in 80% of the schools, laboratory staffs are issued with gas masks. Additionally, all schools have clean, separate toilets for teachers and students. Moreover, in 93.33% of the schools, toilet facilities are adequate.

Further, 80% of the schools are fenced tightly and furthermore all schools have security personnel. Besides, there are secure and manned gates in 86.67% of the schools. Also, all schools have installed working security lights.

However, only 26.67% of the schools have security alarms. In addition, analysis indicates that many schools lag behind in medical security. For instance, school clinics are available in 66.67% of the school. Despite having clinics, only 33.33% of the clinics have trained medical personnel. Besides, only 20% of the schools adequately stock their school medical clinics, which mean many school clinics lack adequate drugs to address health emergencies at school. Additionally, most schools are ill equipped to address medical emergencies as only 13.33% of the schools have trained staff members who can handle health emergencies. Thus, though most school buildings meet safety standards, they fall below standards in the amount of safety equipment available. Besides, their preparedness to handle health emergencies is very low.

The researcher further conducted an online interview on SQASSO on training of teachers on adherence to safety standards in public secondary schools in Nandi North Sub County and established that the ministry rarely trains teachers and other school stakeholders. However, sensitization is done to the principals and other stakeholders to ensure that safety standards are adhered to in school at all times. They rely on the principals to disseminate the same to the school fraternity. It is, therefore, imperative that teachers do not get trained at school level, thus, adherence to safety standards is compromised. Correspondingly, Makau (2016) found out that lack of teacher training on handling safety issues contributes to low safety standards at school. Further, Diaz-vicario and Sallan (2017) aver that implementation of school safety is highly successful when training of staff members and students have taken

place. Thus, this underscores the need for teacher training on observance of school safety measures.

4.6 Principals' Involvement of Stakeholders on Adherence to Safety Standards

Various stakeholders like parents, Board of Management members, Ministries of Education and Health officials, and students play a significant role in ensuring schools formulate effective safety policy and their observance. Thus, this study sought to assess the influence of involving stakeholders on the adherence of safety standards in public secondary schools.

4.6.1 Principal's Responses on Principals' Involvement of Stakeholders on Adherence to Safety Standards

Being at the helm of school management, Principals play an integral role in formulating, effecting and monitoring the observance of school safety standards. Besides, their unique position enables them to influence various stakeholders to support the adherence of school safety standards. Thus, there was need to seek their opinion on the involvement of stakeholders and the adherence to safety standards. The findings are summarized in Table 4.13.

Table 4.12: Principals 'Responses on Principals' Involvement of Stakeholders on Adherence to Safety Standards

Statements	SA f	SA %	A f	A %	UD f	UD %	D f	D %	SD f	SD %	Mean	Std dv
The board of management	9	60	5	33.3	1	6.6	0	0.0	0	0.0	3.21	.34
The PTA carry out	5	33.3	9	60	0	0.0	1	6.6	0	0.0	3.56	1.06
The ministry of public health	6	40	4	26.6	4	26.6	1	6.6	0	0.0	4.29	1.12
There are contact numbers for	1	6.6	7	46.6	4	26.6	2	13.3	1	6.6	4.23	1.45
(n=15,Average Mean=3.82)												

From table 4.13, we can deduce that stakeholders actively participate in the adherence of school safety standards. For instance, 93.33% of all Principals indicated that the Board of Management actively approves and monitors the construction of safe buildings at school. Moreover, a similar number indicate that the PTA monitors and evaluates the safety of school buildings. Moreover, 66.67% are in agreement that Ministry of Health officials inspect their institutions annually. However, about 53.33% of the respondents indicated that their schools have access to emergency contact numbers for firefighters, ambulances, and the police. Though, the figures are relatively above average, they are too low to warrant the security of a school. Given the complexity of safety emergencies, all schools should have access to all emergency contact

numbers. Nevertheless, the findings indicate that various stakeholders are comprehensively involved in overseeing the adherence to safety standards at school.

4.6.2 Principals' Correlation Analysis on Principals' Involvement of Stakeholders on Adherence to Safety Standards

The study sought to find out correlation between involvement of ministry of health officials, PTA members and board of management in observing school safety. The results are analyzed on table 4.14.

Table 4. 13: Principals' Correlation Analysis on Principals' Involvement of Stakeholders on Adherence to Safety Standards

		PIS	ADHE
PIS	Pearson Correlation	1.000	.589
	Sig. (2-tailed)		.000
	N	15	15
ADHE	Pearson Correlation	.586	1
	Sig. (2-tailed)	.000	
	N	15	15

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

Table 4.14 shows a strong correlation between principals' involvement of stakeholders on adherence to safety standards (0.589) at a significance level of $P< 0.05$. Thus, it can be inferred that schools that involve other stakeholders in their safety matters have high safety records.

4.6.3 HODs Responses on Principals' Involvement of Stakeholders on Adherence to Safety Standards

HODs interact with various stakeholders who influence the observance of school safety standards. Besides, some of them are part of the PTA organization, and thus can be classified as stakeholders. Therefore, it was significant to evaluate their responses on the influence of stakeholders in adherence to safety standards. The results are summarized in Table 4.15.

Table 4. 14: HODs' Responses on Principals' Involvement of Stakeholders on Adherence to Safety Standards

	SA		A		UD		D		SD			
Statements	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**Mean**	**Stdv**
Learners observe	7	13.4	27	51.9	9	17.3	5	9.6	4	7.6	4.01	.58
Teachers adhere	11	21.1	25	48.0	9	17.3	4	7.6	3	5.7	3.16	1.02
School administration	13	25	22	42.3	8	15.3	7	13.4	2	3.8	4.23	1.08
School board monitors	8	15.3	28	53.8	8	15.3	6	11.5	2	3.85	3.33	.56
School regularly carries	3	5.7	6	11.5	13	25	17	32.6	13	25	4.18	.09
(n=52,Average Mean=3.78)												

As can be observed from table 4.15, most of the HODs indicate that stakeholders actively influence the adherence of safety standards at school. For instance, 65.38% of the respondents indicated that students observe safety standards and procedures at school. Besides, 69.23% of the HODs observed

that teachers influence the adherence to safety standards at school. Moreover, 67.31% of the respondents indicate that school administration regularly carries out safety inspections. However, 17.31% argued that the school administration does not regularly carry out safety inspections. Also, 69.23% of the respondents observed that the Board of Management regularly monitors adherence to safety standards at school. However, just like principals, a small percentage of HODs (17.31%) indicated that their schools regularly conduct emergency drills. This is an indication that most schools do not have modalities in place of conducting emergency drills or they fail to observe them. Nevertheless, just like the principals' responses, HODs indicate a high level of influence from stakeholders in observance of safety standards at school.

4.6.4 HODs' Correlation Analysis on Principal's Involvement of Stakeholders on Adherence to Safety

The study sought to correlate involvement of Ministry of health officials, PTA members, and Board of management. The findings are analyzed on table 4.16.

Table 4. 15: HODs' Correlation Analysis on Principals' Involvement of Stakeholders on Adherence to Safety Standards

		PIS	ADHE
PIS	Pearson Correlation	1.000	.632
	Sig. (2-tailed)		.000
	N	52	52
ADHE	Pearson Correlation	.632	1
	Sig. (2-tailed)	.000	
	N	52	52

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

Table 4.16 shows a strong correlation between principals' involvement of stakeholders on adherence to safety standards (0.632), at significance levels of $P< 0.05$. Hence, we can infer that schools that actively involve other stakeholders in matters school safety have high safety records.

The researcher interviewed the SQASSO on the principals' involvement of stakeholders on adherence of safety standards and found out that stakeholders are always sensitized on safety standards whenever they have Board of Management meetings that concern development of infrastructure. The Ministry of education ensures that no buildings are approved for construction without the involvement of the ministry of Public works officers who develop the structural plans and bills of quantities in which they specify the quantity and quality of materials to be used in construction. Consequently, the principal and the Board of Management ensure the standards are observed during implementation level.

From the checklist it is clear that most school buildings do not meet safety standards. For instance, only 46.67% are well lit and 80% lack safety rails. Besides, only 26.67% of schools have paved walkways and 53.33% have ergonomic chairs and tables for learners and teachers. Additionally, no school had smoke detectors and or smoke alarm. Besides, only 13.33% of the institutions had escape signage while only33.33% had clear escape roots. Besides, only 40% of the schools have fire extinguishers with only 6.67% having a fire blanket.

However, most classrooms are relatively safe with all schools having blackboards of appropriate height. Moreover, 93.33% of the schools have lockable doors and windows with all classrooms in all schools being well lit and ventilated. Besides, all classes are of the recommended size and all floors in all schools have concrete slabs. Additionally, 86.67% of the classrooms accommodate the recommended number of students.

It can therefore be concluded that the stakeholders are involved in adherence to safety and standards by ensuring standard infrastructure is developed.

Compatibly, Anake (2018) in their study on the role of PTA in education discovered that involving the association in formulation and monitoring of safety measures at school contributes to higher implementation rate of safety protocols. Harmoniously, King'oina (2017), discovered that the board of management plays a significant role in ensuring school safety as they participate in approving the construction of physical structures at school and approving safety rules. Thus, there is a strong correlation between involvement of stakeholders and the safety standards at school.

4.7 Influence of Principals' Involvement of Teachers on Adherence to Safety Standards

As administrators, Principals 'actions immensely influence the observance of safety standards. Therefore, there was need to evaluate their influence on the adherence of safety standards in secondary schools in Nandi North sub-county.

4.7.1 Principals' Responses on Principals' Involvement of Teachers on Adherence to Safety Standards

This study sought to establish the impact of principals' actions on the adherence to safety standards. The findings are summarized in Table 4.17.

Table 4. 16: Principals' Responses on Principals' Involvement of Teachers on Adherence to Safety Standards

	SA		A		UD		D		SD			
Statements	**f**	**%**	**f**	**%**	**f**	**%**	**F**	**%**	**f**	**%**	**Mean**	**Stdv**
Principal organizes regular	0	0.0	6	40	5	33.3	3	20	1	6.67	3.04	.42
Principal engages teachers	2	13.3	8	53.3	3	20	2	13.3	0	0.0	3.45	1.16
Principal monitors	5	33.3	9	60	1	6.6	0	0.0	0	0.0	4.12	1.28
Principal engages teachers in implementation	5	33.3	8	53.3	1	6.6	1	6.67	0	0.0	4.16	.89
Principal revises safety standards	3	20	10	66.6	2	13.3	0	0.0	0	0.0	5.34	.44
(n=15,Average Mean=4.02)												

According to table 4.17, only 40% of principals admitted to organizing regular trainings for teachers on safety procedures. The admission disputes data from HODs which indicates that only 26.93% of them have ever participated in safety training exercise. Hence, it indicates a gap in the preparation of teachers on handling safety issues and emergencies. However, 66.66% of the principals indicated that they engage teachers in formulation of safety rules and

procedures. 93.33% of the principals indicated that they monitor and evaluate safety adherence at school and takes remedial action when required to address safety concerns. Moreover, 86.66% of the principals indicate they engage teachers in implementing school safety guidelines. Further 86.67 revise safety standards and procedures with the teachers.

Table 4. 18: Principals' Correlation Analysis on Principals' Involvement of Teachers on Adherence to Safety Standards

		PIS	ADHE
PIS	Pearson Correlation	1.000	.314
	Sig. (2-tailed)		.000
	N	15	15
ADHE	Pearson Correlation	.314	1
	Sig. (2-tailed)	.000	
	N	15	15

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

Table 4.16 shows a strong correlation between principals' involvement of stakeholders on adherence to safety standards (0.314), at significance levels of $P< 0.05$. Hence, we can infer that schools that actively involve other stakeholders in matters school safety have high safety records.

Thus, going by the responses from the principals, it indicates that principals heavily rely on teachers in ensuring that safety standards have been adhered to. However they need to address the issue of teacher training on safety standards.

4.7.3 HODs' Responses on Principals' Involvement of Teachers on Adherence to Safety Standards

The researcher sought to find out the HODs' responses on the influence of Principals' involvement on adherence to safety standards. The findings are summarized in Table 4.18.

Table 4. 17: HODs' Responses on Principals' Involvement of Teachers on Adherence to Safety Standards

	SA		A		UD		D		SD			
Statements	**f**	**%**	**f**	**%**	**f**	**%**	**F**	**%**	**f**	**%**	**Mean**	**Stdv**
Principal organizes regular	14	26.9	21	40.3	5	9.62	7	13.4	5	9.62	4.44	.42
Principal engages teachers	11	21.1	19	36.5	12	23.1	6	11.5	4	7.69	4.21	1.12
Principal monitors	14	26.9	27	51.9	7	13.4	2	3.85	2	3.85	3.12	1.01
Principal engages teachers I implementation	9	17.3	19	36.5	16	30.7	5	9.62	3	5.77	4.44	.42
Principal revises safety standards	15	28.8	20	38.4	6	11.5	5	9.6	6	11.5	5.34	.44
(n=52,Average Mean=3.91)												

From Table 4.18, majority of the HODs posit that principals engage students and teachers in the implementation of safety standards and procedures. This is a further confirmation from the same assertion by 66.66% of the principals. Additionally, 57.69% of the HODs indicated that Principals procure ad

provide safety equipment and materials to them. However, another group of HODs (19.23%) indicate that their principals do not procure ad provide safety equipment and materials. Moreover, a substantial number of HODs (78.84%) responded that principals implement safety recommendations from teachers and students. This confirms indications by the principals that they take remedial actions whenever it is necessary. However, 7.7% of the teachers indicated that no remedial action is taken. About half (53.85%) of the HODs indicated that principals set aside budgetary allocations for safety trainings ad other safety needs. Also, 67.31% of the HODs indicated that principals communicate to them about safety dynamics. Thus, this confirms that principals involve their teachers in an integral role of implementing safety procedures and standards at their schools.

Table 4. 18: HODs Correlation Analysis on Principals' Involvement of Teachers on Adherence to Safety Standards

		PIS	ADHE
PIS	Pearson Correlation	1.000	.467
	Sig. (2-tailed)		.000
	N	52	52
ADHE	Pearson Correlation	.467	1
	Sig. (2-tailed)	.000	
	N	52	52

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

Table 4.16 shows a strong correlation between principals' involvement of stakeholders on adherence to safety standards (0.467), at significance levels of $P< 0.05$. Hence, we can infer that schools that actively involve other stakeholders in matters school safety have high safety records.

The researcher carried out an interview on the provision of safety equipment and adherence of safety standards to teachers. It was revealed that every school should have all the safety equipment as indicated in the school safety and standards manual. It was also noted that majority of the schools have fire extinguishers but they are too small to put out fire in case it erupts. It is also the principal's mandate to ensure that the laboratory is well equipped with safety equipment and is safe for use by learners and teachers. But it was reported that majority of the schools have laboratories that do not conform to standards. There are no fume chambers in some of the laboratories and lack gloves and blankets for fire extinguishing thus posing danger to the users.

The observation schedule was used to collect information on the status of availability of safety infrastructure and equipment. It was filled out by the school Principals based on their observation of various safety features at their schools.

4.8 Principals' Response on Adherence to Safety Standards

The study sought the opinion of the principals regarding adherence to safety standards which is the dependent variable of the study the findings are presented in table 4.20

Table 4. 18: Principals' Response on Adherence to Safety Standards

Statements	N	Mean	Std dv
Buildings are constructed to standards provided in the school safety and standards manual.	15	3.19	1.02
Inspection on completed buildings is done before commissioning.	15	3.45	1.24
Regular assessment of school infrastructure is done by the MOE and Public Health.	15	3.02	1.78
Repairs and reconstruction of school damaged buildings are routinely done.	15	2.96	2.28
There are posters on safety measures and guidelines displayed within the school.	15	3.12	1.03

Table 4.21 shows that majority of the principals scored the highest mean (M=3.45, SD=1.24) suggesting that inspection on completed buildings is done before commissioning. This was closely followed with by the Buildings are constructed to standards provided in the school safety and standards manual(M=3.19, SD=1.02).This is an indication that safety standards are adhered to however there is need for routine repairs that had the lowest score (M=2.96, SD=2.28).

4.9 Head of Departments Response on Adherence to Safety Standards

The study sought the opinion of the principals regarding adherence to safety standards which is the dependent variable of the study the findings are presented in table 4.21

Table 4. 19: Head of Department Response on Adherence to Safety Standards

Statements	N	Mean	Std dv
Weekly class meetings to discuss safety dangers are held.	52	2.23	1.82
Weekly reports on safety are reported to the administration.	52	2.11	1.02
Students who flout safety rules are punished.	52	3.49	2.00
Regular safety rules are held.	52	2.84	1.34
All teachers and students adhere to school safety and standards policies.	52	3.11	2.46

Table 4.22 shows that majority of the HODs scored the highest mean (M=3.49, SD=2.00) confirming that students who flout safety rules are punished. This was closely followed by; all teachers and students adhere to school safety and standards policies (M=3.11, SD=2.46).This is an indication that safety standards are adhered to, however, there is need for improvement of weekly class meetings as well as weekly reports.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter expounds significant findings from the study. It also presents conclusions arrived at from them. Further, the researcher proposes recommendations as well as suggested areas for further study in relation to principals' management practices on adherence to safety standards in public secondary schools in Nandi North Sub-county, Kenya.

5.2 Summary of the Study

The purpose of this study was to evaluate principals' management practices on adherence to safety standards in public secondary schools in Nandi North Sub-county. The objectives were: to find out the influence of availability of safety infrastructure and equipment on adherence to safety standards; find out the influence of teachers' training on adherence to safety standards; to determine the influence of involvement of stakeholders on adherence to safety standards; and to establish the influence of principal's involvement of teachers in decision making and adherence of safety standards.

Data was collected from 15 secondary school Principals and 52 HODs. Then the data was analyzed using descriptive and correlation analysis with the aid of SPSS Service Park 25. Thereafter, the results were organized and presented using tables and summarized using percentages. Thus, the outcomes are summarized based on the research objectives.

5.2.1 Influence of availability of Safety Infrastructure and Equipment on Adherence to Safety Standards

The study sought to establish the Principal's influence on the safety of school infrastructure and equipment. Based on the first objective, the relationship between of availability of safety infrastructure and equipment and adherence to safety standards. It was found to be statistically significant by principals (M=3.91, r=0.0.545,r^2=0.297; p<0.05), HOD(M=3.29, r=0.628,r^2=0.394; p<0.05).From the study, it was established that majority of schools' infrastructure did not meet the set Ministry of Education standards. However, it was noted that the existing structures in most of the institutions adequately accommodated both teachers and learners. Also, about half of the schools had physical plans and they based their constructions on the plans. It was also noted that all schools were well ventilated and illuminated. However, most of the schools lacked proper and adequate walkways, ramps, and railings. This could negatively impact on some teachers and students, especially the disabled when they try to access some of the facilities. Also, about half of the schools had adequate toilet facilities that were also demarcated for both students and teachers. Hence, there is need to construct more sanitary facilities and clearly demarcate them for both teachers and leaners, in the remaining half of the schools. Also, most of the schools were well fenced and had manned gates. Besides, the number of schools with windows without grills and doors that open towards the outside of the room was satisfactory. Moreover, majority of the schools had access to safety equipment like fire hydrants, fire extinguishers and first aid kits. Hence, most of the school structures and equipment were safe for students and learners in many schools.

5.2.2 Teachers' Training on Adherence to Safety Standards

The study aimed to find out the principal's influence on the training of teachers on safety practices and adherence to safety standards. Based on the second objective of the study which was to establish the relationship between teachers' training and adherence to safety standards. It was found to be statistically significant by principals (M=3.65, r=0.498, r^2=0.248; p<0.05), HODs (M=3.77, r=0.736, r^2=0.541; p>0.05).The study established that majority of teachers had not been trained on handling safety matters, neither were there regular training programmes. However, most teachers were involved in formulating and implementing safety policies for the schools. Also, it was established that teachers had easy access to safety protocols. However, only half of the teachers are issued with protective clothing, including aprons and masks especially while in the laboratory. Therefore, they were exposed to hazardous working environment. However, most schools had teachers who would respond to emergency cases and offer help like, first aid. However, given their low level and infrequent trainings, it is doubtful how they would handle emergencies should they arise.

5.2.3 Principals' involvement of stakeholders' on adherence to safety standards.

The study aimed at finding out the influence of stakeholders' involvement and adherence to safety standards. Based on the third objective of the study which was to establish the relationship between principals' involvement of stakeholders and adherence to safety standards. It was found to be statistically significant by principals(M=3.82, r=0.589, r^2=0.346; p<0.05), HODs (M=3.78, r=0.632, r^2=0.399, p<0.05) .The study found out that stakeholders are actively

involved in the formulation and implementation of safety standards and procedures at school. In particular, the Board of Management participated in approving and monitoring the construction of safe school buildings. Also, Ministry of Health officials inspected a majority of the schools annually. It was also noted that majority of PTA members actively inspected and evaluated safety standards at school on a regular basis. However, only half of the schools had access to emergency numbers for the fire fighters, police department, and ambulance services. It was also noted that teachers influenced the safety at school due to their close monitoring of students and reminder of safety rules. The number of students observing safety rules was also high. However, most schools did not conduct emergency drills and they had never been conducted in some schools.

5.2.4 Influence of principals' involvement of teachers adherence to safety standards

The study sought to find out the extent to which the principal involved the teachers on adherence to safety standards. Based on the fourth objective of the study, which was to establish the relationship between principal's involvement of teachers and adherence to safety standards, it was found to be statistically significant by principals (M=4.02, r=0.314, r^2=0.09 $p<0.05$), HODs(M=4.93; r=0.467, r^2=0.218 $p<0.05$) The research established that most principals involved teachers in formulation of policies and implementation of school safety protocols. However, majority of the teachers are not trained to handle emergencies.

5.2.5 Analysis of the Checklist

The checklist confirmed that most school structures are safe and well ventilated, especially the classrooms. However, most schools lack other safety features like walkways, escape signage, clear escape routes, and guard railings. Moreover, safety equipment like fire extinguishers are few. However, most of the school laboratories have modern equipment, adequate laboratory tables, fume chambers, and proper water and gas piping. Moreover, most schools have adequate security features, including fences, school gates, security lights and security personnel, though many do not have security alarms. However, most schools are not prepared to handle health emergencies as only two thirds have school clinics. Besides, majority of the clinics lack medical supplies and are not adequately staffed with trained personnel. Moreover, very few schools have a trained staff member who would handle health emergencies. Thus, there is need to improve on the schools' health preparedness.

5.3 Conclusion

From the research study findings, the following conclusions were drawn:

That, school principals play a critical role in the implementation of safety standards and procedures at school. Allocating a safety budget in the school budget enhances school safety. That a school principal ought to actively engage stakeholders in the design and implementation of school safety standards and that schools should have emergency response numbers that are easily accessible and in use.

It is concluded that training teachers on safety standards greatly enhances school safety as they play an integral part in the implementation of school safety standards. Training teachers would offer a school with teachers who are able to offer specialized help, such as first aid in emergencies, and that schools that involve all stakeholders in the formulation and implementation of safety standards are safer. Also, it was noted that the training of various stakeholders on school safety standards is generally low. Moreover, it is concluded that monitoring and evaluation activities of board Members and PTA members enhances the security of schools.

Further, it is concluded that schools are safer when they adhere to the Ministry of Education guidelines on erecting standard buildings. Other than that, repairing damaged school buildings enhances the overall school safety. Moreover, it is noted that having safety equipment enhances the ability to handle safety emergencies.

5.4 Recommendations of the Study

Following the research findings, there was a need to make the following recommendations:

i. All secondary schools ought to build enough critical facilities like toilets, ramps, stairs, and guard rails. Besides, all buildings should be constructed in a way that they are accessible to all users, including the disabled. They ought to organize regular safety trainings for both teachers and learners on emergency drills and safety protocols guidelines be made accessible to every school member. All teachers ought to receive adequate safety clothing and equipment especially in the laboratories, and that all

secondary schools ought to set aside budgetary allocations that would cater for safety programs specifically to support safety training and procurement of safety equipment. All schools ought to build school clinics and hire qualified medical personnel to handle health cases and ensure all clinics are adequately stocked with appropriate medical supplies.

ii. The Ministry of Education ought to come up with a policy on enhancing school health facilities..

iii. Scholars ought to study the extent to which ministry of education ought to implement safety standards adherence.

5.5 Suggestions for Further Study

School safety comes first before learning. Therefore, based on research findings, there is need to carry out research in the following areas:

i. A research ought to be carried out to measure the safety levels of various schools based on their demarcation, such as day schools, boarding schools, or single gender schools.

ii. A study should be carried out to establish the role of students in school safety.

iii. A study should be undertaken to assess the role of surrounding school community on school safety.

iv. A study should be undertaken to evaluate the preparedness of schools to handle medical issues among students and staff.

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APPENDICES

Appendix1: Questionnaire for the School Principals

This questionnaire seeks to collect data on the Influence of School Safety on the Teaching and Learning Process in Nandi North Sub-County, Keya. You have been randomly selected to participate in this study. To protect your privacy, please do not write your name in any part of this questionnaire. Kindly, give your opinion to the best of your knowledge. Please answer the questions by ticking (√) or filling in the blank spaces as appropriate.

Section A: Demographic Data

1. Gender: male [ ] female [ ]
2. What is your age bracket? 21-30 years [] 31-40 years [] 41-50 years [] above 50 years []
3. For how many years have you been a principal? Below 6 years [] 6-10 years [ ] 11-15 years [] above 15 years []
4. For how many years have you been a principal in this school? Below six years [] 6-10 years [] 11-15 years [] above 15 years []
5. How will you describe your school?

   Day mixed [] day boys [ ] day girls [] boarding boys] boarding girls [ ] day boarding [ ]
6. What is your highest teaching professional qualification? Diploma [] B.Ed. [] M.Ed. [] Ph.D. [] other_____(specify)

SECTION B:

7. Please indicate by ticking the grid below the statement which best describes safety practices and activities at your school. Note that

SA=strongly agree, A=agree, NO=no opinion, D=disagree, and SD=strongly disagree.

1	**Availability of safety infrastructure and equipment on adherence to safety standards**	**SA**	**A**	**NO**	**D**	**SD**
i.	The school buildings, playgrounds and facilities meet the recommended Ministry of Education internal space requirements					
ii.	The school buildings, playgrounds and facilities adequately accommodate the right number of employees and learners					
iii.	The school has a physical plan and standard structures have been erected					
iv.	The buildings are well ventilated and illuminated					
v.	There are adequate, well-spaced walkways, ramps and guard railings					
vi.	There are adequate toilets for students and staff and are well maintained					
vii.	The school compound is tightly fenced and has a manned gate					
viii.	Damaged buildings are routinely repaired or reconstructed					
ix.	Windows do not have grills					
x.	Doors are adequate and open towards the outside of buildings					
xi.	Regular inspection of buildings and other infrastructure is done					
2	**Teachers' training on adherence to safety standards**	**SA**	**A**	**NO**	**D**	**SD**
i.	Teachers are trained on safety measures and standards					
ii.	Teachers are involved in formulating safety policies and guidelines of the school					
iii.	Teachers conduct safety drills/training with learners					
iv.	Teachers identify safety measures to be observed within the school					
v.	The buildings have adequate, accessible and appropriate emergency exit points					
vi.	Teachers identify safety measures to be observed within the school					
3.	**Principal's involvement of stakeholder on adherence to safety standards**	SA	A	NO	D	SD
i.	The board of management monitors the development of infrastructure					
ii.	The PTA carry out monitoring and evaluation of structures in the school					
iii.	The ministry of public health inspects the school annually					

iv.	There are contact numbers for emergency response providers including ambulances, the police, and firefighters					
4	**Principals' involvement of teachers on adherence to safety standards**					
i.	Principal organizes regular school safety trainings for teachers and learners					
ii.	Principal engages teachers in formulation of safety rules and procedures					
iii.	Principal monitors and evaluates safety adherence at school and takes remedial action when required					
iv.	Principal engages teachers in implementation of school safety guidelines					
v.	Principal revises safety standards and procedures with the teachers when needed					
5.	**Adherence to safety standards**					
i.	Buildings are constructed to standards provided in the school safety and standards manual					
ii.	Inspection on completed buildings is done before commissioning					
iii.	Regular assessment of school infrastructure is done by the MOE and Public Health					
iv.	Repairs and reconstruction of school damaged buildings are routinely done					
v.	There are posters on safety measures and guidelines displayed within the school					

Thank you for your time and cooperation

Appendix 2: Questionnaire for the Heads of Department

This questionnaire seeks to collect data on the **influence of school safety on the teaching and learning practices in Nandi North Sub-County, Nandi County**. You have been randomly selected to participate in this study. To protect your privacy, please do not write your name in any part of this questionnaire. Kindly, give your opinion to the best of your knowledge. Please answer the questions by ticking (√) or filling in the blank spaces as appropriate.

Section A: **Bio Data**

1. 1. Gender: male [ ] female [ ]
2. What is your age bracket? 21-30 years [] 31-40 years [] 41-50 years [] above 50 years []
3. For how many years have you been a teacher in this school? Below 6 years [] 6-10 years [] 11-15 years [] above 15 years []
4. For how many years have you been ahead of department in this school? Below six years [] 6-10 years [] 11-15 years [] above 15 years []
5. What is your highest academic qualification? Diploma [] B.Ed. [] M.Ed. [] Ph.D. [] other (specify) _____

SECTION B: Influence of implementation of occupational health and safety

6. Indicate by ticking the grid below the statement which best describes your occupational safety and health training experience. Note that

SA=strongly agree, A=agree, NO=no opinion, D=disagree, and SD=strongly disagree.

1	**Availability of safety infrastructure and equipment on adherence to safety standards**	**SA**	**A**	**NO**	**D**	**SD**
i.	School buildings and facilities are adequately spaced and constructed					
ii.	The school walkways are wide enough, well paved, and drained					
iii.	Teachers and learners have access to ergonometric furniture					
iv.	School buildings have emergency and safety equipment including water hydrants, fire extinguishers, and first aid kits					
v.	School buildings have emergency features including windows without grills and doors that open outwards					
2	**Teachers' training on adherence to safety standard**	**SA**	**A**	**NO**	**D**	**SD**
i.	Teachers understand safety standards and procedures					
ii.	I have participated in school safety training workshops/seminars					
iii.	There are dedicated teachers who can administer first aid in emergencies					
iv.	Teachers actively monitor students' adherence to school safety and standards procedures					
v.	Teachers have access to safety and emergency protocols					
vi. vii.	Teachers have access to safety equipment and clothing in the laboratories					
3	**Principal's involvement of stakeholder on adherence to safety standards**	**SA**	**A**	**NO**	**D**	**SD**
i.	Learners observe school safety standards and procedure					
ii.	Teachers adhere to school safety policies and					

	regulations					
iii.	School administration regularly carries out safety inspections					
iv.	School board monitors implementation of safety standards					
v.	School regularly carries out emergency drills					
4	**Principals' involvement of teachers on adherence to safety standards**					
i.	The principal engages students and teachers in implementing school safety standards and procedures					
ii.	Principal procures and provides safety equipment for teachers.					
iii.	Principal implements safety recommendations from students and teacher					
iv.	There is a budgetary allocation for teachers' safety trainings and needs.					
v.	Principal regularly communicates to teachers on the safety dynamics.					
5.	**Adherence to safety standards**					
i.	Weekly class meetings to discuss safety dangers are held					
ii.	Weekly reports on safety are reported to the administration					
iii.	Students who flout safety rules are punished					
iv.	Regular safety rules are held					
v.	All teachers and students adhere to school safety and standards policies					

Thank you for your time and participation

Appendix 3: Research Checklist

This check list will be used to collect data on the availability of health and safety infrastructure in secondary schools

Type of physical infrastructure or equipment	**State of infrastructure**	**YES**	**NO**
School buildings	Buildings are well lit and ventilated		
	Climbing ramps exist		
	Safety guard railings		
	Stairs		
	Paved walkways		
	Adequate spacing in rooms		
	Proper windows available in all buildings		
	Lockable doors in all buildings		
Firefighting equipment	Adequate fire extinguishers		
	Fire blanket		
	Smoke detectors		
	Smoke alarms		
	Escape signage		
	Fire assembly point		
	Clear fire escape routes		
	Water tank		
Office furniture	Ergonomic chairs and tables		
	Well-spaced office		
	Well ventilated office		
	Concrete floor		
	Lockable windows and doors		
Classrooms	Blackboard of appropriate height		
	Well lit classrooms		
	Classes of the recommended size		
	Classes contain Recommended number of students		

Laboratory	Well ventilated		
	Modern laboratory equipment		
	Appropriate laboratory tables		
	Appropriate gas piping		
	Appropriate water piping		
	Fume chamber available		
	Gas masks for staff available		
	Has a fume chamber		
	Firefighting equipment		
Lavatories/toilets	Separate staff and students toilets		
	Adequate staff toilets		
	Separate male and female staff toilets		
	Clean toilets		
School security	Secure school fence		
	Secure school gate		
	Security personnel available		
	Availability of fire and security alarms		
	Availability of security lights		
School clinic	Clinic available		
	Medical personnel available		
	Clinic adequately stocked to handle emergencies		
	Staff trained to handle emergencies		

Appendix 4: Interview Guide for Sub-County Quality Assurance Officer

1. Do physical infrastructural facilities in schools under your jurisdiction meet the recommended MOE safety standards recommendations? How do you ensure they meet the set standards?
2. Are school community members regularly trained on safety practices? How does it influence adherence to safety standards?
3. Is there a role that teachers should play in ensuring adherence to safety standards in school? How should they be involved?
4. How do you view the implementation of safety standards policies in schools? Do they satisfactorily discharge their mandate? How have they succeeded or failed?
5. What is the role of your department in ensuring safety in schools and how does it influence adherence to safety standards in public secondary schools located in Nandi North sub-county, Kenya?

Thank you for your time and cooperation

Appendix 5: Research Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **972465**

Date of Issue: **23/November/2020**

RESEARCH LICENSE

This is to Certify that Ms.. TERESA JEPTANUI SUGUT of University of Nairobi, has been licensed to conduct research in Nandi on the topic: INFLUENCE OF PRINCIPALS' MANAGEMENT PRACTICES ON ADHERENCE TO SAFETY STANDARDS IN PUBLIC SECONDARY SCHOOLS IN NANDI NORTH SUB-COUNTY for the period ending : 23/November/2021.

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