CHALLENGES FACING THE IMPLEMENTATION OF THE PHYSICAL FACILITIES SAFETY POLICY IN PUBLIC PRIMARY SCHOOLS. A CASE OF NANDI CENTRAL DISTRICT

BY

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DECLARATION

Declaration by the Students

This thesis is my original work and has not been submitted for any degree in any University. All the sources I have used or quoted have been indicated and acknowledged.

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DEDICATION

I dedicate this work to my beloved husband Mr. Barnabas Rono and children Alfred, Lizzy, Linda and Lesley who showed their patience despite tough conditions and challenges they experienced during my absence while undertaking my course work and through the data collection process.

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ABSTRACT

Studies and reports indicate that insecurity for children exists in schools arising from inappropriate physical facilities. The purpose of this study was to find out challenges facing the implementation of the physical facilities safety policy in public primary schools in Nandi Central District. The objectives that guided the study were: to establish cases of insecurity, assess the degree to which schools adhere to the safety policy, evaluate the methods applied to ensure the safety of learners and determine the roles of head teachers in ensuring the implementation of the physical facilities safety policy in public primary schools. The study was based on the "Domino theory" of safety theories as modeled by H.W Heinrich (2002) which identifies cases of accidents and how to prevent them. The study employed a descriptive survey design. The targeted population comprised the head teachers, teachers, quality assurance and standards officer (DQASO) and the parents' representatives. Proportionate sampling technique was used to select 45 schools to participate in the study. This was 30% of 152 public primary schools in Nandi district . All the 45 head teachers and one education officer were purposively selected. A total of 90 teachers in charge of school physical facilities and 45 parents' representatives were selected using simple random sampling techniques. In collecting data, questionnaire, interview and observation schedules were used. Data was both qualitative and quantitative. Results were presented using descriptive statistics such as frequency distribution tables, percentages and bar graphs. The findings of the study revealed that the implementation of the safety policy was not fully adhered to. The challenges influencing the implementation process included: inadequate funds, time, capacity building, transport and coordination, lack of training and awareness on safety and poor management and maintenance. Further, protective gadgets like fire extinguishers and lightning arrestors were not in place. Based on the findings of this study, it was recommended that: MOE and policy makers come up with adjustments that will make schools safe zones for learning. In addition, close monitoring be beefed up in order to make the head teachers ensure that facilities are available, adequate, and well managed. This study is significant in that it will help the education stakeholders and policy makers adopt strategies that will promote adherence to the safety policy in schools.

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LIST OF ABBREVIATIONS

CFS - Child Friendly School

CWS- Church World Service

DEO- District Education Officer

DQASO- District Quality Assurance and Standards Officer

GOK- Government of Kenya

KIE- Kenya Institute of Education

MOE- Ministry of Education

NCES- National Center for Educational Statistics

OHS - Occupational and Health Safety

PRISM - Primary Schools management

ROK- Republic of Kenya

SASA- South Africa School Act

SSZ- School Safe Zones

SMC- School Management Committee

UNESCO- United Nations Educational Social and Cultural Organization

UNICEF- United Nations International Children's Emergency Fund

WHO- World Health Organization

CHAPTER ONE

INTRODUCTION TO THE STUDY

1.0 Introduction

This chapter discusses the background of the study, statement of the problem, objectives of the study, research objectives, research questions, assumptions of the study, significance, justification, scope and limitation of the study, theoretical framework and operational definitions of the key terms used in the study.

1.1 Background of the Study.

School safety is a pre-condition for quality education. Physical facilities enhance teaching/ learning process which improves performance of a school. The facilities can be permanent or temporary. The schools should ensure that classrooms, dormitories, offices, kitchen, toilets and other physical structures are clean, well maintained, properly utilized and safe, (MOE Safety Manual, 2008). Safety of persons is a matter of concern to all in every part of the world.

Contrary to this, institutions of learning are experiencing serious cases of insecurity. In addition, in all over the world, there has been an upward trend in the number of school children dying or getting injured as a result of school violence, disasters and emergencies that could be avoided if safety policies in schools were adhered to.

sHowever, a number of countries worldwide have developed strategies in order to implement school safety. These strategies recognize the multi- dimensional causes of school safety problems and the need for preventive measures and long term plans that encourage partnership between schools and other stakeholders.

Moreover, the whole world is concerned about learners' safety and health in schools hence autonomous agencies like the World Health Organization (WHO), the United Nations Educational Scientific and Cultural Organization (UNESCO) and the United Nations International Children's Emergency Fund (UNICEF) work hand in hand in setting safety and health standards in schools. These bodies are concerned with supplying safe drinking water, fighting drug trafficking, making schools safe zones for learning and deal with special problems of child care in countries affected by war or other calamites.

The world conference on Education for All, convened in Jomtien (Thailand) in March (1990), had the aim of reviving the worlds' commitment to educating all its' citizens, and providing safety and health facilities for school going children. All geared towards attaining the millennium goals by providing adequate physical facilities in schools.

In 1996, donor countries committed themselves to the task of helping developing countries to ensure Universal primary education by the year 2015. UNESCO (2005), tried to tackle challenges that arose on the implementation of Free Primary Education, which included inadequate physical facilities in primary schools. It also observed that, the effective control of the flow of materials and equipments in schools was necessary

in all countries. It also noted that, maintenance, training and supervision of these facilities and equipments was equally important.

The developed countries for example, America, United Kingdom, and Europe place emphasis on the school safety. According to Bangle (1995), the physical environment of schools in USA is in peril as emphasized in a recent study by the National Centre for Educational statistics (NCES, 2000); the substandard conditions of facilities and inappropriateness of much school design may influence students' negative achievement. They have Federal Statutes with which school facilities must comply, for example Section 504 of the Rehabilitation Act of 1983, states that the physical facilities including classrooms, dormitories and playgrounds should be in conformance with the Uniform Federal Accessibility Standards (UFAS).Section 104. States;

> '*Each facility constructed shall be designed and constructed in such a manner that the facility is safe and accessible to the user. The constructions are built in accordance to TORT Law- which is the area of law relating to monetary or other compensation for injuries'*

Therefore, before a school is constructed in America, it is a requirement that TORT Liability Insurance be purchased and this requires school managements to create a safer and more secure environments for children by use of technology. According to department of education (2006) Poor building constructions such as inadequate ventilation, poor indoor air quality, noise, bad lighting, uncomfortable thermal conditions and overcrowding are challenges faced by schools in America. In China schools are required by law to take the responsibility of managing and protecting students in their premises. They are required by law, to buy liability accident insurance to compensate death and injuries that occur in the school premises, (Cavanagh, 2004).

However, in the United Kingdom (UK) the Educational School Premises Regulation stipulated minimum standards for school premises. Provision that is covered by this regulation include toilets facilities, fire, classrooms, staff rooms, weather protection, noise, lighting, heating, ventilation and water supply. Briely D. (1991), the workplace (Health, Safety and Welfare) Regulation of 1992 is applicable to all types of Educational establishment in the United Kingdom. The regulation applies to all maintained schools in England and Wales, including nursery, community, foundation and voluntary schools. UNICEF (1995) requires that all schools covered by the regulation adhere to the provision of standards for Education premises. All school sites, the condition of the premises should provide sufficient assurance as to the health, safety and welfare of all who are using the building. Good standards of hygiene should be maintained and sufficient space be provided.

Further, others studies indicate that, in French city, police authorities regularly co-ordinate with school security officials in order to promote school safety, (Briefly, D. 1991). South Africa has put relevant legislation laws and regulations in place aimed at protection of children. They advocate for the safety of environmental measures. Further, Republic of South Africa (1996), states that school physical facilities, including school buildings and grounds pose safety problems. According to Noquera (1996), advocates that, if effective measures to address the problems are not taken soon, support for public Education could be irreparably jeopardized. Moreover, Section 10 of the South Africa Schools Act (SASA) 1996 provides for the protection of learners against physical and

mental harm. The maintenance of school physical facilities including cleaning and security falls within the ambit of responsibilities of public schools governing body. Section 21a of the same Act gives the school governing body authority to control school property, building and grounds occupied by the school.

The Ministry of Education in Kenya, as in many other African countries, is responsible for ensuring that every school is provided with guidelines regarding designs and construction of the physical facilities. These standards are aimed at safeguarding all those who enter and use the facilities ROK (2001) .School safety policies in Kenya as indicated in circular No. G9/1/169 includes-;

- Head teacher should reside in school.
- Fire drills should be held at least twice every year.
- Emergency doors are created in dormitories and special rooms.
- Safety instructions are displayed in laboratories and workshops.
- Dormitory windows should open outwards and be without grills.
- Fire fighting equipments should be provided.
- Involvement of registered professionals in site planning, design, construction and maintenance of school buildings.
- Regular health inspection of premises and students.
- Classrooms should be built upwards from laboratories, kitchens and playing ground and their longer sides to run in east or west direction.
- Prevention of overcrowding in classrooms and dormitories.

- One toilet to be provided for every 30 students and clean water provided for students consumption.
- Clearly demarcated school grounds with proper fencing and secure gates.

In addition, a safe design for any building must have the following features based on an approved architectural design. There must be a provision of fire escape routes in all buildings, provisions must be made in each design to avert such disasters like lightning, storms, and floods where these are prevalent and firefighting equipment must be provided. Mbiti (2000) suggests that for those schools which cannot afford technical equipment, sand packets should be made available in strategic places.

In Kenya the standard measures that should be observed include size, position; structures of the different physical facilities. Safety manual (MOE, 2008) advocates that:

> *Storied houses should not exceed two floors. Classroom size be 8m by 6m, windows should not be grilled and should be easy to open from outside. The position of elevators, sockets, and electronic appliances should be beyond the children's reach. In addition the school grounds be well demarcated, fenced and with secure gates. Well lit and ventilated rooms and each block are fitted with serviced fire extinguishers. Sanitation facilities should be 20feet deep and 10m away from other buildings, clean and adequate that is 1 toilet for 30 pupils.*

Further the Church World Service partners with the local organizations, churches, businesses, MOE and other community groups so as to develop school safe zones. Today, the programme is working with ten piloted schools in Kenya, so as to transform them into productive learning environments to make them models of what all schools in Africa are expected to one day become. Their main aim is to have secure environments, where children can learn and play safely. The second aim is to have conducive environments

where teachers are well trained and have adequate materials for their classes. Lastly, is to have health environment where children can enjoy at least one nutritious meal a day. Kenya was chosen to carry out piloting in schools because of its commitment to Education and this was evident in 2003 when the government made primary education free This brought challenges, including overcrowded classrooms, inadequate school facilities, lack of sufficient learning materials and in adequate security to the learners, (UNESCO, 2005).

In one of the occasions, the education minister launched the Safety Standards Manual for schools at the Kenya Institute of Education (KIE) headquarters, and directed that all public schools be given 150,000 to 350,000 each to buy fire extinguishers/fighting machines. According to the MOE Safety Standard Manual (2008) specifications on the building of dormitories among other measures to prevent deaths in schools were discussed and every school was to set up a safety committee. The safety manual was aimed at assisting schools to achieve minimum standards of safety. The School Safe Zones manual was disseminated to some 18,000 primary schools and 4,500 secondary schools across the country.

According to Gicheru, (1998), the Endarasha incident where two boys were burned to death is an indication of school management bodies failing to adhere to the safety procedures. The media reports revealed that, there was congestion in the dormitories and the windows were fitted with grills and wire mesh yet the ministry of education outlawed in the safety manual. Simple directives that detailed door and window

specifications were first issued after the death of 67 boys in a fire tragedy at Kyanguli Secondary School in March 2001. There was a tragedy that relived memories of dormitory deaths. At Asumbi Girls primary boarding. Eight pupils burn to death as safety concern emerge. Windows were fitted with grills in the dormitory and their was delayed responses from security agency (www.standardmedia.co.ke24thaugust2012) . (In addition, the ministry of education introduced new rules to improve safety in schools, when students' protests rocked over 300 schools countrywide, which entailed burning of dormitories and destruction of property worth millions of shillings. Koech report (1999), a governmental commission of inquiry of Kenya's Education System attributed the declining standards of education in public schools to arise due to inadequate and unsustainable physical facilities.

Further, Olembo (1992), commented that the physical assets of the school are part of the schools' identity and nature which the public sees and understands first. It conveys the first impression about how effective the management of the school is. In addition, people coming to school are able to identify particular buildings like classrooms, toilets, dormitories, administration block among others. Musvosvi (1998) is in agreement, that school administration should liaise with MOE when planning to build a school because some government agencies have certain specification and building standard measures to be followed.

The Public Heath Act Chapter 242 of (1986), empowers the public health officers to inspect the physical facilities in an institution to ensure health and safety of the children. It also empowers the public health officers to close down any public institution which

does not meet the public health standards. The Public Health Act and Policy (1972), proposed the following basic standards to be observed in educational institutions.

> "*The buildings should be constructed in such a way that they do not pose any danger to the user and that the buildings should be spacious enough to avoid overcrowding. Buildings be adequately ventilated, classrooms and dormitories be well lighted. Open wells, dams and naked wires should be taken into account to avoid accidents. The spacing, doors, windows should be considered. A dormitory should have a door at each end and emergency door in the middle."*

Further, in a circular from the Nandi District County Council (2011) the county Mayor advocated that, all public and private schools should adhere to the laid safety and standard measures of different facilities. He directed that a structural plan for classrooms and dormitories was to be submitted to the council for inspection besides the Decker beds which were to be stacked not more than two each with at least 2m space between them. Despite the fact that most Kenyan schools are aware of the school safety measures most of the stipulated requirements have not been implemented. The above scenario can be linked to the many cases reported over media which are affecting the pupils security for example, the recent death of two students in Endarasha boys in Nyeri who were burnt in the dormitory while asleep, (Okendo, 2010).

According to the Education Act Cap 211 (1980) Section 15 1b on Registration states that:-

> *"The Minister shall cause the school to be provisionally registered for a period of eighteen months. If he is satisfied that the premises and the accommodation are suitable and adequate, with regard to the number, ages and fulfills the prescribed minimum requirements of health and safety and conforms with any building regulations for the time being in force under any written law". The act further states that; No primary school class should have more than 50 pupils.*

Section 19c states that:"

> *The Minister may make regulations with respect to conduct and management of schools and such regulations may prescribe minimum standards for the health and safety of public and for a satisfactory environment. For education standards to be attained by schools and designated as efficient the physical facilities for example school grounds, classrooms, sanitations, dormitories, water tanks, kitchen, play fields among other should be adequate and safe*".

According to R.O.K (2005), many public primary school buildings are in a state of poor maintenance characterized by lack of latrines that cannot meet the increasing number of pupils in schools. In addition, majority of infrastructure is generally in poor conditions due to lack of investment, poor construction standards and inadequate maintenance. This is in agreement with Nyakwara (2009), who observes that there is an acute shortage of physical facilities in Kenyan public primary schools which arose due to the influx of one million pupils who attended school in response to the government's provision of free primary education. He also blames the government for lack of proper guidelines to be used in the implementation of the physical facilities safety policy in schools.

Sifuna (1990) notes that the government's effort to support Primary Education through abolished school fees has caused problems in the development of school physical facilities like the classrooms for they do not provide enough funds for the construction. Ironically, most schools in urban centers do not follow the safety and health standard measures while constructing their buildings. According to Wachiri (2001) it is clear that some schools have more than two storeys, small or no field for play and the buildings have been located in very noisy environments. In addition, fire, wind blowing off roofs,

or floods sweeping classrooms has been experienced due to lack of training, awareness and non implementation of the required policies.

In addition, studies and reports from Wachiri (2001) indicate that, Mukuru-Kayaba primary school is a classic case of an environmentally unsafe and unhealthy school in Nairobi. The school is built on a 1.40 acre and has a population of over 1500 pupils. The classrooms are crowded by 60 pupils, the floors have potholes, and the classrooms lack proper lighting and ventilation systems. Besides there is excessive noise, poor sanitation, lack of tree shades, flooded playground, violent street children and poorly maintained buildings among others.

In Nandi Central, there have been a number of cases reported to the D.E.O's offices related to accidents, deaths and injuries in schools, resulting from the physical facilities. A vivid example was that of a child who fell into a pit latrine and this was an indicator that most schools have not taken any safety measures to prevent such accidents. In addition the media reports by Ochieng (2011) states that more than 300 students at Kapchepsir primary in Nandi County are studying in risky classrooms which have developed cracks since 1998 and are in a state of collapsing. Besides, the School has been built in a swampy area and majority of the permanent buildings in the school have been condemned by the Ministry of Health, Physical Planners and that of Education to be insecure for the users. Despite the danger and insecurity in place the school committees are slow to relocate the school to a safer site which is assign of un-willingness to implement the safety policy in schools.

1.2 Statement of the Problem.

The government's attempt to provide free primary education in 2003 was welcomed by an influx of learners to the few available public primary schools. As a result of this, there was need to strengthen the implementation of the safety policy in order to ensure that the swelling numbers of pupils in schools are not at risk. However, despite the safety policy in place, there are still reported cases of insecurity in public primary schools. The safety problems have posed a chain of challenges that require attention so as to avoid the same being repeated in the future.

Moreover, there have been occurrences of accidents, injuries, deaths, and property destroyed in schools. Most of the cases have been encountered in classrooms, playgrounds, toilets, dormitories among others. Cases of fires, wind blowing roofs off, floods sweeping classrooms and lightning strikes are some of the common incidences of insecurity encountered in public primary schools country wide. The above issues have raised concern among the stakeholders, MOE, policy makers and the community at large.

Table 1.1: Incidence of insecurity

NANDI COUNTY.		
DISTRICT	NO. OF SCHOOL	INCIDENCE OF INSECURITY
Nandi East	87	4
Nandi South	137	7
Nandi Central	152	10
Nandi North	172	8
Tindiret	92	6

Source: D.E.O's Office Nandi County

The statistics indicate clearly that there are more incidences of insecurity emanating from the physical facilities in Nandi Central as compared to other Districts in the county.

According to a study by Susan et al (2000), investigating school playground safety practices it was revealed that, little attention was given to provide safe playground in schools. In addition, Kipngeno & Benjamin (2007) of Moi University carried out a research on safety awareness and preparedness in secondary schools. Their findings revealed that, there were no safety awareness programs and teachers and students were poorly prepared to respond to accidents.

Studies have however been done in secondary schools and at University level therefore leaving a gap in the primary section. This study therefore sought, to investigate the challenges of the implementation of the physical facilities of safety policy in public primary schools in Nandi Central District.

1.3 Purpose of the Study

The purpose of this study was to identify challenges facing the implementation of the physical facilities safety policy in public primary schools in Nandi Central District.

1.4 Research Objectives.

1.4.1 The main research objective is:-

To investigate challenges of the implementation of the physical facilities safety policy in public primary schools in Nandi Central District.

The specific objectives are:-

1) To establish cases of insecurity posed by the physical facilities in public primary schools in Nandi Central District.
2) To assess the degree to which schools adhere to the laid down physical facilities safety policy in public primary schools in Nandi Central District..
3) To evaluate the methods applied to ensure the safety of learners in public primary schools in Nandi Central District.
4) To determine the roles of Head teachers in ensuring the implementation of the physical facilities safety policy in public primary schools in Nandi Central District.

1.5 Research questions.

The main research question is:-

What are the challenges facing the implementation of the physical facilities safety policy in public primary schools?

The specific research questions are:-

1. What cases of insecurity are posed by the physical facilities in public primary schools in Nandi Central District?
2. To what degree do the schools adhere to the laid down physical facilities safety policy in public primary schools in Nandi Central District?
3. What are the methods applied to ensure the safety of learners in public primary schools in Nandi Central District?
4. What are the roles of Head teachers in ensuring the implementation of the physical facilities safety policy in public primary schools in Nandi Central District?

1.6 Assumptions of the Study

This study took into account the following assumptions:-

1. That all the public primary schools were aware of the required safety standard measures of the physical facilities.
2. That teachers were qualified and were in a position to provide the necessary information about the study and gave true information about the safety standard measures in their schools.
3. That the findings and recommendations of the study would be considered useful by the Ministry of Education, the school administration and all stake-holders in order to improve the current physical facilities safety policy. In addition they will put in place methods, rules and regulations that will make schools safe zones for learning.

1.7 Significance of the Study

The study is significant in that; the findings will help public primary schools management and other Education stakeholders to adopt the safety standard measures on physical facilities in their schools. In addition the challenges influencing the implementation of safety policy will be dealt with accordingly.

Moreover, the study will be useful to policy makers and education so as to come up with strategies aimed at making the Education system responsive to modern challenges and needs of the society. The recommendations arising from empirical findings of the study are useful to the ministry of education officials and policy makers in making adjustments that promote the implementation of school safety policy in place.

Lastly the study contributes knowledge on safety measures in schools to other scholars, researchers and different institutions interested in carrying out the same research.

1.8 Justification of the Study

There has been high concern by the educators, ministry of education and political leaders in the country on the alarming reports of cases of accidents, injuries, destructions of property and even deaths arising in schools across the country as a result of lack of adherence to the required safety standard measures of the physical facilities.

However, issues of non conformity do not only affect Nandi District but many cases have been reported all over the world regarding the way safety issues are handled in schools. Moreover series of incidences of classrooms collapsing, wind blowing off the roofs, fire outbreaks, congestion in classes and dormitories have been rampant.

In relation to the above during the World day for safety and health for occupational workers, the chairman for occupational safety and health (NACOSH), Dr. Abdullahi Adan (2010), commented that; ‘safety and health culture needs to be nurtured from the early age, so that by the time one enters the working age bracket, the person should have developed values and ethics that position him/her as one who perceives prevention of injuries as being of the highest priority in all their daily activities.’

It is therefore evident that, the safety measures play a crucial role in the primary level. Moreover, the study was proposed because not many studies have dealt with safety standard measures in the district and especially in public primary schools of Nandi Central. The study is significant in that it came up with workable recommendations which can be used to promote adherence to the safety policy in place.

1.9 Scope and Limitation of the Study

1.9.1 Scope of the Study

The study was basically concerned with assessing the state of various physical facilities with regard to the safety of learners in public primary schools. In addition, the safety standard measures is a wide area with different disciplines like health and hygiene safety, road safety, safety against drugs and substance abuse, child abuse and transportation among others. As a result of this, the research could not be done in a single study and therefore the present study was to identify the challenges facing the implementation of the physical facilities policy. Moreover, since the study was carried out in Nandi Central District, covering all public primary schools would not be possible therefore the study restricted itself only to a representative sample of 45 schools out of 152 and this was 30% of all the public primary schools. The respondents were only the head teachers, teachers in charge of the school physical facilities, the District Education representative and parent representatives.

1.9 .2 Limitations of the Study

As the study dealt with the challenges in the implementation of the physical facilities safety policy, some schools were not willing to disclose the current conditions of the different physical facilities in their schools however, persuasions were used and assurance that the findings arising from it would only be used for academic purposes only. In addition, all the head teachers in Nandi district needed to be under study but this would not work due to time, finance, and other challenges. Nonetheless, the sampled schools were representative enough to provide for findings that were used for

generalizations and conclusions regarding the level of adherence to the safety policy in the whole district. As the study was based on Nandi Central District, the findings may not allow for generalization in other districts. However, it is possible to make some limited generalizations to cover the country because the safety policy is operational in all public primary schools.

1.10 The Theoretical Framework

This study was guided by the Domino Theory formulated by H.W. Heinrich (2002).

The domino theory was heavily oriented towards the human approach. He carried out a detailed research into the cause of accidents and found out that approximately 88% of them were as a result of unsafe acts committed by human beings whereas the remaining 12% were caused by technological factors. From these observations, he developed the domino theory. Heinrich considered that there were a number of factors that contributed to accidents. These could be likened to a number of dominoes standing in a row. If one is knocked down the remainder also falls (figure 1.1). However, when one is removed from the dominoes, the possibility of a loss occurring is reduced.

According to Heinrich (2002), there are four dominoes that lead to an accident. These dominos include: -The social environment, the fault of the person, the unsafe act and the injury itself as shown in figure (1.1) below.

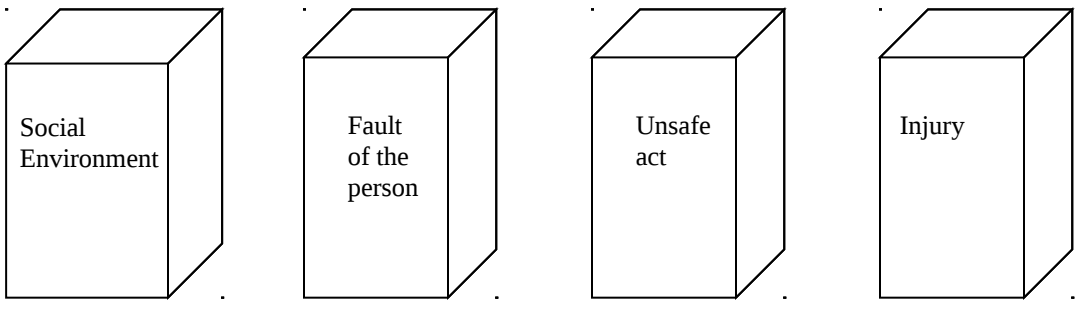


Figure 1.1 – The Domino Theory

Source: Risk Management module Unit 3 topic 22 Safety theories.

Social environment – Individuals are brought up in a particular environment for example the school environment where different physical facilities are found. However, some people have little concern for their own or other people's safety and give it little interest.

The fault of the person – This means that the person has tendencies to enter into unsafe situations perhaps because he or she has not absorbed training or education given on its dangers for example dangers of electricity, open pits, swimming pools etc. Nevertheless, the child might not be aware that he or she is carrying out an unsafe act.

The unsafe act – This is the actual act that leads to the injury for instance in a school setup exposing learners to use physical facilities that are not up to the required safety standards.

The injury itself – This is an injury to the person or destruction of the property.

In relation to the above, occurrences of accidents, injuries and destructions of property always happen in schools and these should be reduced or minimized. This should be done by removing the unsafe act. Heinrich considered that the best domino to be removed is the unsafe act.

Training and sensitizing of all the school stakeholders should be done so as to make the school a safe environment for learning. Rules, plans and measures should be taken so as to assure safety of the physical facilities being used in schools. Although steps could be taken to reduce the effect of the accident, it is best to prevent it from occurring altogether. The theory provides school management with a framework in order to consider what action to be taken after a risk has been identified and this will help them understand the problem and come up with a solution. The safety factor is paramount in all aspects of human life. In the school situation for example, the safety policy entails practical measures in place which minimize injuries arising from structural negligence.

Heinrich's domino theory therefore formed the theoretical framework for the study on challenges influencing the implementation of the physical facilities safety policy in public primary schools of Nandi Central District. The theory can be used regardless of the type of risk for example fires, theft and all types of accidents emanating from the physical facilities.

In a school set up we have different dominoes. The classrooms, dormitories, dining halls, and play grounds among others, are the physical facilities that form the entire social environment which is a school. Factors like finance, poor management, awareness, and sensitization on school safety, maintaining and repairing physical facilities and technology will pose danger to those who are using them and these will lead to occurrences like accidents, injuries, deaths, fire outbreaks, and wind blowing roofs in

school form the last dominoes .In regard to this, a school should observe the required safety standard measures policy so as to make school a safe zone for learning.

1.11 Operational Definition of Terms

1. **Accident –** something that happens unexpectedly and is not planned for in advance, accidents in schools are caused by certain factors that can be prevented though safety measures.
2. **Challenges –** Problems encountered in schools if the right safety standard measures are not followed.
3. **Head teachers –** refers to heads of institutions for example headmasters, headmistresses or principals in the school under investigation.
4. **Implementation**- it is the process of putting into practice an idea, program me or set of activities new to the people attempting to bring about change.
5. **Measure** – an official action that is done in order to achieve a particular aim i.e. safety or security measures.
6. **Physical facilities** – the structure used to enhance learning such as classrooms, dormitories, toilets, office, and desks among others.
7. **Policy**- Is a strategy undertaken to solve a problem.
8. **School safety** – is all measures undertaken by learners, staff, parent and other stakeholders to either minimize or eliminate risks conditions or threats that may cause accidents, body injury as well as emotional and physical problems.
9. **Standard**- level of quality achievement in relation to safe physical facilities in schools.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.0 Introduction.

This chapter reviewed literature relevant to the study. It targeted at pinpointing the studies that have been carried out concerning factors affecting the implementation of the physical facilities policy in public primary schools. The sources of literature included: Textbooks, journals, theses, newspapers, periodicals, policy documents, Education Act
s and magazines. This chapter is divided into the following sub themes; Cases of insecurity posed by the physical facilities in schools, challenges influencing the implementation of the physical facilities. Safety policy in schools in different countries; methods applied to ensure safety, the degree to which schools adhere to the laid down safety policies and the head teachers' roles in ensuring the implementation of the physical facilities safety policy. The last part presents a summary of past studies in the area.

2.1 Cases of Insecurity Posed by the Physical Facilities in Schools

The problem of insecurity posed by the physical facilities caused to learners is no longer strange in public schools. Time and again there are media reports of accidents and injuries to the learners while they are in school. All these are emanating from the different physical facilities in the schools.

Cavanagh (2004), states that implementation of school safety and security policies in European countries has been influenced by school tragedies. In Europe 320 children, teachers and parents died at school number one in Belgium as a result of failure to

provide armed military to guard schools. Reuters (2004), reported Indian school tragedy where 90 pupils died as a result of fire; the school building had one exit door and was overcrowded. Emergency doors and fire fighting equipments were missing.

In India there was a fire tragedy that left 400 students death this was attributed to failure by Regulatory Authorities to enforce safety norms. There was a blast in China in 2001 where a storied building collapsed on children and this was as a result of lack of adherence to the safety measures. The school physical facilities, including school building and grounds pose safety problems, (Sowetan, 1996). Insecurity of learners in school leads to fundamental violation of the social contexts between the school and the community.

In Kenya there still exist incidences of injuries, death and loss of property in public schools because of lack of compliance with the school safety policies. For example Okendo (2010), reported that two boys were burnt to death at Endarasha School because of lack of adherence to the safety procedures. There was congestion in the dormitories and windows fitted with grills and wire mesh. In addition the absence of fighting equipments and emergency exits led to high death in schools.

Teaching and learning cannot take place in an unsafe environment. To create safe school environment posses great challenges to school management. It is stipulated in the Bill of rights Act section (24) that every person has the right to one environment that is not

detrimental to his health or well being. These rights apply to learners and protect them from being exposed to harmful environments while in schools.

Characteristics of a Safe School

A safe school is where all who are using the different physical facilities feel secure and comfortable being in the school. Taylor (2000) defines school safety as an environment which is not detrimental to one's health or well being. A safe school should have adequate and well maintained facilities such as toilets, classrooms and school grounds which are clearly demarcated with proper fencing and school gate, (UNICEF Kenya, 2010).

Marrison, (1994), asserts that characteristics that are evident in a safe school and friendly schools are effective when there is quality leadership. A solution focused rather than a problem focused approach, policies and plans that aim to feel safe and valued, and a range of strategies across all levels of operation, preventive measures, early intervention and case management are characteristics of a safe and friendly school. Koech (1999), posits that school safety encompasses the total learning environment, including learners, classrooms, educators, parents and the community. This view expounds what school safety entails.

Squelch (1995), defines a safe school as one that is free from danger and possible harm , where non – educators, educators and learners can work. He also propounds that a safe school is characterized by certain physical aspects such as secure wall ,

fencing and gates, buildings that are in good state of repair and well maintained school grounds .

Shaw (2002), recommends that attention should be given to hallways, stairways and verandas where learners walk to and from classes. Earthman (2001), is in agreement that they link certain school environmental factors to improved students performance, for example ventilation, thermal comfort, classroom lightning and natural lightning . His study suggests that improvement in educational outcomes can be supported through provision of quality facilities followed by the maintenance of the same. Grainger, (1994), in their research on school quality in Africa , found that a basic quality of school facilities contributed to quality in terms of students learning. In this context , a basic school quality will include enough classrooms, sufficient desks, chalkboard and storage facilities. Mbiti (2002) is in agreement that, quality of education in primary school resides with school physical facilities among other factors.

According to Share, et al (2006), there are four major sources of vulnerability to the safety of schools setting; first is the physical layout of the school building and supervision/ use of school space, secondly is the administrative teaching and management of school; thirdly is the characteristics of the surrounding neighbors served by the school and fourth is the characteristics of the students enrolled in the school.

When parents send their children to school they do so under the assumption that the students will return home safely at the end of the day. School management is obligated to provide an environment which is conducive for learning. School officials must regularly monitor their facilities for emerging dangers such as accident and deaths. Reasonable precautions should be taken to protect the safety of all persons who enter school facilities or grounds, (UNICEF-Kenya, 2010). Abraham Maslow (1968) outlined human needs in a hierarchical form of eight levels: level 1 and 2 at the bottom are very important as far as safety and health measures are concern. Level 1 are the physiological needs which are good for growth and development where one has to get enough food, drink, sleep, play among others. The environment must be conducive and free from threatening conditions.

Level 2 emphasizes on safety and security: - all people in school environment including pupils, teachers, non-teaching staff should feel they are safe and secure. No much learning will go on if life and security is threatened. A school should be a safe place in the community. An attractive physical environment influences people's attitudes, behaviors and disposition. Therefore teachers, students, workers need this kind of environment. Figure 2.1 illustrates the outcome considered to be evidence of a school that has developed strategies to create safe and friendly environment.

STUDENTS

- Increased student participation
- High attendance rate
- Low suspension and exclusion
- Improved literacy and numeracy achievement
- Positive perception of schooling
- Enhanced perception of the safe and friendly place

STAFF

- Improved morals
- Less absenteeism
- Greater participation in decision making
- Positive school perception
- Greater job satisfaction
- Pride in their school and community

PARENTS

- Positive perceptions of schooling
- Enhanced perceptions of the school as a safe and friendly place
- Increased participation and a feeling that their participation is encouraged
- Belief that the school community with parents in a timely and helpful name

ADMINISTRATION

- Provision of quality leadership
- Modeling of positive communication
- Encouragement of school community participation in decision making
- Understanding of and response to school community wishes

WIDER COMMUNITY

- Positive perception of the school
- Positive media reports and public relations campaigns
- Partnership are formed with other agencies and community groups

Figure 2.1 Outcome Characteristics of a Safe and Friendly School.

Source: Griffiths and Weatherilt. (2001)

Safety is of great importance to whole school stakeholders including, students, teachers administration and the wider community. Strategies across all levels of operation,

preventive measures, early interventions and case management should be put in place. Tanner and Hecking (2006) advocates for group decisions to be put in place, so as to enable the school safety succeed. According to Okumbe (2007) is in agreement that group decision can impede the speed at which some important decision can be implemented. However Dierkx (2000) refers to group decision making as an empowerment, which is defined as involving people in their work through a process of inclusion. Empowerment leads to innovation, commitment, continuous improvement, transformation of personnel and better services in schools, like the implementation of the school safety policies.

A problem is solved by a sequence of action that reduces the difference between the initial situation and the goal. Grainger (1994) adds that, to solve problems requires an individual or group to make some initiatives even risk by first identifying the problem, framing it, generating on a solution and taking action that alters what routinely occurs in order to solve the problem.

During the Dakar World Education Forum in Senegal 2000, participants stressed the importance of building safe, health and environmentally sound Educational physical facilities for African children so as to overcome poverty, improve their lives and change their communities. There is a toolkit that provides useful procedures that make schools and classrooms more welcoming and lively places for learning for All children and teachers, teacher – friendly, parent – friendly and community – friendly, (UNESCO, 2004).

2.2 Methods applied to ensure safety of learners in schools

(i) Physical Facilities Standard Measures, Rules and Regulations

The USA and UK physical facilities in schools should be repaired, cleaned and maintained. School property upkeep and maintenance policies and procedure may differ from one institution to another. Each school head must ensure that school safety standards are met, (Reuters 2004).

In USA policies and practices are affected by addressing needs of the students, school personnel and community. The United States Department of Education (USDE) requires safety policies in schools to be strictly enforced. In view of threats posed by terrorism, drug related violence, proliferation of firearms and natural typhoons floods and hurricanes. Most American public schools have zero-tolerance policies on activities that are likely to compromise school safety.

(ii) Fire Safety Standards

The standards on fire safety in school facilities give focus primarily on preventing personal injury or death of occupants as well as minimizing property damage and destruction. Security in schools should be put in place by avoiding overcrowding of students and other members of the school community must know the spots where firefighting equipment is located, learn how to use them as well as know what type of alarm signals to expect in case of a fire outbreak in school, (Alexander K.& Alexander M. 1992).

There are several policies that govern the provision of education in Kenya. The head teacher should be conversant with the relevant education commission and reports in these

case circulars on safety from MOE, providing guidelines on policy and coming up with Child Friendly Schools UNICEF (2010). The guidelines for registration of primary schools depends on the population of the catchment's area, space utilization and space a requirement for the different physical facilities, (MOE, 1999).

In addition (Reuters, 2004), is in agreement that fire can be caused by faulty electrical fitting, keeping of inflammable materials and substance in premises, careless handling and use of electrical appliances. Other cases include lightning and falling trees. This can be avoided by installing lightning arresters on buildings. Where there is no wind breakers, school buildings have been destroyed by wind. Dangers such as these can be minimized by growing trees around the school compound.

(iii) Security fencing

For safety purpose, schools should install security fencing around their compounds in order to keep out intruders and other unwanted visitors whose presence may jeopardize the security of those in school community, (Dierkx, 2000).

(iv) Security personnel

The employees serving as security personnel in learning institutions must be trained in security details. Many schools, particularly those located in rural areas normally employ watchmen and nurses who have little or no basic knowledge on security matters. Such employees should be given in-service training in this sensitive and vital area of safety, (UNESCO, 2004).

(v) Fire and burglary insurance

Schools should take insurance cover against fire and burglary for protection of human life and property. The buildings should not be used before they are insured against fire, (K.I.E, 2002).

(vi) Play ground

Play is integral component in the physical and mental development of the child, (Millar 1988). Children play is critical to psychomotor, intellectual and social development. The field should be properly maintained for various sporting activities and other relevant places. Susan et al (2006) identified that little attention is being given to provide safe playground environment and there is need for supervision training. Therefore space, well leveled grounds and time should be provided for the children.

2.3 Adherence to the laid down safety standards for Education Premises in USA, UK, England and Kenya.

The Education School Premises Regulations (1999) stipulate minimum standards for school premises. School and colleges are also covered by the workplace (Health safety and Welfare) Regulations (1992), which outline provisions that must be made in relation to the work environment. Provisions that are covered by these regulations include: toilet facilities, fire, staffrooms, weather protection, noise, lighting, heating, temperature, ventilation and water supply.

(i) General Health, Safety and Welfare

For all school or college sites, the condition of the premises should provide sufficient assurance as to the health, safety and welfare of all who are using the building. According to Share & Furlong, (2006) good standards of hygiene should be maintained. There should also be sufficient space so that overcrowding can be avoided.

(ii) Toilet Facilities

The Education (school premises) Regulations further stipulate that, there should be at least one toilet for every 10 pupils under five years and one for every 20 pupils over that age. In special schools, the minimum provision is one toilet for every 10 pupils, irrespective of age. Staff toilets must be separate from those for pupils whilst the number of toilets for staff must be adequate.

(iii) Staffrooms and Restrooms

According to the Education (school premises) Regulations, every school (except pupil referral units) must have a staff room, separate from teaching accommodation, for teachers to use for work and for social purposes. Whilst the size of the staff room is not specified, it is implied that it should be reasonable. Under the workplace (Health, Safety and Welfare) Regulations, employers must provide facilities for rest and to eat meals (where meals are regularly eaten). Eating facilities should include the facility to obtain or prepare hot drinks. It is possible for the room used for eating facilities to double up as a rest area, but the space should be large for the number of workers likely to use it at any one time.

(iv) Medical rooms

The Education School Premises Regulations require every school to have a room for medical or dental examinations, and the care of sick or injured pupils. Such a room must be readily accessible, contain a wash basin and be reasonably near a toilet.

(v) Noise / acoustics

Noise is to be expected and even desired in environments for children. Learning environment requires quietness. Classrooms are expected to provide good listening and communication conditions to the children. Noises are destructors to the teaching /learning process. Markets, industries and highways should be away from learners. Each room in a school building must have acoustic conditions and insulation against disturbance by noise appropriate to its normal use according to the Education (school premises) Regulations. Other legislation requires employers to carry out assessment of the risk created by noise exposure in the workplace, (USDE, 2004).

(vi) Classrooms

Proper building orientation and classrooms, roofs, floors and window size need consideration in the building design. Nyakwara (2009) notes that pupils attending government-owned schools faced inequality in access to child friendly classrooms as per class size, floors and roofs and the physical space.

In the African News (2008) on the web, Joyce Wangui narrates experience of Kiangage primary school, where several pupils had been attacked by jiggers because the classroom floors were in a bad state. However the anti-jigger campaign (Ahadi Kenya Initiative) have visited many public primary schools in parts of the country so as to fight the jigger

menace. The roofs of most schools have no ceiling and when it rains classes are stopped. This shows necessary attention or adherence to the required safety measures were not given to architectural designs and maintenance. Cracks were a result of poor building structure or not using the right ratio of building materials.

According to G.O.K (2003), the government specification for classroom size is 7.5 m×6.0 m to accommodate 30 pupils. The main concern of the classroom physical space include; safety and accessibility to learning, arrangement of furniture and the teacher use of physical resources. However, following the introduction of F.P.E in the year 2003 it became necessary to increase the number of pupils in classroom to 40-45 to between 60-70 pupils per class.

2. 4 Head teachers' roles in implementing the Physical Facilities Safety Policies in Schools.

The head teachers are managers of the schools and are involved in implementing safety policies. They are also involved in the management and maintenance of the physical facilities, monitoring and evaluating and promoting a Safe School zone. According to Briely (1991), head teachers should have positive and responsible attitude to safety in school. In addition to his duty, is supposed to manage, teach and educate, is also required to provide physical, educational and mental safety to the learners. Bray and Ooshuizen (1999), concur with Briely that, the head teachers should provide proper supervision, instructions and control to learners so as to ensure their safety. It is the legal duty and responsibility of the school managers to provide sufficient supervision, and to safeguard learners from any insecurity or danger.

However the amount and degree of supervision depend on learners' age, activity being carried and the environment where the activity is taking place, (Handbook, 2007). The head teachers are expected to acts as a prudent father of the family, because in his status and position, is delegated to act in the place of the parent (in *loco* Parentis) Alexander & Alexander (1992). Therefore it is the role of the head teachers to provide a safe and conducive environment for learning. The challenges being faced in the implementation process should not only be handled by the head teachers. All stakeholders should co-operate and work as a team so as to ensure school safety. Schools alone cannot function as a panacea so as to solve the different challenges, (Furlong & Morrison, 1994).

The school management board should create mechanism and procedures that ensure stakeholders are conversant with measures needed to prevent occurrences of disasters and steps required to reduce the impact. Olembo (1992) posits that, facilities management is an integral part of the overall management of the school. The actualization of the goals and objectives of education require the provision, maximum utilization and appropriate management of the facilities (UNESCO, 2008). School managers should carry comprehensive assessment of the facilities to determine areas of need. They should also adopt modern methods of technology so as to ensure safety in schools, (New York Science Journal 2008).

Further, MOE (1999) is in agreement with Olembo that the facilities management is a process that ensures those buildings and other technical systems support the operations of

an organization. The International Facilities Management Association (2002), described facilities management as the practice of co-ordination of the physical workplace with the people and the work of the organization. In addition, school facilities management is the application of scientific methods in the planning, organizing decision making, co-ordination and controlling of the physical environment of learning with the aim of actualization of Educational goals and objectives. In the context of the physical facilities this will involve selection of site for establishment of new school, design and construction for instance grounds, renovation and maintenance of old plants.

Facility management plan should give meaning to the educational philosophy in an institution. According to the planning guide for maintaining school facilities (2003), facility audit is good inventory of school facilities that provides a standard method of establishing baseline information about the components, policies and procedure of a new existing facility. It provides information on the status of the school facilities. This is carried out by assessing buildings, grounds, and equipments. Shaw (2002) is in agreement that, supervision and facility audit are important to the schools managers because it helps planners, managers and staff to know what is available, maintenance needs and location, and also provides facts not guess work in maintaining and improving the school facilities.

UNICEF Kenya (2010) outlined the stages in facilities management as: analysis stage, solution stage and lastly implementation stages which completes the strategy development process through the establishment of an implementable plan that

incorporates the key elements of procurement, training and communication. Regarding the physical facility safety the above stages are necessary for the success of the implementation of the physical facilities safety policy. The Education Standards Regulation-Legal Notice 106/1968, states that the head teachers are expected to be familiar with the regulations and standards related to size of classes. The standards cover the quality of the buildings, playgrounds, equipments, and general safety of the school.

2.4.1 Management of the Physical Facilities.

According to the School Management Guide (1999), management is the process of designing, developing and effecting organizational objectives and resources so as to achieve the predetermined organizational goals. This concurs with Earthman (2001) that, actualization of goals and objectives are obtained through management of the physical facilities in schools. Management is the role of head teachers in a school set up.

Educational management function is to see sound policies, goals, and objectives formulated in schools and objectives achieved. Educational manager should ensure policies and objectives of the school are clearly stipulated and well known to both the occupants and the community, in these case physical facilities safety policy, (Okumbe, 2007).

Moreover a sense of ownership for the school property should be instilled as an attitude in every member of the school community, a lot of money which would otherwise be spent on replacement and repair can be saved and such savings can be used in other areas of development in school. According to Mbiti (2000), the major purpose of maintaining

high standards of up keep of school property is to make sure that the place is habitable, safe, and aesthetically appealing as a teaching and learning environment. Therefore school physical facilities should be well managed by the head teachers so as to make them safe for the learners.

In addition, UNESCO (2006) in administration and management of ECDE centers, states that regulation require that every centre be registered and should meet the required standard measures. The procedures include legal requirements which entailed land acquisition and building of centre facilities. The Standard Guidelines for Kenya (2006) advocates the following conditions to be observed when building ECDE centre facilities. Classrooms should be standard size of 8m x 6m, be well ventilated, have enough light, proper windows and doors which are lockable in good floors appropriate for children with special needs.

In addition, furniture for children and teachers should be appropriate, attractive and safe. Play ground should be big enough to allow children to move freely. The toilets should be adequate, be separate for children and teachers, boys and girls and not less than 6 or 20 feet deep and 15m away from the bore hole, and have safe floors. Therefore, it is the head teacher's role to ensure that, the regulations and required safety measures are adhered to when constructing the different physical facilities in the schools.

Proper up keep of school facilities signifies the sense of orderliness, care and the level of attention given by the administration. As a matter of fact, attractive facilities portray a

positive image on the part of the head teacher while the converse is equally true. A clean school compound with well maintained buildings and properly trimmed hedges is a clear indication that the institution has both capable and visionary manager, (Taylor, 2000).

2.4.2 Maintenance of the physical facilities.

The concept of maintenance means that school facilities and equipment require constant care and attention. According to Educational Handbook (2006-2007), whenever signs of wear and tear appear funds should be there so as to be used for maintenance in primary schools which do not have enough funds to employ grounds staff. They depend on class teachers, head teachers and school committee to co-ordinate the maintenance procedure. Close attention must be given to specific areas which constitute the totality of school facilities and the impact such facilities have for the children enrolled in the school. These facilities include grounds, classrooms, offices and toilets.

The head teacher should set up and follow proper management and administrative procedures so as to utilize them properly and ensure regular maintenances. In addition, the facilities should be regulated under the statutory requirement with the current law where building regulation must be adhered to, (Educational Standard Buildings and Public health act -1972).

The implementation of Health and Safety at Work Act (HSAWA, 1996) advocates that, it is the shared responsibilities of the ministry, school committee, head teachers and head of departments to work together in making sure school safety is implemented. The school management should realize that they are responsible for health and safety of all workers

and students at their school and therefore liable for any injuries caused on their school premises.

There is an urgent need for schools to make greater efforts to educate and train teachers and students to safeguard their own personal safety and to prevent accidents in school premises. Accidents that have occurred recently relating to fires, sports injuries or slips on slippery surfaces highlight the need for school managers to improve their efforts in the promotion of students' safety. They are leaders of their schools in the formulation and implementation of the safety policy in schools, (Assessment report, 2005).

According to OHS relevant rules and procedures should be displayed on school notice boards, laboratories and other special rooms. Notices should be put in high risk areas to prevent these accidents from happening for example slippery floor, open wells. School safety programmes should aim to inculcate in students habits and skills which will ensure and promote their safety when using the facilities.

2.4.3 Problems and Issues in Facilities Management

The commonwealth secretariat (1991), stipulates that, most fundamental problems in facilities management is lack of Policy guidelines for infrastructural development in schools. Most schools have inadequate physical facilities because the Government has failed to establish policy directive on minimum standards in relation to school physical facilities.

According to the 21st Century Fund (2005), policy agenda should entail increase in public participation in facilities planning and maintenance. The facilities management should be in line with laid down rules and regulations derived from overall policy guideline. Second challenge is management practices. Most managers in schools lack knowledge of management process and some who poses the knowledge fail to put it into practical use in the management of the schools. School facilities management requires intermixture of experts in different areas. One should have skills and knowledge to assemble and utilize the available resources for efficient facilities management. The third challenge is finances: - inadequate funds are always a problem for managers in all organization. It's the responsibility of the manager to look for alternative means of sourcing funds to be used in the different physical facilities.

Oosthuize and Van (1994) are of the view that, every school needs a principal who is committed in the administrative leadership and support for instance the physical facilities safety policy implementation process. It will be difficult to effect broad-based changes when the leaders are to determined in their work. Grainger (1994) reviewed the evidence of a principal's contribution to school effectiveness in providing safety. They concluded that principals exercise a measurable effect on schooling effectiveness and students achievements.

2.5 Challenges Influencing the Implementation of Safety Procedures

These are constraints that hinder success of set objectives. Earthman (2001) notes that Financial constraints, lack of training on safety measures , lack of supervision, lack of awareness, lack of knowledge and skills, lack of government directives, lack of

community involvement and poor implementation strategies are challenges that influence implementation process in schools.

UNESCO (2006) is in agreement that, to formulate and implement a policy is faced with certain challenges for instance lack of adequate skills and knowledge among innovators in the formulation of school safety policies, lack of support and management, history of non-implementation of past Education reforms and poor change implementation strategies. The factors discussed above are evident to be some of the challenges that affect the implementation of the school safety policy in the public schools.

Further according to R.O.K (2005), lack of finance by the government, which are to be used in the implementation of the safety policy are a problem. Constructing the physical facilities and in-servicing the staffs on school safety require money. Tanner and Hacking (2006) are also in agreement that poor management is another challenge. For a success of anything there should be proper management of the physical facilities in the school under proper supervision by the school administrator. In addition, lack of awareness training and sensitization on the issues that relate to safety in schools to all the stakeholders is a challenge.

Mbiti (2000) argues that, building and maintaining of the already existing physical facilities are very expensive, so most administrators opt to cheaper building materials which are sub-standard and these are also a threat as far as school safety is concern. Lack

of use of modern technology as a method of management of facilities in schools influence the implementation process of safety in most schools.

However, UNESCO (1986) reports says that, many countries have a perennial shortage of classrooms, and in urban areas, often more than 55 pupils are crammed into rooms built for half that number . Eshiwani (1993) observes that, school performance is affected by the physical facilities. The presence or absence of adequate physical facilities distinguishes between high and low achieving schools.

According to (ROK, 2002), the major challenges of education have been rapid enrolment which is not matching the available physical facilities. Grainger (1994), observe that schools face problems of facilities such as inadequate and badly constructed building and poor management and maintenance skills due to lack of training. Further, ROK (2002),notes that most head teachers are lacking modern management skills, a problem that contributes to the failure of implementing the physical safety policy in public primary schools. Koech, (1999) is in agreement with Grainger, he points out that declining standard in primary Education is as a result of inadequate and unsustainable physical facilities.

UNESCO (2002) noted that; maintenance, training on use and evaluation of these facilities is very important. Assessment report (2000), WHO and UNICEF outlined the following factors influencing facilities implementation. They include: financial difficulties, institutional problems, inadequate human resources, lack of sector co-

ordination, insufficient community involvement, inadequate operations and maintenance, insufficient information and communication.

2.6 Summary

The Kenyan government commitment in promoting access equity, retention and quality in schools is bound to be affected if safety standard measures are not addressed appropriately,(ROK, 2005). Furlong and Morrison (1994), identified characteristics of a safe school to have a positive impact to students, staff, parents , administration , and wider community. During Dakar World Education Forum (UNESCO 2001), participants stressed on building of safe , health and conducive environment for learners.

The developed countries like UK, USA, England and Wales have safety standard measures to ensure learners security. Health Safety Regulations (1999), stressed on the physical facilities standards measures, rules and regulations. They include fire safety, security fencing, fire insurance, playground, sanitation facilities among others. These measures should be adhered for the success of the safety implementation.

Developing countries like Kenya can emulate what is done in the developed countries so as to solve the problem of insecurity of learners. Studies by the assessment report (2000), WHO and UNICEF identified financial difficulties institutional problems, inadequate human resource, insufficient community involvement and management and maintenance to be factors influencing implementation of the physical facilities.

Okumbe (1998), noted that, while making decisions concerning the implementation of a policy, a leader should involve all the stake holders in coming up with decision like the safety policy in their schools. Heylingnen (1998), points out that, a problem is solved by identifying , framing and generating a solution to solve the problem. Therefore, the challenges affecting the implementation of physical facilities safety policy are to be identified and solutions made.

The directors of university of Northern Iowa, school of health and physical education, carried a research with the purpose to investigate school play ground safety practices. They identified that little attention is being given to provide safe playground. In the New York Science journal (2008), the Department of Education and Administration in Nigeria identified the need for effective facility management so as to make schools safe for the users.

Considering the above researches which have been carried out by Susan et al (2000) and New York Science journal (2008), we see that they have seen playground safety practices and facility management but have not looked at the school safety standard measures. The researches which have been carried out have left this gap which the study seeks to fill. Further, Kipngeno & Benjamin (2007) carried out a research on safety awareness and preparedness in secondary schools. Most of these studies have little on the physical facilities and safety measures to be put in place. Incidences of insecurity always emanate from different physical facilities. The government only gives directives on safety measures when an accident has occurred, like the fire outbreaks, deaths and wind

blowing roofs are reported but after that, they do not make a follow to see whether the required safety measures are adhered to or not.

Studies have been carried in different fields of safety and health like child trafficking, food safety, sanitation, school dropouts, drug abuse and child abuse, and not physical facilities safety policy. In addition, the studies have been done on the secondary and university levels and leaving a gap which need to be filled in the primary section since it carries the highest number of learners. Despite the school safety policies in place, cases of insecurity are still reported and this is a gap that requires to be filled.

Unlike the above studies, this study has gone beyond looking at the conducive environment of a school as a safe zone and looks at factors such as challenges affecting the implementation process, cases of insecurity posed by the physical facilities, use of safety standard measures, management and maintenance of the physical facilities and Head teachers' roles in the implementation of the physical facilities safety policy. This will probably fill the gap left by the other researchers. It is therefore important that, studies are carried out to identify the challenges influencing the implementation of the physical facilities policy in public primary schools.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.0 Introduction

This chapter covered the different areas of research methodology used in the study. It includes the research area, the target population, the study sample and sampling techniques, the research design, research instruments, validity and reliability of research instruments, piloting of research instruments, data collection procedures and data analysis.

3.1 Research Design.

Research design are the arrangements of conditions for collecting data in a manner that aims at combining, the relevance to the research purpose. It can also be referred to as a plan of the proposal research work, (Onen and Oso, 2005).

This study adopted a descriptive survey research to get information from the sample. In using a descriptive survey research design. Descriptive survey design allows use of both qualitative and quantitative approaches. The researcher was able to collect original data from a sample and generalized the findings to all public primary schools in Nandi Central and in the whole country. The descriptive method was considered appropriate as it enabled the researcher to reach as many respondents as possible and acquired a lot of information within a short period of time by use of questionnaires, observation and interview schedules. According to Msumbuga (2000) a survey is an important method employed when trying to solve problems in educational sector. They collect

detailed description of existing phenomenon with the aim of employing the data to justify the current conditions and make plans for improving them. The design was used to organize and summarize data using descriptive statistics.

3.2 The Study Area

The study was carried out in Nandi Central District. The District borders Mosop to the North, to the West is Kakamega, Nandi South to the South and Eldoret South to the East. The district headquarters is Kapsabet Town. The district is made up of four Divisions namely; Kosirai, Kapsabet, Kilibwoni and Emgwen Divisions. The district has 152 public primary schools, both public day and boarding. The area was chosen because there have been reported cases related to safety problems; for example accidents, injuries due to fire outbreaks, wind blowing roofs, rooms collapsing among others. The district is an economically potential area with fertile soils and adequate rainfall. According to Nandi District development plan (2002-2008), the District is highly potential in terms of dairy and crop production preferably maize and tea being the leading crops. Given that most parents come from this region, they are economically stable and are in a position of supporting their schools financially.

3.3 Target Population.

The target population refers to the total number of subjects or the total number of environments of interest by the researcher, (Onen and Oso, 2005).

The study targeted all the public primary schools in Nandi Central district. The district has 152 public primary schools. All the head teacher, teachers in charge of physical facilities , the District Education representative (DQASO) and the parents'

representatives formed the study population. The DQASO and Head teachers were selected because they are the care takers of the school physical facilities.

3.4 Sample Size

Patton (2002) argues that the sample size depends on what one wants to know, the purpose of the inquiry, what is at stake, what will be useful, what will have credibility and what can be done with available time and resource. There were 152 public primary schools in Nandi central district. All these schools would not be covered due to time and resources available. The sample size consisted 45 schools which was 30% of the 152 schools . Kothari (2008) asserts that 30% is a representative sample of the entire population. It was however hoped that the information obtained from the 45 schools can be generalized as applicable to other schools in the same area.

Therefore 45 public primary schools represented the 152 schools , 45 head teachers, 90 teachers,45 parents representative and 1 District Education officer representative(DQASO) formed the study sample as illustrated in table 3.1 below.

Table 3.1:- Sample Size for Respondents.

Respondents	Population	Sample size (30%)
Head Teachers	152	45
Teachers in charge of physical facilities	304	90
District Education Officers (DQASO)	5	1
Parents representative	152	45
Total	613	181

3.5 Sampling Techniques and Procedures

This is the process of selecting a certain number of individuals for a study in order to be representatives of the large group they were selected from. The individuals selected form the sample, while the large group from which they were selected from is the population, (Kothari, 2008).

In this study therefore, the following sampling techniques were used: - purposive, stratified and simple random sampling techniques. All the public primary schools in Nandi central district were stratified into four divisions in the District; Kosirai, Kilibwoni, Kapsabet and Emgwen. Proportionate stratified random sampling technique was used to select the participants that is; 45 head teachers, 45 Parents representatives and the DQASO. The 45 selected schools from the 152 public primary schools in the 4 divisions were stratified as follows; Kosirai 12 schools, Kilibwoni 12, Kapsabet 10 and Emgwen 11 schools respectively. Stratified simple random sampling technique was used to ensure that each division was assigned the proportionate number of schools in the sample as in the population. Stratified simple random sampling enabled the respondents and schools stand an equal chance of being included in the sample. According to Mugenda and Mugenda (2008), the goal of stratified random sampling technique is to achieve desired representation from various sub-groups in the population.

3.6 Research Instruments

In collecting data, the questionnaires, interview and observation schedules were used to collect primary and secondary data in public primary schools in Nandi Central district.

According to Mugenda and Mugenda (2008), social science commonly uses questionnaires, interview schedules, observational forms and standardized test as research instruments.

3.6.1 Questionnaires

A questionnaire refers to a list of questions Mugenda & Mugenda, (2008).

According to Kothari (2008), questionnaires are free from the interviews bias, as the answers are in the respondents own words. In addition, respondents also have an adequate time to give well thought out answers. Questionnaires also save time and information can be collected from a very large sample. The questionnaires consisted of both closed ended and the Likert type questions structured open ended questions.

Questionnaires were preferred because they are tools commonly used to obtain important information about a population and many respondents are easily reached.

For the purpose of this study, the researcher administered structured questionnaires to head teachers, parents representatives and teachers in charge of the school physical facilities. The questionnaires were divided into two sections. Section A dealt with the demographic data, while section B contained the Likert- scale type of questions related to the research objectives; cases of insecurity posed by the physical facilities, degree of adherence, methods applied to ensure security of learners, Head teachers roles in the implementation process and challenges that hindering the implementation of the physical facilities safety policy in schools. The questionnaires are presented as Appendix III.

3.6.2 Observation schedule

According to Kombo and Tromp (2006), observation is a tool that provides information about actual behavior. It involves habitual routines of which people are hardly aware. Direct observation allows the researcher to put behavior in context and thereby understand it better.

This method was employed to supplement the use of questionnaires. It is a qualitative primary research instrument for gathering data in a natural way that ensures validity and reliability. For the purpose of this study, direct observation was used to check the state of certain physical facilities. Section A was to check facilities, whether it was according to the required standard or not. They included; the classrooms, toilets, dormitories, kitchen, lighting ventilation and bathrooms. Section B included other safety facilities to ascertain if they were available or not. They included; the gatekeeper, fire extinguishers, lightning arrestors, play grounds, safety manuals, Education Acts, Public health Act, and inspection minutes from the DQASO. Observation played an important role because data collected was used to make recommendations and adjustments in the implementation process. The observation schedule is presented as Appendix IV

3.6.3 Interview.

Interview is a method of collecting data that involves presentation of oral-verbal stimuli and reply in terms of oral-verbal responses (Kothari, 2008).

Structured interview schedules were prepared to collect in-depth data. Presenting questions orally is an appropriate means of gathering information from children, illiterates and key resource persons. Msumbya (2000) asserts that many people are

willing to communicate orally than in writing and they would provide data more readily and fully than on a questionnaire. An investigator is able to encourage subjects and probe them deeply into a problem.

This instrument was used to obtain information from DQASO who is in charge of assessing quality Educational Programmes in the District, physical facilities safety among others. The items in the DQASOs' interview schedule sought information on their inspection/supervisory roles of the physical facilities safety, reported cases of insecurity in the district, their roles in the implementation process, challenges they encountered and gave recommendation on what should be done. This instrument is presented as Appendix II.

3.7 Validity of Research Instruments

Mugenda and Mugenda (2008), describes validity as the accuracy and meaningfulness of inferences based on the research results. The test must produce information that is not only relevant but free from systematic errors. In order to maintain consistency and relevance to the problem or degree to measure what researcher intended to do, the researcher carried out three processes to ensure validity of research instruments.

First, the university supervisors who are lecturers in department of Educational Management and Policy Studies School of Education Moi University confirmed the research instruments validity and made the necessary corrections. Secondly, the researcher carried out a pilot study in two randomly selected schools from the neighboring district. The consistency in response from the piloted study determined the

validity of the research instruments. Thirdly, the researcher made appropriate adjustments based on the supervisors' advice and the outcome of the pilot study.

3.8 Reliability of Research Instruments

Reliability is a measure of the degree to which a research instrument yields same results after repeated trials (Neumann, 2000). An attitude scale is considered reliable, for example, to the degree to which the same respondents or very similar respondents receive the same or very similar scores upon repeated testing.

Reliability of instruments was established through a pilot study conducted in two schools from the neighboring district. The two administrations were analyzed separately. The first test was administered and after two weeks the second test was also repeated with the same respondents. Two weeks was an appropriate duration so as to avoid recall by the respondents.

It is highly desirable to run a pilot test on a questionnaire and to revise it based on the results of the test. Piloting was done to establish whether the instrument could be used to collect data and to identify any problems that were likely to occur at the time of actual data collection process. It was also meant to check whether the instructions in the questionnaire were understandable to the respondents.

Reliability of the research tools were determined by correlating two administration using Cronbach's test of reliability. Cronbach's coefficient Alpha (α) is a general form of the

K- R20 formula that can be used when items are not scored dichotomously especially when measures have multiple scored items, such as attitude scales or essay tests.

On a likert scale the individual may receive a score from 1 to 5 depending on which option was chosen. The Cronbach's test of reliability was adopted from the study because the items in the questionnaire were not scored dichotomously; therefore multiple choice items in the questionnaire had several possible answers each given a different weight.

The questionnaires were administered separately coded and scored. They scored a correlation coefficient of 0.75 for the head teachers, the teacher's in-charge of physical facilities had a correlation of 0.78, and finally 0.74 was obtained for parents' representatives questionnaires. The results yielded a correlation coefficient of 0.75 and this ranged between 0 and 1, therefore it was considered appropriate to ascertain the reliability of the instruments. Kerlinger (1986), notes that according to cronchba's alpha, reliability co-efficient normally ranges between 0 and 1. The instruments were therefore reliable enough for the purpose of this study.

3.9 Data Collection Procedures

According Kombo and Tromp (2006), a researcher will require a research permit before embarking on the study. The researcher first sought for an introduction letter from the school of Education, Moi University, addressed to Permanent Secretary, Ministry of Education Science and Technology for the purpose of conducting research.

After obtaining the permit, the researcher sought permission from Nandi District Education Office to collect information from the schools.

The researcher then dispatched letters to the head teachers of the sampled schools, requesting to use their schools for the study. After that, the researcher carried out the actual study by presenting the questionnaires personally and explaining to the respondents the purpose and significance of the study. The researcher personally collected the duly filed questionnaires and at the same time checked the list of the items in the observation schedules. The researcher also conducted an interview to the District Education representative (DQASO) in order to get in-depth information.

3.10 Data Analysis

Data analysis involves organization, interpretation, presentation of collected data and analysis that reduces the field of information to a usable size (Onen and Oso, 2005).

In this study the data was analyzed using both quantitative and qualitative techniques with an attempt to answer the research questions.

Data obtained from the questionnaires and interview for this study were coded using Statistical Package for Social Sciences (SPSS). Data was analyzed using descriptive statistics and presented in form of tables, percentages and bar graphs. For the purpose of analysis, data generated from questionnaires had the alternatives provided as ‘Strongly Agree’ and ‘Agree’ merged to mean ‘Agree’ and ‘Strongly Disagree’ and ‘Disagree’ merged to mean ‘Disagree’.

Perception and opinions of the respondents on Challenges of the Implementation of the Physical Facilities Safety Policy were analyzed and rated using descriptive statistics and presented in the form of percentages and frequencies, which were used to summarize

data. Based on the findings; interpretations, conclusions and recommendations were made. A detailed analysis of information collected is reported in chapter four.

3.11 Ethical Issues

A letter of authority addressed ‘to whom may concern’ (Appendix VI). The respondents were informed about the purpose of the study and assured of confidentiality and privacy from the information they gave, and that the findings from the study would be used for academic purposes only.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION, INTERPRETATION, DISCUSSIONS AND SUMMARY

4.0 Introduction

This chapter presents the findings of data collected, analysis, presentation, interpretation, discussion and chapter summary.

The study sought to meet out the following objectives,

(i) To establish cases of insecurity posed by the physical facilities

(ii) To assess the degree of adherence to the laid down safety policy,

(iii) To evaluate methods applied to ensure safety of learners and finally,

(iv) To determine the roles of head teachers in the implementation of the school safety policy.

4.1 The response rate for respondents

This section deals with the response rate of the questionnaires dispatched to various respondents. Their responses are as indicated in table 4.1 below.

Table 4.1: The response rate of the respondents' questionnaire

Respondents	Number of administered questionnaires	Questionnaires		Response rate
		Returned	Non returned	
Head teachers	45	45	0	100
Teachers in-charge	90	80	10	88.9%
Parents' representatives	45	45	0	100%
Total	180	170	10	94.4%

Respondents in this study were the head teachers, teachers in charge of school physical facilities, parents' representatives, and the District Education Officer's representative. A total of 180 questionnaires were distributed to all the respondents. The response rate for head teachers and parents' representatives was 100% because of prior booking of appointments through the head teachers and the fact that most of the respondents were able to honor their appointments. However, questionnaires for respondents not present were left behind for them to fill and were collected later. The response rate of teachers in charge of school physical facilities was 89% because for some schools, one teacher is in charge of physical facilities instead of two. The response rate for all the respondents was 94.4%. The high response rate for all the respondents was due to the fact that the researcher is a teacher in the district and was in a position to locate and access the sampled schools without much difficulty.

4.2 Respondents' Background Information

This section gives the background information regarding gender representation and the academic qualifications of the respondents who participated in the study. The respondents included the head teachers, teachers in charge of school physical facilities and parents' representatives.

4.2.1 Gender

This section dealt with the gender representation of the respondents who participated in the study. Their gender representation is as indicated in table 4.2 below.

Table 4.2 Gender of the Respondents

Gender	Head teachers		Teacher in charge		Parent rep		Whole group	
	N	%	N	%	N	%	N	%
Male	27	60.0	32	40.0	16	35.6	82	45.6%
Female	18	40.0	48	60.0	29	64.4	98	54.4%
Total	45	100	80	100	45	100	180	100%

The findings revealed that, the head teachers comprised 27 males representing 60.0%, while the females were 18 representing 40.0%. The teachers in charge of the school Physical facilities were 48 females representing 60.0%, while 32 were males representing 40.0%. The parents' representatives recorded 16 males representing 35.6% and 29 females representing 64.4%.

Further, results also revealed that, most teachers in charge of the school physical facilities in most public primary schools were females because they are considered better care takers and responsible for administering safety in schools as compared to their male

counterparts. The head teachers in most schools were dominated by the male teachers. This could be attributed to culture dominance which is male oriented and therefore perceived to be better leaders in all fields. However, this does not conform to the Ministry requirement which advocates for gender balance in the management of schools, (Education Act, 1980).

In as far as parents' representatives were concerned, the females dominated and this was attributed to the fact that, in public primary schools, most male parents sent the females to represent them during the parents meetings. It is from such meetings that elections for parents' representatives are held. This scenario could be attributed to cultural norms and beliefs of the people of the region who perceive the child especially at primary level belongs to the mother.

4.2.2 Qualifications of the Respondents

This section looked at the qualifications of the respondents who participated in the study. It was important to establish the academic qualifications of the respondents since they have been charged with the responsibility of interpreting and implementing the safety policy in place. The highly qualified are likely to posses managerial skills necessary for the management of schools. Their responses are illustrated in table 4.3 below.

Table 4.3: The Qualifications of the Respondents

Qualification	Head teachers		Teacher in charge		Parent rep	
	N	%	N	%	N	%
S1/ diploma	22	48.9	20	25	16	35.5
Degree	7	15.5	18	10	1	2.2
Masters	0	0	2	2.2	0	0.0
Untrained	0	0	11	13.8	28	62.2
P1	16	35.0	33	41.3	0	0
ECD certificate	0	0	6	7.5	0	0
Total	45	100	80	100	45	100

Results indicated that out of the 45 head teachers, 22(48.9%) had Diploma, 16 (35.6%) were P1s and 7 (15.5%) had a Bachelors degree. This implies that most head teachers had diploma and P1 certificates. Further, results also indicated that 20 (25%) teachers in charge had diploma, 18(10%) were degree holders, 2(2.2%) had masters, 11(13.8%) were untrained. However, 33(41.3%) had P1 and 6(7.5%) had ECD certificates. This implies that most teachers in charge of the physical facilities were PIs and was due to the minimum qualifications needed by the ministry for primary school teachers. Most of the headteachers were of diploma and P1 levels. So were those incharge of physical facilities in their schools. This means that majority of teachers in public primary schools have the requisite qualification which should enable them understand and implement the safety policy in schools.

However, 16(35.6%) parents' representatives had diploma, 1(2.2%) degree and majority 28 (62.2%) were untrained. There were no parents representatives with Masters, P1 and ECD certificates. On the contrary the bulk of parents representatives were untrained and a good number with diploma certificates.

Although most head teachers and teachers in public primary schools were holders of diploma certificates and primary teachers (P1) certificates. The number of head teachers and teachers having degree and masters qualification are few because a degree and masters is assumed to be a qualification required of secondary and university teachers. Their qualification is an added advantage in that they are more exposed hence in a better position to implement the safety policy.

This was in agreement with Mbiti, (2000), who asserts that, the head teachers and teachers play an important role in school management and therefore should have appropriate education and managerial skills which enables them make schools safe and conducive environments for learning. Fullan (1982) adds that, effectiveness and efficiency in teaching and learning are determined by the teachers' academic and professional characteristics. However, this does not arguer well with Okumbe (2001) who views that, all school stakeholders have an important role to play in the management of Education but most of them lack appropriate education and managerial skills in handling issues related to schools safety.

4.3 Analysis of Cases of Insecurity Posed by the Physical Facilities

The first objective of this study was to identify cases of insecurity posed by the physical facilities in public primary schools. In order to achieve this objective, the head teachers, teachers in charge of the school physical facilities and parents' representatives were required to give their responses related to this objective. Their responses are presented in table 4.4 below.

Table 4.4 Assessments of Cases of Insecurity Posed by the Physical Facilities.

	Respondents	**Head teacher**			**Teachers in charge of Physical facilities**			**Parents Representative**		
		Frequencies & percentages			Frequencies & percentages			Frequencies & percentages		
		SA &A	SD & D	U	SA &A	SD & D	U	SA &A	SD & D	U
1	There has been rampant cases of roof destruction by wind	42 93.3%	2 4.4%	1 2.2%	57 71.3%	20 25.0%	3 3.8%	36 80%	8 17.8%	1 2.2%
2	Collapses of classrooms have endangered the learners in schools	37 82.2%	7 15.6%	1 2.2%	58 72.5%	15 18.8%	7 8.8%	28 62.2%	16 35.6%	1 2.2%
3	Improper wiring has caused electrocution to learners due to exposed live wires	41 91.1%	2 4.4%	2 4.4%	51 63.8%	13 16.3%	6 7.5%	21 46.7%	12 26.7%	12 26.7%
4	Poor ventilation in the rooms affects learners' health.	28 62.2%	10 22.2%	7 15.6%	50 62.5%	21 26.3%	9 11.3%	30 66.7%	12 26.7%	3 6.7%
5	The state of classroom floors, windows and walls pose insecurity in schools.	35 77.8%	9 20%	1 2.2%	43 53.8%	33 41.3%	4 5.0%	25 55.6%	15 33.35	5 11.1%
6	There have been accidents emanating from fire outbreaks	30 66.7%	11 24.4%	4 8.9%	42 52.5%	24 30.0%	14 17.5%	26 57.8%	13 28.9%	6 13.9%
7	There have been cases of death caused by congestion in the dormitories	25 55.6%	18 40%	2 4.4%	23 37.5%	48 60.0%	9 11.3%	10 22.2%	30 66.7%	5 11.1%

Results revealed that, majority of 93.3%headteachers, 71.3%teachers in charge of physical facilities and 80%parents' representatives strongly agreed that, there had been rampant cases of roof destruction by wind. This implies that most public primary schools do not follow the required safety measures like planting trees around school compounds to act as wind breakers. This may also be attributed to lack of following the required safety measure when constructing the building and the building committee not consulting the physical planners so as to seek proper site and design of appropriate building. There were rampant cases of wind destruction reported in the District; this was evident from one of the sampled schools as illustrated in figure 4.1 below.

Figure 4.1: A school block destroyed by wind at a primary school in Nandi Central District

Under normal circumstances, the doors and windows of buildings should be placed against the direction of the wind. In addition, it was recommended that, trees should be planted around the buildings to act as wind breakers. However, the above pictures taken from the sampled school indicate that wind destruction occurred because the block was constructed towards the direction of the wind. Further, results also revealed that, there were no trees planted to act as wind breakers thus exposing the building to wind destruction .This implies that, the school learning environment was not safe for learners because of the danger posed by the building which did not conform to the required safety measures of the physical facilities.

The DQASO attested to the same that, there were cases reported to their office concerning wind destroying classrooms. They also confirmed that most schools had been constructed without following the required standard measures as stipulated by the MOE manual (2008). The key issues being the size, position and structures of different physical facilities which should be adhered to, besides construction approved by the Ministry of Public Health and Physical Planners

Further, results also revealed that 82.2% head teachers, 72.5% teachers in charge of physical facilities and 62.2% parent's representatives strongly agreed and agree that the collapse of the classrooms endangered learners in schools. This implies that most of the constructions were done without following the required safety measures. This could be attributed to poor supervision of the facilities by the head teacher while the construction was on going. Mismanagement of funds and corruption by the school management may

lead to constructing facilities which may pose insecurity to the users. Examples of such schools in a state of collapsing are illustrated in figure 4.2 and 4.3 below.

A permanent block demolished due to cracks at a Primary School in Nandi Central District.

Figure 4:2 Sample school to illustrate a demolished block as a result of cracks

Figure 4.3 Learners in an insecure Classroom at Chepketei primary school of Nandi Central District.

The Ministry of Health, physical planners, together with the MOE and the School Management Committee resolved to relocate Kapchepsir primary school. The school has been constructed on a swampy area and has been condemned because of the safety threats. However, despite the dangerous state of the physical facilities in the school, they are still in use thus making it a risky zone for the users. Moreover, all the permanent blocks in the school are dilapidated and are in a state of collapsing because the constructions were done in a swampy area. Education Act (1980) advocates that, the building should be constructed in such a way that they do not pose any danger to the users and that the buildings be approved by the relevant bodies before they are used.

In addition, 91.1% head teachers, 63.8% teachers in charge and 46.7% parents' representatives agreed that improper wiring caused electrocution to learners. This implies that wiring was done without considering the safety of the learners. Observation indicated that live wires were exposed openly and this could cause electrocution to learners. The sockets were placed in positions which learners could reach easily. The reason for this is that, most school management employ electricians who might not be competent. Reuters (2004) asserts that fire can be caused by faulty electrical fitting, keeping of inflammable materials and substance in the premises. Careless handling and use of electrical appliances is insecurity to the learners.

Another, 62.2%.head teachers, 62.5% teachers in charge and 66.7% parents' representatives agreed that, the physical facilities were constructed without following the requirements in order to ensure proper ventilations are in place. Furthermore,

observations made revealed that, most of the buildings in majority of the schools visited were not well ventilated. This may be attributed to lack of proper supervision by the building committee to ensure that ventilations in the buildings are adequate. The Public Health Act and Policy (1972) proposed that, buildings should be spacious enough to avoid overcrowding and the classrooms be adequately ventilated. The same results are illustrated in figure 4.4 below.

Figure 4.4: A sampled school to illustrate poor ventilation.

A classroom with poor ventilation at a primary school in Nandi central district .

The above picture presents the state of a classroom with poor ventilation which threatens learner's eye sight.

Regarding the state of floors, majority of the respondents 62% were of the opinion that the state of the floors, windows and walls of the classrooms were the major causes of accidents in the schools. This implies that the state of the physical facilities in some schools especially the walls, windows and floors were not conducive for learning. This

may be attributed to lack of finance to complete the facilities. The findings revealed that most schools had un- cemented floors, open windows and walls with holes and dangerous cracks. These results are as presented in figure 4.5 below.

Un-cemented floor

Figure 4.5: A typical classroom with un-finished windows, floor and with walls which have cracks and holes.

The above findings revealed that, the holes on the walls and un-finished windows subjected learners to severe colds which threaten their health and safety. In addition, during rainy seasons the holes and open windows accessed floods to the classrooms.

Moreover, majority of the respondents 60% revealed that, there have been accidents emanating from fire outbreaks. This implies that there have been fire out breaks in public schools which have caused accidents and destruction of property. Most schools have not put in place the safety measures to curb fire out breaks like the use of fire extinguishers. This could be attributed to lack of finances to purchase the gadgets or ignorance from the administration. This does not auger well with the KIE (2002) requirement that schools should take cover against fire for protection of human life and property. In addition, buildings should not be used before they are insured against fire.

Finally, as regards cases of death caused by congestion in the dormitories, 55.6% head teachers agreed that there have been cases of death caused by congestion, contrary to 40.0% who disagreed and 4.4% of them were undecided. Further, 37.5% teachers in charge agreed as compared to 60.0% who disagreed, while 11.3% were undecided on cases of death caused by congestion. However, 22.2% parents' representatives agreed, while 66.7% disagreed that, there had been cases of death caused by congestion in the dormitories. This implies that there are few cases of deaths caused by congestion in the dormitory. The reason for this is that, most public primary schools are day schools and do not have dormitories therefore cases of congestion are not rampant. According to Okendo (2010), the Endarasha incident where two boys were burned to death is an indication of

congestion in the dormitory and windows fitted with grills and wire mesh which do not provide escape routes in case of emergencies.

Other cases of insecurity observed in the sampled schools included dangerous cracks on the walls yet the facilities were still in use. These findings are illustrated in figure 4.6 below.

Head teacher's office

Classroom

Figure 4.6: Sampled school to illustrate the state of the walls which posed insecurity to the users.

From figure 4.6 above it is evident that, the conditions of the walls are in a dangerous state. The cracks on the walls are a sign of danger to the users who are subjected to insecurity.

According to the Public health Act (1986), all physical facilities used by learners should be well built according to the required safety measures. The key principles revolving around buildings being well ventilated, having proper lighting and wiring systems and with proper water supply and disposal. In addition, the classroom windows and dormitories should not be fitted with grills and wire mesh, (safety manual MOE, 2008). In addition, the state and conditions of the physical facilities such as classrooms, dormitories, toilets, and playgrounds affects learners' health and performance. For example, poor lighting that can lead to eye problems, poor ventilations which can lead to communicable diseases and lastly unfinished walls and floors where learners exposed to extreme colds, dusty floors which may be potential zones for jigger breeding.

4.4 Assessment of the Degree of Adherence to the Laid Down Physical Facilities Safety Policy Measures.

The second objective of the study sought to determine the degree of adherence to the laid down safety standard measures as required by the MOE (2008). The respondents were asked to respond to the practices they adopted in order to ensure that they adhered to the safety measures of the physical facilities. Their responses are as in table 4.5 below:-

Table 4.5 Analysis of the Degree of Adherence to the Laid Down Physical Facilities Safety Policy Measures.

Respondents	Head teacher			Teachers in charge of Physical facilities			Parents Representative		
	Frequencies & percentages			Frequencies & percentages			Frequencies & percentages		
	SA &A	SD & D	U	SA &A	SD & D	U	SA &A	SD & D	U
The school has taken proper care of general safety of learners in the school	36 80.4%	9 20.0%	0 0%	51 63.8%	20 25%	9 11.3%	29 64.4%	16 20.0%	0 0.0%
There is proper ventilation in the rooms	10 22.2%	35 77.8%	0 0.0%	66 82.5%	10 12.5%	4 5.0%	36 80.0%	6 13.3%	3 6.7%
Schools have proper lighting systems in various physical facilities	29 64.4%	14 31.1%	2 4.4%	52 65.0%	22 27.5%	6 7.5%	30 66.7%	8 17.8%	7 15.6%
School have adhered to proper wiring to avoid electrocution	34 75.6%	6 13.3%	5 11.1%	55 68.8%	15 18.8%	10 12.3%	1 46.7%	9 20.0%	15 33.3%
schools have no stored buildings exceeding two	32 71.1%	5 11.1%	8 17.8%	49 61.3%	12 15.0%	29 36.3%	23 51.1%	4 8.9%	18 41.0%
The recreational facilities are safe for play for children	17 37.8%	21 46.7%	7 15.6%	53 66.3%	20 25.0%	7 8.8%	27 60.0%	13 28.9%	5 11.1%
There is proper pumpling to ensure sufficient water supply in schools	22 48.9%	17 37.8%	6 13.3%	42 52.5%	30 37.5%	8 10%	17 37.8%	21 44.4%	8 17.8%
There adequate recreational facilities in the school	21 46.7%	23 51.1%	1 2.2%	23 28.8%	434 55.0%	13 16.3 %	14 31.1%	23 51.1%	8 17.8%
There are no congestion in dormitories and windows not fitted with grills and wire mesh	17 37.8%	21 46.7%	7 15.6%	36 45%	34 42.5%	10 12.3%	17 35.6%	20 44.4%	29.0%

Results from table 4.5 above revealed that majority of the respondents agreed that schools had taken care of the general safety of learners. This is indicated by 80.0%head teachers,

63.8% teachers in charge of physical facilities and 64.4% parents' representatives who strongly agreed that the schools have taken care of safety of learners. This is contrary to 20.0%, head teachers, 25.0% teachers in charge and 20.06% parents' representatives who disagreed, while 10.0% teachers in charge were undecided, implying that they were not aware of all the safety measures in the school. This implies that most schools have taken proper care of general safety of learners in the schools whereby, a conducive environment is provided by the teachers who ensure that learning and teaching goes on in safe zones. Ordinarily, there is no much emphasis placed on school safety due to lack of awareness on its significance. Moreover, according to the Education School Premises regulation (1999), schools should provide sufficient assurance to the health, safety and welfare of all using the premises.

It was the purpose of this study to also establish the state of ventilation in the classrooms. Results revealed that, there was a great difference between the head teachers' responses where 22.2% agreed, contrary to 82.5% teachers in charge and 80.0% parents' representatives who also agreed. This could be because most of the head teachers tried to conceal the state of the physical facilities pertaining ventilation in the classrooms. This implies that most schools do not have sufficient ventilation on the physical facilities. This could be attributed to lack of awareness by facilities and lack of transparency and accountability by the head teachers while doing the construction. According to Standard Guides for Kenya (2006), classrooms should be standard size 8m by 6m, be well ventilated, have enough light, proper windows and doors.

However, majority of 65% respondents were of the view that, schools have proper lighting systems in the various physical facilities implying that they adhere to the required standard measures whereby, most classrooms were fitted with windows which facilitated for enough light. According to Public Health and Policy (1972), they proposed that classrooms should have proper lighting systems and ventilation in all buildings.

As regards buildings exceeding two storeys, majority of the sampled schools had no storied buildings exceeding two. A significant number of 41% of parents' representatives were undecided. This implies that, most schools do not have storied buildings due to financial limitations, and that most parents' representatives were not aware of the state of construction in their schools. The requirements by the MOE (2008), advocate that school buildings should not exceed two floors and all buildings should be approved by the Ministry of Physical Planners and Public Health to ascertain the required safety measures.

Further, results also revealed that majority of 66.3% teachers in charge, 60% parents' representatives strongly agreed that recreational facilities were not safe for play for children while 46.7% head teachers disagreed. Since majority of the respondents agreed it means that majority of the schools expose learners to unsafe recreational facilities which place them at high risks of accidents. Most schools have constructions and playing fields in small area where learners are restricted to play without much freedom thus exposing them to risks of getting injured. Some schools had recreational facilities which were not

well leveled to ensure safety of learners as they play. According to Education Act Cap 211 (1980), for education standards to be attained, the physical facilities including classrooms, sanitation and playing field should be adequate and safe.

Another, 48.9% head teachers, 52.5% teachers in charge and 37.8% parents' representatives strongly agreed that there is proper plumping to ensure sufficient water supply and proper drainage in schools. This implies that most schools had sufficient water. The reason is because the region experiences rainy seasons throughout the year therefore water shortage is not a problem. Most schools have also dug boreholes and installed tanks to harvest water during rainy season. School Safety Policies in Kenya as indicated in circular No.G9/1/169 requires schools to provide one toilet for every 30 students and clean water provided for consumption and cleaning. A significant number of 38% respondents disagreed implying that, although most schools have proper plumping and drainage systems, there are those that do not have them or are poorly structured.

Moreover, 46.7% head teachers agreed that physical facilities in their schools were adequate. This is contrary to 55.0% teachers in charge and 51.1% parents' representatives who disagreed. This means that, most schools do not have adequate facilities therefore subjecting learners to either congested fields or scarce resources which limit their creativity and proper manipulation of talents.

The same findings were confirmed by the existing physical facilities from the sampled schools, where the required safety measures were not adhered to especially in the

classrooms and toilets. The facilities were inadequate and could not accommodate the number of learners. During break- time the pupils queued outside the few available toilets and this was a threat to the learners' health. Evidence of overcrowded classrooms and use of inadequate toilets are illustrated in figure 4.7 below.

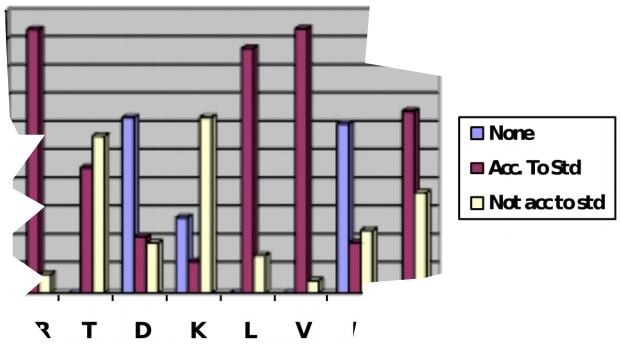
Overcrowded classroom

Pupils queuing in one toilet

Figure 4.7: Sample Schools to illustrate Overcrowding in Classrooms and Inadequate Toilets.

The Education Act states that no primary school class should have more than 50 pupils. The required ratio is 40:1 based on one teacher per class.

Finally as regards congestion in the dormitories, majority of 45% respondents were undecided. However, a small number of 37% head teachers, 12.3% teachers in charge and 35.6% parents 'representatives agreed. This implies that, most public primary schools are day schools or are partially boarding therefore the safety may not be much conversant with the state of the boarding facilities. These results do not arguer well with regulations stipulated by the Public Health Act and policy, (1972) that advocates for conformity to the required standard measures, the buildings should be constructed in such a way that they do not cause any danger to the users .The buildings should also be spacious enough to avoid overcrowding. In addition, observation made indicated the real state of the physical facilities, those according to and those not according to the required standard measure as illustrated in figure 4.8 below



Key

CR-	Class rooms	T-	Toilets	D-	Dormitories
K-	Kitchen	L-	Lighting	V-	Ventilation
B-	Bathroom	GS-	General Safety		

Figure 4.8: State of the Physical Facilities

The following physical facilities: classrooms, Toilets, Dormitories, Lighting, Ventilation, Bathrooms and General safety of the school were observed, so as to establish whether they were according to the required standard measure or not. Observation made showed that classrooms in most schools were build as required this was 93.3%, lighting 86.7% and ventilation 95.6%. The physical facilities were also not adequate. This implies that schools had constructed the physical facilities according to the required size and had proper lighting and ventilation. The adherence to the required standard measure as stipulated by the Education School Premises regulation (1999), out lines regulations for toilets, classrooms, lighting, ventilation and water supply.

Facilities not according to the required standard measures were the Toilets 55.6% and Kitchen 62.2%.The toilets in most schools were very few as compared to the number of learners. During break time, they queue and this was not conducive especially for girls. The boys had urinary pit which at list accommodated their number. Most schools had kitchen constructed with timber or iron sheets. Children were served and took their lunch from outside. Olembo et.al, (1992) points out that, schools face problems of facilities such as inadequate, badly constructed buildings and poor or non existence of maintenance and repairs. The occupational and health safety (OHS) add that, it is the shared responsibilities of the Ministry, school committees and head teachers to adhere to the required safety standards in schools for the safety of learners.

4.5 Methods Applied to Ensure Safety of Learners

In objective three, the study further investigated the methods applied to ensure safety of learners in schools. In order to achieve this objective, the respondents were supposed to indicate the methods they administered so as to ensure safety in their schools. Their responses are illustrated in table 4.6 below.

Table 4.6: Methods Applied to Ensure Safety of Learners.

Respondents	**Head teacher**			**Teachers in charge of Physical facilities**			**Parents Representative**		
	Frequencies & percentages			Frequencies & percentages			Frequencies & percentages		
	SA &A	SD & D	U	SA &A	SD & D	U	SA &A	SD & D	U
The school had fire extinguishers in place to ensure safety	10 22.2%	30 66.7%	5 11.1%	22 27.5%	51 63.8%	7 8.8%	10 22.2%	32 71.1%	3 6.7%
There a school nurse to cater for emergencies	10 22.2%	32 71.1%	3 6.7%	18 22.5%	52 65.0%	10 12.3%	11 24.4%	28 62.2%	6 13.3%
Lightning arrestors have been appropriate placed in the various physical facilities	14 31.1%	30 66.7%	1 2.2%	18 22.5%	50 62.5%	12 15.0%	11 24.4%	28 62.2%	6 13.3%
Fire and other security alarms are placed strategically for use	8 17.8%	33 73.3%	4 8.9%	25 31.3%	50 62.5%	5 6.3%	11 24.4%	26 57.8%	8 17.8%
The school had well trained security guards to ensure safety	11 24.4%	32 71.1%	2 4.4%	20 25.0%	52 65.0%	8 10.0%	10 22.2%	26 57.8%	9 20.0%
There are emergency doors in all physical facilities to cater for emergency	12 27.7%	29 64.4%	4 8.9%	18 22.5%	52 65.0%	10 12.3%	14 31.1%	25 55.6%	6 13.3%
The school had a first aid kit to cater for accident	14 31.1%	27 60.0%	4 8.9%	28 35.0%	44 55.5%	8 10.0%	21 46.7%	20 44.4%	4 8.9%
There are matrons and housekeepers to cater for security of learners in the dormitories	20 44.4%	22 48.9%	3 6.7%	21 22.5%	46 57.5%	13 16.3%	20 44.4%	20 44.4%	5 11.1%
The school had trained scouts and girls guide as first aiders to cater for an emergence	22 48.9%	22 48.9%	1 2.2%	39 48.8%	38 47.5%	3 3.3%	20 44.4%	21 46.1%	4 8.9%
There were the provision of rubbish at strategic points to avoid littering of dangerous objects	23 51.1%	22 48.9%	0 0.0%	41 51.3%	34 42.5%	5 6.3%	32 71.1%	11 2.4%	2 4.4%

Results revealed that, majority of 66% Head teachers, 63.8% teachers in charge and 71.1% parents' representatives strongly disagreed that schools have fire extinguishers in place to ensure safety. However, a significant number of 22.2% Head teachers, 27.5% teachers in charge and 22.2% parents' representative agreed.

This implies that most schools did not have fire extinguishers in place but a few schools who afforded had installed. It therefore, means that schools require funds to purchase the fire extinguishers. It also means that the government pledge to provide fire extinguishers to all schools has not been realized. According to MOE (2005), during the launch of manual for schools in Kenya, the Minister of Education directed that all public schools be given funds to purchase fire extinguishers. This is also in line with Mbiti (2006), that security be put place and ensure all school community know the spots where fire fighting equipments are located, learn how to use them as well as knowing the signals to expect incase of fire outbreak.

Further, results also indicated that there were schools nurses to cater for emergencies. This is represented by 71.1% Head teachers, 65.0% teachers in charge and 62.2% parents' representatives who disagreed contrary to 22.2% Head teachers, 22.5% teachers in charge and 24.4 % parents' representatives who strongly agreed. A significant number of 6.5% Head teachers, 12.3% teachers in charge and 13.3% parents' representatives were undecided. This implies that most public primary schools do not have school nurses to cater for emergencies. It also means that, in case of emergencies, learners are exposed to insecure environments. Shaw (2002) is of the view that schools should have well trained nurses to cater for learners safety incase emergencies occur.

It is also revealed that, 64% of the total respondents disagreed that lightning arrestors have been appropriately placed in the various physical facilities, 26% respondents agreed while 10% respondents were undecided. This implies that lightning arrestors have not been placed on the various physical facilities in most schools therefore, exposing learners to dangers of lightning electrocution because preventive measures have not been put in place. The circular from ROK (2002) advocates on fire safety standard that lightning arrestors be installed on buildings, to avoid fire related cases. In addition Cavanegh (2004) states that, schools are required by law to buy liability accident insurance so as to compensate death and injuries that occur in school premises.

Further results reveal also that, 73.3% head teacher, 62.5% teachers in charge and 57.8% parents' representatives disagreed that fire and other security alarms are placed strategically for use. However, 24.7% respondents agreed while 11.3% were undecided. This implies that fire and other security alarms were not available in public primary schools as advocated by the MOE Education Act (1980). The UK-Educational school Premises Regulation (1999) advocates for good condition in school premises, provision of fire and other security alarms which should provide sufficient assurance as to the health, safety and welfare of all using the building.

In addition, results also revealed that 24.4% head teachers, 25.6% teachers in charge and 22.2% parents' representatives agreed that, schools have security guards to ensure safety contrary to a majority of 64.7% respondents who disagreed. It means that majority of the

schools have not employed trained security guards to ensure safety. The head teachers confirmed that they have night watchmen as security only to guard the school property. According to school safety policies circular (2001), it is a requirement that school grounds should have proper fencing with secure gates and security guards. Wangai (2001) adds that, security personnel like nurses and guards must be trained on school safety.

However, majority of 62% respondents disagreed that there were emergency doors in all physical facilities, contrary to a significant number of 27% respondents who agreed, and 11% respondents who were undecided. These therefore, means that in public primary schools, construction of the buildings are done without considering the emergency doors which used as emergency exit incase of fire outbreak or any danger. The Public Health Act and Policy (1972) proposed standards to be observed by considering the spacing, doors, and windows of the physical facilities. The buildings should have emergency doors.

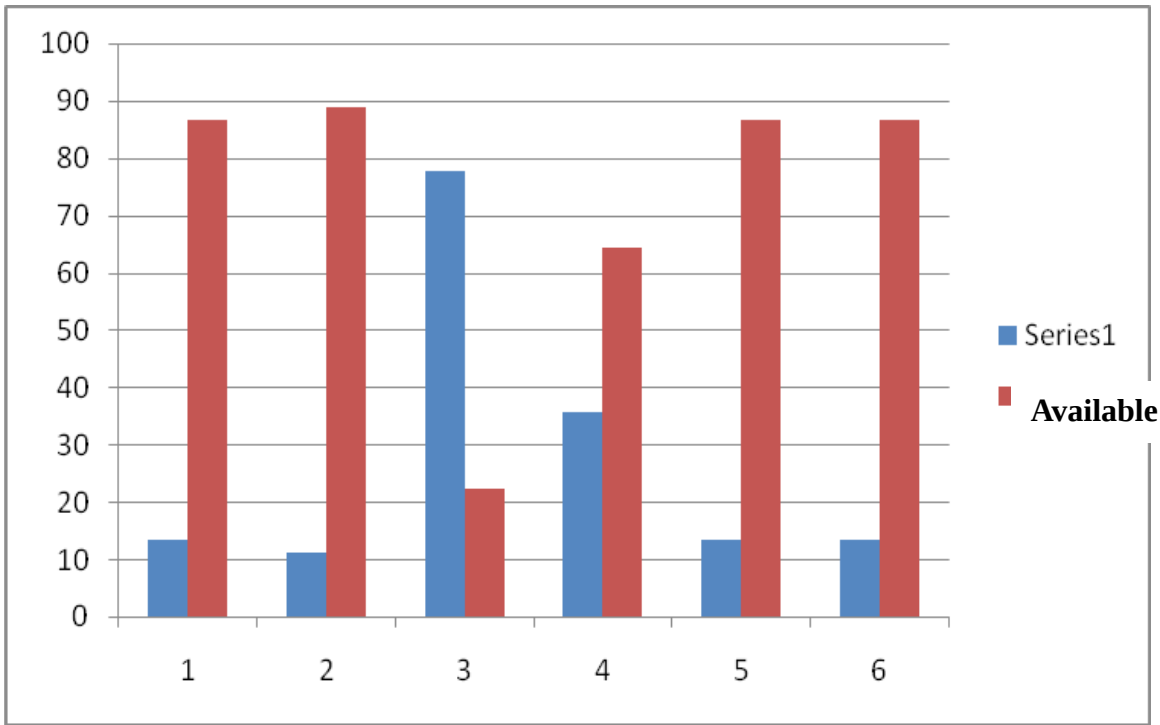
It is further, revealed that, 60.0% head teachers, 55.5% teachers in charge and 44.4% disagreed that school have First Aid Kit. However, 38% respondents agreed, while a significant figure of 8.9% head teachers, 10.0% teachers in charge and 8.9% parents' representatives were undecided. It indicates that some schools have not applied the use of First Aid Kit in schools to cater for emergencies. The Red Cross Society (2008) advocates every school to have a First Aid Kit and scouts and girl guides be trained on how to use them.

Nevertheless, 48.9% head teachers, 57.5% teachers in charge and 44.4% parents representatives disagreed that there were matrons and housekeepers to cater for security of learners. Contrary to 44.4% head teachers, 22.5% teachers in charge and 44.4% parents representatives who agreed. This implies that public primary schools have no matrons and security because most of them are day schools. Wangai (2001), points out that the employees serving as security personnel in learning institutions be trained on security details. Most schools in rural areas employ nurses and watchmen with little or no basic knowledge on security matters.

Results also revealed that, 48.9% head teachers, 48.8% teachers in charge and 44.4% parents' representatives agreed that schools have trained scouts and girl guides as first aiders. However, 48.9% head teachers, 47.5% teachers in charge and 46.1% parents representatives disagreed while a significant number of 5.0% were undecided. This implies that most schools used learners instead of nurses to cater for emergencies when a problem arises. This may be attributed to the school managements who have no funds to pay for the school nurses, matrons and security. Red Cross Society (2008), advocates for all learning institution to have boy scout and girl guides so as to give assistance when need arise. All members in school are to be trained on safety awareness and preparedness while in school.

Lastly, results also indicated that schools used rubbish pits and dust bins to avoid littering the compound with dangerous objects. This is represented by 51.1% head teachers, 48.8% teachers in charge and 71.1% parents' representatives who agreed. Contrary to 48.9% head teachers, 51.3% teachers in charge and 2.4% parents' representatives who disagreed. Most public schools have rubbish pits and bins because cleanliness is done regularly by the students under supervision of teachers in charger, who ensure that all rubbish in school compound are disposed off. Ministry of Education (2001), defines school safety as an environment which is not detrimental to ones health and therefore all school grounds be well demarcated with proper fencing and all rubbish be disposed in the appropriate place.

Results observed in figure 4.6 indicated that most schools had not put in place the gadgets that ensure safety of learners like gate, fire extinguishers, play ground, lightning arrestors, safety manual and circulars from MOE on school safety. The researcher checked the physical facilities to ascertain if they were available or not as shown on the figure 4.9 below.



Not available

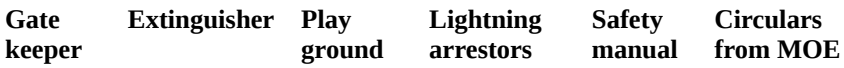


Figure 4.9: Other Safety Facilities in Schools

The facilities which were not available were: Gate keeper 86.7%, Fire extinguishers 88.9%, Lightning arrestors 64.4%, Safety Manual 86.7% and Safety circulars from the MOE 86.7%. Most schools had the playground available this was 77.8%.All the other facilities were not available. This implies that schools have not put in place the required preventive gadgets and circulars on safety. This may be attributed to lack of finance to purchase the gadgets and failure by the Ministry of Education to distribute the circulars on safety to schools; this affected the implementation of the physical facilities safety policy in schools. According to the Ministry of Education (2008), the following should be adhered to; fire escape roots in all buildings, adequate facilities, provision of fire extinguishers, lightning arrestors, doors and windows should not be grilled or fitted with wire mesh. All sockets and electronic appliances should be beyond children's' reach, the school play ground be leveled and spacious

The above observations are related to an interview report from the District Education representatives that they normally carry out supervision process in the same schools and obtained the same findings. They forward to the Ministry of Education but not much has

been done to solve the problem. The DQASO complained about the failure by the MOE to act on issues forwarded to them. This showed that, the government takes long in implementing a certain Policy.

4.6 Head teachers' Roles in Implementing the Physical Facilities Safety Policy in Schools.

The fourth objective of this study sought to establish the roles of head teachers in implementing the physical facilities safety policy in their schools. The head teachers, teachers in charge of physical facilities and parents' representatives were asked to give their opinion on the head teachers' roles. Their responses are as indicated in table 4.7 below.

Table 4.7 Assessment of the Head teachers' Roles in Implementing the Physical Facilities Safety Policy.

Respondents	**Head teacher**			**Teachers in charge of Physical facilities**			**Parents Representative**		
	Frequencies & percentages			Frequencies & percentages			Frequencies & percentages		
	SA &A	SD & D	U	SA &A	SD & D	U	SA &A	SD & D	U
The head teacher ensure proper management and maintenance of the physical facilities in the school	44 97.8%	1 2.2%	0 0.0%	70 87.5%	8 10.0%	2 2.5%	37 82.2%	6 13.3%	2 4.4%
Head teachers ensure monitoring and evaluation of physical facilities to ensure standards and safety measures in place	39 86.7%	6 13.3%	0 0.0%	11 13.8%	64 80.0%	5 6.3%	9 20.0%	33 73.3%	3 6.7%
The head teachers ensure there is totals adherence to the safety manual in the control of the physical facilities	40 88.9%	5 11.1%	0 0.0%	11 13.8%	62 77.5%	7 8.8%	12 26.7%	26 57.8%	7 15.6%
The head teachers involve all the stakeholders in decision making regarding the implementation of the physical facilities	40 88.9%	5 11.1%	0 0.0%	20 25.0%	49 61.3%	11 13.8%	10 22.2%	34 75.6%	1 2.2%
All physical facilities ins schools have been constructed with approval of public health and physical planners	40 88.9%	8.94%	1 2.2%	23 28.8%	51 63.8%	6 7.5%	19 42.2%	23 51.1%	3 6.7%
The head teachers avail the safety manuals and circulars from the ministry on safety and standards to teachers in schools	37 82.2%	7 15.6%	1 2.2%	25 31.3%	46 57.5%	9 11.3%	13 28.9%	1 2.2%	31 68.9%
The head teachers organize for training and induction course of safety committee in school	15 23.3%	28 62.2%	2 4.4%	28 35.0%	37 46.3%	15 18.8%	15 33.3%	23 51.1%	7 15.6%

The findings revealed that, majority of 97.8% head teachers, 87.5% teachers in charge and 82.2% parents' representatives agreed that, there is proper management and maintenance of the physical facilities in their schools. However, a significant number of 11.3% respondents disagreed while 2% were undecided. This implies that most of the head teachers ensured that, there is proper management and maintenance of the physical facilities in their schools. However, results also revealed that, there are those whose implementation is questionable, meaning that the state of physical facilities in their schools may be dilapidated .These results are in agreement with MOE (1999). that head teachers are responsible for all matters pertaining the smooth running of the school for example management of the physical facilities.

Further, results also indicated that 86.7%, head teachers strongly agreed, contrary to 80% teachers in charge and 73.3% parents' representatives who strongly disagreed that the head teachers ensured that there was monitoring and evaluation of the physical facilities. This implies that, the there is no proper monitoring and evaluation strategies set by the head teachers and therefore most physical facilities may be in a bad state hence exposing learners to accidents. Olembo (1992) posits that, facilities management is an integral part of the overall management of the school and head teachers are required to do monitoring and evaluation to ensure safety measures are in place.

In addition, results also revealed that, 70% head teachers, 77.5% teachers' in charge and 57.8%parents'representatives strongly disagreed that there is total adherence in the implementation of the safety policy. This means that the implementation of the physical

facilities policy has not been fully adhered to in most public primary schools. These results are not in line with the Public Health Act (1986), which recommends that all physical facilities used by learners, should be well ventilated, have proper lighting and wiring systems, enough water supply and windows not fitted with grills\wire mesh.

Further, results also revealed that, 88.9% head teachers agreed that they involve all the stakeholders in decision making regarding the implementation of the physical facilities. This is contrary to 61.3% teachers' in charge and 75.6% parents' representatives who strongly disagreed. This implies that, all the stake holders are not involved in decision making and therefore, the head teachers could be the only ones who evaluate the physical facilities hence the deteriorating conditions of most structures in schools. Furllong and Morrison (1994) are of the view that, challenges being faced in the implementation process should not only be handled by the head teachers but there is need to incorporate all stake holders in decision making. School alone cannot function as a ‘’panacea’’ while solving the different challenges.

Moreover, results also revealed that the head teachers 88.9% agreed that, physical facilities are constructed with the approval of the Public Health and Physical Planners. This is contrary to majority of 58% teachers in charge and parents' representatives who disagreed. This implies that, constructions are done without approval of the public health and the physical planners resulting to cracks on the walls and floors, sinking of weakly structured foundations or congestions arising from classrooms or dormitory sizes not reciprocal to the required ratios. Mbiti (2000), asserts that, safe design for buildings the

following features based on an approved architectural design. The right size, provision of fire escape routes in all buildings and installments of preventive gadgets.

It is further indicated that, 57.7% teachers in charge and 28.9 parents' representatives disagreed that, the head teachers availed the safety manuals and circulars from the ministry to their teachers. A significant number of 68.9% of the parents' representatives were undecided. However, the head teachers 82.2% agreed. Since majority disagreed, it means that, the safety manuals and circulars were not forwarded to the teachers implying that they were not updated with the current issues pertaining the implementation of the safety policy .It means that teachers are not in a position to implement the policy as required therefore subject learners to risky zones in school. PRISM Lead Team, (2002), head teachers have a role to play by ensuring that policy implementation succeed in school level. They are to liaise with all stakeholders in the implementation process

Finally, results revealed that, 62.2% head teachers, 46.3% teachers in charge and 51.1%parents' representatives disagreed that, the head teachers organized for training and induction courses for the safety committee in schools. However, 30% of the respondents agreed while 16% were undecided. This implies that most schools do not have training and induction courses for their committees and therefore most of them have limited knowledge and skills regarding the implementation of the safety policy. In addition, results also revealed that some schools have the training packages. The head teachers interviewed attributed it to lack of finances to facilitate the process (the government has not set aside funds for this programme). However, the few schools with the packages got

funds from elsewhere. According to UNESCO (2005), school facilities management requires experts in different areas who have knowledge and skills to assemble and utilize the available resources for efficient management of facilities, however, finance is the major challenge in most schools. Okumbe (2007), states that, management is the process of designing, developing and effecting organizations objectives so as to achieve predetermined organizational goals.

4.7 Challenges Faced in Implementing the Physical Facilities Safety Policy

The fifth objective of the study was to establish challenges faced in implementing the physical facilities safety policy. In order to achieve this objective, the head teachers, teachers in charge of physical facilities and parents' representatives were asked to give their opinions on the challenges facing the implementation process. Their responses are as illustrated in table 4.8 below.

Table 4.8 Responses on the Challenges of the Implementation of Physical Facilities Safety Policy.

Respondents	**Head teacher**			**Teachers in charge of Physical facilities**			**Parents Representative**		
	Frequencies & percentages			Frequencies & percentages			Frequencies & percentages		
	SA &A	SD & D	U	SA &A	SD & D	U	SA &A	SD & D	U
Lack of training on safety measure	44 97.8%	1 2.2%	0 0.0%	75 93.8%	4 5.0%	1 1.3%	40 88.9%	3 6.7%	2 4.4%
financial constraints	42 93.3%	1 2.2%	2 4.4%	65 81.3%	8 10.0%	7 8.8%	43 95.6%	1 2.2%	1 2.2%
Lack of knowledge and skills	44 97.8%	1 2.2%	0 0.0%	66 82.5%	8 10.0%	6 7.5%	38 84.4%	5 11.1%	2 4.4%
Lack of supervision on the construction of the physical facilities	39 86.7%	5 11.1%	1 2.2%	65 81.3%	5 6.3%	10 12.3%	44 97.8%	1 2.2%	0 0.0%
Lack of proper implementation strategies	39 86.7%	4 8.9%	2 4.4%	66 82.5%	6 7.5%	8 10.0%	38 84.4%	5 6.7%	2 4.4%
Safety committees lack awareness	35 77.7%	7 15.6%	3 6.7%	66 82.5%	7 8.8%	7 8.8%	39 86.7%	4 8.9%	2 4.4%
lack of management and maintenance	36 80.0%	7 15.6%	2 4.4%	65 82.5%	13 16.3%	2 2.5%	37 82.2%	5 11.1%	6 6.7%
Lack of community involvement	38 84.4%	5 11.1%	2 4.4%	65 82.5%	11 13.8%	4 5.0%	34 75.6%	5 11.1%	2 4.4%

Results revealed that, majority of 47.8% head teachers, 93.8% teachers in charge and 88.9% parent's representatives strongly agreed that lack of training on safety measures affected the implementation of physical facilities safety policy. This implies that the school safety committee lack training on safety measures and therefore were not able to implement the safety policy. This is in line with Republic of Kenya (1999), who noted that in-service and training is necessary for head teachers, DQASO and all practicing teachers charged with implementation of a new program. Olembo (1992), is in agreement that schools face problems of facilities as a result of poor management and maintenance skills due to lack of training.

It was also revealed that, financial constraint was another challenge that affected policy implementation. Majority of 93.3% head teachers, 81.3% teachers in charge and 95.6% parents' representatives strongly agreed. This implies that most public primary schools lacked funds to use in constructing the facilities that are safe for learners, purchasing the protective gadgets and also training and in servicing all stakeholders on safety issues, (Drerkx, 2000).

Further, results revealed that 97.8% head teachers, 82.5% teachers in charge and 84.4% parents' representatives agreed that lack of knowledge and skills was a challenge. This implies that the safety policy in schools has not been implemented because of lack of knowledge and skills by the management. UNESCO (2006), is in agreement that, to

formulate and implement a policy, is faced with challenges of adequate skills and knowledge among innovations in the formulation of school safety policies.

In addition, results also revealed that, 86.7% head teachers, 81.3% teachers in charge and 97.8% parents' representatives agreed that lack of supervision on the construction of the physical facilities affected the implementation process; however, 6.3% respondent disagreed while 1.3% disagreed. This implies that the schools were constructed without proper supervision by the relevant bodies like the MOE, Ministry of Health and Ministry of physical planners. This leads in constructing building not safe for learners. Earthman (2001), acknowledges lack of supervision as a challenge that influences the implementation process in schools. This could also be attributed to lack of funds to administer supervision process in different schools by the relevant bodies.

Results also revealed that, 86% head teachers, 82.5% teachers in charge and 84.4% parents' representatives agreed that lack of proper implementation strategies affected the implementation process. This implies that proper strategies have not been put in place by the government so as to make the safety policies implementation succeed. These results are in line with the views by the commonwealth secretariat (1991), that most fundamental problem in facility implementation and management is whereby the governmental fails to establish policy directive for infrastructural development in schools.

Results also indicated that majority of 77% head teachers, 82.5% teachers in charge and 86.7% parents' representatives agreed that lack of awareness by the safety committee affected the implementation process. This means the safety committee lack awareness on the safety committee. The safety committees are the ones to implement the policy but if they lacked awareness on safety, nothing will take place. According to UNICEF (2010), the aim of creating Child Friendly Schools is achieved by creating awareness and training to all stakeholders.

Majority of the 77.7% head teachers, 82.5% teachers in charge and 86.7% parents' representatives agreed that, lack of management and maintenance of the physical facilities affected the implementation process. This implies that most facilities in public primary schools were not well managed and maintained and thus could be attributed to the knowledge and skills by the safety committee. This could also be attributed to poor supervision like the DQASO and other relevant bodies who are to monitor the state of the different facilities in schools. It could also be attributed to the manager knowledge on safety measures. These results concur with the views of Taylor (2000), that facilities management is ensuring that all building support the operations of an organization. This is supported by Academic journals (2009), that actualization of goals and objectives are obtained through management and maintenance of the physical facilities in school.

Finally, results also revealed that majority of 84.4% head teachers, 82.5% teachers in change and 75.6% parents' representatives agreed that lack of community involvement was another challenge influencing physical facilities safety policy. This means that

community was not involved in issues related to school safety policy. The community are the stakeholders and can come up with how they want their to school be, as it pertains construction of the physical facilities. This means that the community is supposed to own and support the school. Furlong and Morrison (1994), posits that challenges in school safety implementation should not be handled by the head teachers only but all stake holders be involved so as to ensure school safety.

All the respondents agreed that all the eight challenges which entailed lack of training, financial constraints, lack of supervision, lack of implementation strategies, lack of awareness, management and maintenance were the major challenges in public primary schools that affected the implementations of the safety process.

From DQASO, findings showed that logistical reasons including inadequate means of transport, inaccessible schools, uncooperative head teachers, inadequate time to do inspection and laxity by MOE to monitor implementation process were other challenges. There was also failure by the MOE to act on issues forwarded to them by DQASO. In view of the above challenges that have affected the policy implementation it is not only the MOE to be blamed, but all the stake holders should not sit back and do nothing but should take action so as to solve the problems.

On the issues of financial constraints, the government had been providing a certain percentage to be used for the construction of certain facilities. This was found not enough, making the schools to construct facilities which were not to the required standard

measurers . The findings revealed that some schools had taken initiatives of conducting fund raising to substitute the little given by the government. Some schools in the district had also benefited from the Constituency Development Funds (CDF) and stimulus programmes. There were certain facilities which were constructed from the above funds. Some head teachers had solicited support from NGO's and church organizations to supplement what the government offered.

Republic of Kenya (2005) observe that funding agencies can be a source of suggested changes, by providing funds to use in the implementation such as safety policy. The autonomous agencies include NGOs, WHO, UNICEF, UNESCO, churches who are school sponsors among others. Figure 4.10 below are examples of school buildings funded by autonomous agencies with the aim of making them school of Excellence.

School Funded by Stimulus Programme.

School Funded by Community Development Fund.

Figure 4.10: Sample schools to illustrate government initiative in funding school physical facilities.

The challenges on lack of supervision were evident in most schools. This was starting from top to down. The study revealed that the government through the ministry of Education lack supervision process of the different physical facilities in schools. The relevant bodies like the Ministry of Health and Physical Planners do not supervise on the construction of the different facilities to ascertain if they conform to the required standard measures or not. Coming down to the school level, head teachers and stakeholders were reluctant in the supervision of the safety measures of the existing facilities. Lack of awareness on safety measures was evident in most schools.

Indeed, the challenges facing the implementation policy are overwhelming, but all stake holders should collaborate so as to curb the challenges. Adequate funds should be availed proper supervision be done, create awareness on safety and proper management and maintenance be done on the existing facilities. The government under MOE has the aim to implement the school safety policy in all schools but it has been affected by the above challenges.

This study, therefore, is in line with Assessment Report (2005), financial constrains, lack of training on safety measures, lack of supervision, lack of awareness, lack of knowledge and skills, lack of government directives, lack of community involvement and poor implementation strategies are challenges hindering implementation of safety process. UNICEF Kenya (2010), notes that in-service and training is necessary for head teachers, DQASO and all practicing teachers charged with implementation of a new program. Olembo (1992), adds that, there is an urgent need in the improvement of

school set objectives by upgrading of the management skills because any new program me must be implemented to attain its objective. Republic of Kenya (2005), observe that funding agencies can be a source of suggested changes by providing funds to the institutions. ROK (2002), WHO and UNICEF outlined the use of modern technology, institutional problems, lack of sector coordination, and poor maintenance as challenges in the implementation process.

4. 8 Chapter Summary

The chapter has reported the findings of the study. The areas covered included the response rate, the background information of the selected respondents which entailed head teachers, teachers in charge of physical facilities safety and parents representatives, cases of insecurity posed by the physical facilities, the degree of adherence to the laid down physical facilities safety policy standard measures, the methods applied to ensure the safety of learners, the roles of head teachers in ensuring the implementation of the physical facilities safety policy and finally Challenges of the implementation of the physical facilities safety policy. The next chapter provides summary of the findings, conclusions and suggestions for further research.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

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

5.1 Summary of the Findings

The purpose of this study was to investigate the challenges in the implementation of the physical facilities safety policy in public primary schools of Nandi Central District. The objectives of the study were; to find out cases of insecurity posed by the physical facilities, to assess the degree of adherence by schools to the laid down safety standards measures, to evaluate the methods applied to ensure safety of learners and finally to determine the roles of the head teachers in ensuring the implementation of the physical facilities safety policy. Respondents were the head teachers, teachers in charge of the school physical facilities, District Education representatives and parents' representatives.

5.1.1 Background Information

The respondents who participated in the study indicated that 98(54.4%) were females and 82(45.6%) were males. This shows that majority of the school safety committees were females. Results further indicated that the males dominated the post of head teachers. However, majority of the females 29(64.4%) were in charge of the physical facilities. Results further revealed that majority of head teachers 22(48.9%) had diploma and this implies that they had knowledge and skills that would assist them in implementing the

safety policy. Most teachers in charge of the physical facilities 33(41.3%) had P1 certificate. However, a good number of parents representative had diploma certificates. This implies that they are in a position to be appointed as Parents' representatives and be charged with the responsibility of making decisions regarding the implementation of the safety policy in their schools.

5.1.2 Cases of Insecurity Posed by the Physical Facilities

The study was designed to establish cases of insecurity posed by the physical facilities in schools. The findings from the respondents who participated in this study revealed that there had been rampant cases of roof destruction by wind according to 81.3% who strongly agreed whereas 15.7% disagreed. This shows that wind destruction have destroyed roofs of most schools. Further it was established that 72.3% of the respondents agreed that collapses of classroom endangered the learners in school. This implies that learners are exposed to use facilities that are insecure to them. The study found out that 67.3% of the respondents agreed that improper wiring caused electrocution to the learners. Another 64% of the respondents agreed that poor ventilation in the rooms affects learners' health and 62% of the respondents agreed that the state of floors, windows and walls posed insecurity to learners in schools.

The study also found out that there have been accidents emanating from fire outbreaks. This was according to 60% respondents. It indicates that, most physical facilities in schools have been constructed without adhering to the required safety measures, therefore exposing learners to unsafe conditions. Another 49% of the respondents agreed that there have been cases of death caused by congestion in the dormitories,

while 50% of Parents representative disagreed. This shows a few cases have been reported on dormitory congestion because most of the public primary schools are day schools and that boarding facilities are not required.

The findings from the DQASO who participated in this study revealed that, there were various cases of insecurity reported to their office and preventive measures had been put place so as to avoid occurrences of accidents. Observation indicated that, most schools had classrooms constructed without following the right size and position. Where classrooms were available, the conditions were not safe for the learners. Some classrooms had cracked walls, broken windows and rough floors. The toilets were available in some schools but not enough for the number of the pupils, showing that the right ratio was not followed. Some schools used pit latrines systems which were also unsafe especially for young learners. The fields for the recreational activities in some schools were not well leveled and too small and this was seen to be a cause of insecurity to the learners. In addition, play grounds were not well maintained and this posed threats to the safety of learners.

Further an interview administered to the District Education Officer, revealed that many cases of insecurity emanating from the physical facilities were cases reported to the District Education Office. This included inadequate classrooms, wind destruction, cracked walls, poor drainage and insufficient facilities to accommodate the large number of learners. Findings from the supervision carried in such schools showed that the required standard measures were not followed thus making them to be insecure to the

learners and all those who use them. According to Mbiti (2002), each school head must ensure that school safety standards are met.

A study by the 21st century school fund (2005), indicated that most fundamental problems in facilities management were lack of policy guides for infrastructural development in schools. The laid down rules and regulation should be derived from the policy guideline as in the physical facilities safety policy.

From these findings it was evident that, cases of insecurity still exist in schools emanating from the physical facilities. Therefore preventive measures should be put in place so as to minimize incidences of insecurity in schools, and that the required standard measures of the different physical facilities are followed. It should be a collective responsibility of all stakeholders to ensure safety of the learners in schools. The rules and regulation in the safety manual should be adhered to and the policy on school physical facilities safety be implemented.

5.1.3 The Degree to which Schools Adhere to the laid Down Safety Standard Measures Regulation of the Different Physical Facilities

The second objective of the study was to identify the degree to which schools adhere to the laid down safety standard measures. . According to MOE (2005), all physical facilities are to be appropriate, adequate and properly located. They were also supposed to be devoid of any risks to the users, also they have to comply with the provision of the Education Act (cap 211), Public Health Act (cap 242) and Ministry of Public works build regulations. The findings from the respondents who participated in this study revealed that 65% of the respondents agreed that schools have taken care of general

safety of the learners. Further, 82.5% teachers in charge disagreed that there was enough ventilation in the rooms. However, 65% of the respondents agreed that most of the classrooms had proper lighting. As regards buildings exceeding two storey 41% parents' representatives were undecided showing that they were not aware of the required standard measures to be put in place when constructing school facilities.

The study found out majority of the respondents 63% agreed that the recreational facilities were not safe for play for learners. This means learners were prone to accidents. They reported further that proper plumbing and drainage system was ensured but other schools did not have. Further 51.1% head teachers agreed that recreational facilities in their schools were adequate but teachers in charge and parents representatives disagreed that the facilities were inadequate hence learners were subjected to playing in an overcrowded place. It was reported that majority of 45% of the respondents were undecided on the congestion in the dormitories.

The study found out that most schools had taken care of the general safety of learners in the schools. The recreational facilities were found not to be safe for learners because the size was too small to accommodate the large numbers of learners. The playing fields were also rough and not well labeled and these were observed by the researcher (see observation table 4.9 pg 82).

Therefore, on the aspect of the degree of adherences to the laid down safety measures, proper supervision and monitoring should be done so as to enable the schools to adhere fully to the required standard measures. Adherence will help to minimize the cases of insecurity which are still reported in schools and make schools safe environments for learning. The school management should ensure that all the facilities are well ventilated and have proper lighting. Fencing and proper gate should be put in place so as to protect intruders from coming to school and for easy management thus ensuring security.

5.1.4 Methods Applied to Ensure the Safety of Learners in Public Primary Schools

The third objective of this study sought to identify methods applied to ensure safety of learners in public primary schools. The findings from the 67% of the respondents indicated that the schools did not have fire extinguishers. This means that majority of the schools had not installed fire extinguishers. Therefore learners were exposed to danger in case of fire outbreaks. In addition, majority of the respondents 66% disagreed that there was a school nurse. This implies that schools operate without nurses and cannot cater for emergencies. Further, 64% of the respondents disagreed that there were lightning arrestors. Moreover, majority of the respondents 64.7% disagreed that fire and other security alarms had been installed. This implies that structures in place do not meet the required standard measures hence expose learners to risks. It was also indicated that 64.7% respondents disagreed that schools have security guards to ensure safety. This means that majority of the schools do not employ security guards and trespasses are not taken care of. When this happens, learners may be exposed to dangerous people, substances or even kidnap. From the findings, all the respondents also disagreed that there were no emergency doors in all the physical facilities to cater for emergencies.

This meant that learners cannot access escape routes in case of emergencies. According to the safety manual guide (2005) all doorways should be wide, at least 5 feet wide, and they should open outwards. In addition they must not at any time be locked from outside when learners are inside. The dormitories should have emergency exit doors placed at the middle and labeled 'Emergency Exit". Further 53% of the respondents disagreed that schools had First Aid kit to cater for accident while majority (51.1%) of the parents' representatives agreed that the school had First Aid Kit. This means some schools had purchased them. In addition 57.5% teachers in charge disagreed that matrons and housekeepers were in schools. This was not necessary because most public schools were day and did not have boarding facilities. Results further revealed that 48.9% head teachers and teachers in charge agreed that schools had trained scouts and girls guide to cater for emergencies, but most parents representatives disagreed. This shows that, the parents' representatives lacked awareness regarding what goes on in schools. In addition 50% of the respondents agreed that there was provision of rubbish bins at strategic points. This implies that most schools have appropriate places for rubbish disposal and therefore most compounds are not littered.

From observations made, the study also found out that most schools in the district had not put in place safety measures like fire extinguisher, school nurses, lightning arrestors, fire / security alarms and security guards. ROK (2001), requires schools to put in place safety measures which entails the use of preventive gadgets. A high percentage of the respondents agreed that preventive measures were not in place. However this could be as a result of lack of finances to purchase the facilities, pay nurses or security guards.

5.1.5 The Roles of Head teachers in Implementation of the Physical Facilities Safety Policy in Schools

The fourth objective of this study sought to establish the roles of the head teachers in implementing the physical facilities safety policy in schools. The findings indicated that 89.3% respondents were of the view that, the head teachers did not ensure proper management and maintenance of the physical facilities. This implies that the facilities were dilapidated exposing the users to risky zones. In addition 86.7% head teachers reported that they did monitoring and evaluation of the physical facilities while 80% teachers in charge disagreed. It implies that head teachers do not monitor and evaluate the physical facilities. The study found out that head teachers opinions were contrary to the teachers in charge and parents' representatives. This implies that the head teachers fear being victimized on their management roles and therefore they concealed information.

Further 88.9% head teachers agreed that they ensure total adherence to the safety manual in the implementations of the safety policy, contrary to 77.5% teachers in charge and 57.8% parents' representatives who disagreed. It implies that head teachers do not adhere to the required safety measures as stipulated by the MOE safety manual. The study also found out that 88.9% head teachers involve all stakeholders in decision making while majority of 68% teachers in charge and parents representatives disagreed. This shows that head teachers do not involve all stakeholders in decision making regarding the implementation of the safety policy. This might be attributed to lack of transparency and accountability by the head teachers when constructing the different physical facilities.

The study found out that, physical facilities in schools were constructed without approval by the Public Health and Physical Planners. This was according to 58% respondents who disagreed. In addition, teachers in charge and parents representatives also disagreed that the head teachers avail the safety manuals and circulars from the Ministry on safety. However 82.2% head teachers agreed that they avail. This implies that they get the circulars but they do not take time to brief the teachers on issues related to safety therefore this derails the implementation process. The findings from the head teachers, who participated in this study, revealed that they do not organize for training and induction courses to the safety committee. This was according to 62.2% head teachers who disagreed. It implies head teachers did not administer their roles so as to implement the safety policy.

5.1.6 Challenges Facing Implementation of the Physical Facilities Safety Policy

The purpose of this section was to establish the challenges of the implementation of the physical facilities safety policy. All the respondents strongly agreed that the safety committee lacked training on safety committee according to 93.7% of the respondents. This shows that the safety committee lacked training and this affected the implementation process. The respondents reported that financial constrains was another major challenge according to 90% of the respondents. Funds are required for facilitating all process in any policy implementation. This implies that the policy implementation will not take place if funds are inadequate. It was stated by 84.7% respondents that, lack of knowledge and skills has affected the safety policy implementation. This implies that the safety committee lacked the required knowledge and skills in the implementation process.

Further, 88.7% of the respondents agreed that lack of supervision on the construction of the physical facilities affected the implementation of safety policy in schools. This implies that constructions in schools were done without proper supervision by the safety committee and were not within the required standards. According to 84.7% respondents, revealed that lack of proper implementation strategies was a challenge. This implies that there were no proper strategies by the relevant authorities so as to make the implementation process a success. It was also reported that, the safety committees lacked awareness to implement the policy. This means that the safety of learners in most schools was compromised. In addition, 81.7% of the respondents were of the opinion that, lack of management and maintenance was a challenge in the implementation of the physical facilities. This implies that the school physical facilities were not well maintained and were neither managed as per the required safety measures. Another 81% of the respondent agreed that lack of community involvement in the implementation process was a challenge. This implies that the community was not involved in making decisions as regards the school safety policy.

5.2 Conclusions

The first objective of this study sought to identify cases of insecurity posed by the physical facilities. Results indicated that there are still reported cases of insecurity in public primary schools posed by the physical facilities despite the safety policy in place. The cases included - roof destruction by wind which was a rampant cases reported to DEO officer, collapse of classrooms, .improper wiring, poor drainage and fire outbreaks and death as a result of congestion in the dormitories. It can be concluded that, preventive measures have not been put in place so as to minimize incidence of insecurity

in schools. It can also be concluded that, the required safety standards measures of the different physical facilities are not followed while doing the constructions. It can also be concluded that, implementation of the safety policy is partially done and this is a gap which needs to be filled. From the findings of this study, it can therefore be concluded that there are still cases of insecurity in most public primary schools posed by the physical facilities.

The study also sought to investigate the degree to which schools adhere to laid down physical facilities safety standard measures. From the research findings it can be concluded that majority of schools did not place much emphasis on the general safety of learners in the schools but were much concerned with academics. It can also be concluded that, some of the physical facilities ratios did not tally with the enrolments and therefore learners were subjected to extreme congestions. Further it could be concluded that the schools management did the construction without adherence to the laid down safety standard measures. It can therefore be concluded that most schools do not adhere to the required safety measures of the different physical facilities.

The study also sought to identify the methods applied to ensure the safety of learners in public primary schools. From the research findings, it can be concluded that, most schools have not put in place protective measures like fire extinguishers, school nurses, lightning arresters, first aid kits, matrons, scouts/girl guides and rubbish bins. It can therefore be concluded that, most schools have not adopted good practices that promote the implementation of the safety policy in place.

The fourth objective was to establish the roles of head teachers in implementing the physical facilities safety policy in schools. It can be concluded that, most of the head teachers did not administer their roles as required in the implementation process. It can therefore be concluded that, the implementation process is at stake and physical facilities have not been well maintained.

Finally the fifth objective sought to investigate the challenges facing the implementation of the physical facilities safety policy. It could be concluded that, lack of training on safety measures, financial constraints, lack of knowledge and skills, lack of supervision, poor management and maintenance of the existing facilities and lack of community involvement while constructing the physical facilities in schools lack of transparency and accountability by the school management are the challenges that derailed the implementation process. It can therefore be concluded that, the implementation process has not been achieved due to the above identified challenges.

5.3 Recommendations.

Based on the findings and conclusions, the following recommendations were proposed

1. Results revealed that financial implications were the major challenges that hindered the implementation of the school safety policy. This study therefore recommends that the government through the ministry of Education provides funds to used in the construction of different physical facilities. The trend should be that the government provides a special vote head ‘safety’ for construction, maintenance and repairs of the already existing structures.

2. The findings showed that constructions were done without following the required safety measures. This study therefore recommends that all physical facilities in existence and those to be constructed in schools should be approved by the MOE, Ministry of Public health, the Physical planners and other relevant bodies in order to ensure that they are efficient and safe. In addition, all the buildings should be equipped with protective gadgets like fire extinguishers, lighting arrestors, ventilations among others.
3. Since there were no clear safety policy guidelines in schools as revealed by the findings. This study therefore recommends that the policy makers should ensure that documents and manuals on safety are distributed from the head quarters down to grassroots levels (Education Offices and schools). Moreover, the MOE in conjunction with other relevant bodies should come up with strategies as follow up in order to assess the level compliance to the safety policy.
4. As there were no proper strategies in place to sensitize children on risk zones and precautions incase of emergencies or accidents; it is recommended that, special packages of training on safety be put in place in schools. The trend should be to incorporate safety issues in the school curriculum.
5. It was found that most schools do not have school safety committees. In order to oversee the implementation of the safety policy in place. This study therefore recommends that, all schools should form school safety committees who will be charged with the responsibility of implementing the safety policy.
6. As it is the head teachers' role to implement safety policies, results indicate that most head teachers have not diligently dealt with safety in their schools. This study

therefore recommends that the head teachers be made to ensure that schools are safe zones for learners. The trend should be close monitoring and evaluation by the MOE on the existing structures and those under construction.

5.4 Suggestions for Further Research

School safety is a wide area in that it deals with schools grounds, health and hygiene, food safety, safety against drug and abuse, safety of children with special needs, safety against child abuse among others. Due to its wide nature there is need to replicate a similar study in other areas of school safety.

Moreover, a study could be carried out in order to find out the effects of the school physical facilities on teaching and learning process. Further since this study was done in one district, there's need for a similar study to be replicated in other districts so that generalizations could be made on the challenges of the implementation of the physical facilities safety policy.

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APPENDICES

APPENDIX 1: INTRODUCTORY LETTER

INFORMED CONSENT LETTER

Department of Educational
management and policy studies,
Moi University,
P.O Box 3900, ELDORET.

Dear participant

RE: PARTICIPATION IN MY STUDY.

I am a post graduate student pursuing a master of philosophy degree programme in the department of educational management and policy studies, Moi University. I am currently conducting research for my masters' degree thesis on challenges facing the implementation of the physical facilities safety policy in public primary school in Nandi central district. May I kindly request you to participate in my study? Your responses to the items in the questionnaire will be treated with utmost confidentiality, and will not be used for any other purposes except this study. You are free to withdraw from this study at any time you deem fit. You may also request the researcher to inform you about the findings of this study.

Thank you very much for accepting to participate in this study. Please sign in the space provided on this letter.

Yours faithfully,

Korir Milka Jepkemboi

Researcher Date

APPENDIX II: INTERVIEW SCHEDULE FOR DISTRICT EDUCATION OFFICER REPRESENTATIVE

Section A: Background information

1. Gender Male[ ] Female [ ]
2. What is your position in the DEO office?
3. How many years have you served in this capacity?
4. What is your highest academic qualification? Masters Degree [ ]

Bachelors Degree [ ] Diploma[ ] Certificate[ ] Any other

Section B: Information on the implementation of the physical facilities safety policy.

5. Have you attended any in-service training for inspection concerning school safety? Yes [ ] N o[ ]
6. Who organize for this in-service training?

   MOE [ ] DEO [ ] Any other

7. Do you organize in-service training courses for Public Primary Schools Head teachers and teachers on school physical facilities?

   Yes [ ] No [ ]

8. How often do you carry out school inspection/supervision of the quality of the school physical facilities? Once per term[ ] Twice per term[ ] Any other
9. what are the challenges that affect the implementation of safety policy in schools?
10. What cases of insecurity are reported to your office from school?
11. What recommendation do you give about the challenges of the safety?

APPENDIX III: QUESTIONNAIRE FOR HEAD TEACHERS AND TEACHERS IN CHARGE OF PHYSICAL FACILITIES

Section A: BACKGROUND INFORMATION

Indicate by a tick (√) your correct response.

1) My school is: - Day school [ ] Boarding school [ ] Boarding and day [ ]

2) My school is: - Boys school [ ] Girls school [ ] Mixed school [ ]

3) I am Male [ ] Female [ ]

4) My qualification is: - SI /Diploma [ ] BA/BSC [ ] BED [ ] BSC/BA with PGDE [ ]

MED/MPHIL ED [ ] Untrained [ ] PI [ ]

5. Designation; Head Teacher [ ] Teacher [ ] Parent Representative [ ]

6. Teacher in charge of: - Games Facilities [ ] Boarding facilities [ ]

Sanitation [ ] Classrooms [ ]

Section B: Information on the physical facilities safety policy and its implementation

Section I; Cases of insecurity posed by the physical facilities.

The following are cases of insecurity posed by the physical facilities in public primary school. Indicate with a √ where you feel your view is appropriate in the responses below Strongly Agree (SA) (5), Agree (A) (4), Undecided (U) (3), Disagree (D) (2), strongly Disagree (SD) (1).

		SA	A	U	D	SD
1	Slippery floors are major causes of accidents in schools.					
2	Collapses of classrooms have endangered the learners in school.					
3	There have been accidents emanating from fire outbreaks					
4	Improper wiring in schools have caused electrocution to learners due to exposed live wires					
5	Weakly structured roofs have been the reason for the rampant cases of roof destruction by wind					
6	Poor drainage around school have provided leeway for floods					
7	There have been cases of death caused by congestion in the dormitories.					
8	Any other					

Give recommendations on what can be done in order to reduce or curb the many causes of insecurity in schools_____

Section II; Degree of adherence

The following are some of the characteristics that determine the conditions of the physical facilities in public primary schools. Using a (√) indicate where your view best suits in the responses below. 1. Agree 2. Strongly Agree 3. Undecided 4. Disagree 5. Strongly Disagree.

		SA	A	U	D	SD
1	Schools have no storied buildings exceeding two.					
2	Schools have adhered to proper wiring to avoid electrocution.					
3	Schools have proper lighting systems in the various physical facilities.					
4	There's proper ventilation in the rooms.					
5	There is proper plumping to ensure sufficient water supply in the schools.					
6	There are adequate recreational facilities in the school.					
7	The recreational facilities are safe for play for children.					
8	The school has taken proper care of general safety of learners in the school.					

Give recommendations that can be adopted to enable schools adhere to the required standard measures_____

Section III: Methods applied to ensure security of learners

The following are methods applied to ensure the security of learners. Using a √ indicate where your view is most appropriate from the following options.

Strongly Agree (SA) (5), Agree (A) (4), Undecided (U) (3), Disagree (D), Strongly Disagree (SD) (1)

		SA	A	U	D	SD
1	The schools have the fire extinguishers in place to ensure safety.					
2	There are emergency doors all psychical facilities to cater for emergencies.					
3	The school has a first aid kit to cater for accidents					
4	The school has trained scouts and girl guides as first aiders to cater for any emergencies					
5	There's the provision of rubbish / dust bins at strategic points to avoid littering of dangerous objects.					
6	Fire and other security alarms are placed strategically for use					
7	The school has well trained security guards to ensure safety.					
8	There's a school nurse to cater for emergencies.					
9	There are matrons and housekeepers to cater for security of learners in the dormitories					
10	Lighting arrestors have been appropriately placed in the various physical facilities.					
11	Any other					

Give recommendations that may be applied in order to ensure the security of learners in schools .----------

Section IV: Head teachers role in the implementation.

The following are the roles of the head teachers in the implementation of the physical facilities safety policy. Using (√) indicate the responses that best describe your view from the following options. Strongly Agree (SA) (5), Agree (A) (4), Undecided (U) (3). Disagree (D) (2). Strongly Disagree (SD) (1).

		SA	**A**	**U**	**D**	**SD**
1	The head teachers avail the safety manuals and circulars from the ministry on safety and standards to teachers in schools					
2	The head teachers involve all the stakeholders in decision making regarding the implementation of the safety policy					
3	All physical facilities in the schools have been constructed with approval of the public health and physical planners.					
4	The head teacher organize for training and induction courses for the safety committee in school					
6	The head teacher ensures proper management and maintenance of the physical facilities in the school					
7	Head teachers ensure monitoring and evaluation of physical facilities to ensure standards and safety measures are in place.					
8	The head teachers ensure there is total adherence to the safety manual in the construction of physical facilities.					
9	Any other					

Give recommendations on what can be done in order to improve on the head teachers' roles in implementing the safety policy in schools._____

_____

Section V: Challenges that influence the implementation of the physical facilities safety policy in schools

The following are challenges that hinder the implementation of the physical facilities safety policy. Using (√) indicate the responses that best describe your view from the following options. Strongly Agree (SA) (5), Agree (A) (4), Undecided (U) (3). Disagree (D) (2). Strongly Disagree (SD) (1).

		SA	**A**	**U**	**D**	**SD**
1	There are financial constraints which compromises the physical facilities standards in schools.					
2	Lack of training on safety measures affects the implementation process.					
3	Lack of supervision on the construction of the physical facilities brings the standard down					
4	Lack of knowledge and skill compromises the implementation of the safety policy.					
5	Lack of community involvement in the implementation process leads to many accidents in schools.					
6	Lack of proper implementation strategies has lead to many accidents in schools.					
7	Management and maintenance from all stakeholders is not in place.					
8	Safety committees lack awareness on safety measures					

Give recommendations on what can be done to reduce or curb the challenges that hinder the implementation process -

_____

THANK YOU

APPENDIX IV: OBSERVATION CHECKLIST

School_____Date_____Time _____

Section A: State of the physical facilities

Facility	**State**	
	According to standard	Not according to standard
Classroom		
Toilets		
Dormitories		
Kitchen		
Lighting		
Ventilations		
Bath rooms		
General safety of the school		

Section B: Other safety facilities in school

Facility	**Available**	**Not available**
Gate keeper		
Fire extinguishers		
lighting arrestors		
Play ground		
safety manual		
safety circulars from MOE		
A copy of the education Acts		
A copy of the public health act		
Inspection minutes from QASO		
Latest minutes of the safety committee in school		

APPENDIX VII: A MAP SHOWING NANDI CENTRAL DISTRICT

APPENDIX VIII: RESEARCH PERMIT

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THIS IS TO CERTIFY THAT:

Prof./Dr./Mr./Mrs./Miss MILKA JEPKEMBOI KORIR

of (Address) MOI UNIVERSITY P.O. BOX 3900, ELDORET

has been permitted to conduct research in .....Location, NANDI CENTRAL .....District, RIFT VALLEY .....Province,

on the topic Challenges of the implement-ation of the Physical facilities safety policy in Public Primary Schools. A case of Nandi Central District.

for a period ending 31ST DECEMBER 20 11

PAGE 3

Research Permit No. NCST/RRI/12/1/SS-011/42

Date of issue 31/01/2011

Fee received SHS 1,000

Applicant's Signature

Secretary National Council for Science and Technology

APPENDIX IX: RESEARCH AUTHORIZATION

REPUBLIC OF KENYA

NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

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

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

Our Ref: **NCST/RRI/12/1/SS-011/42/4**

Date: **31st January 2011**

Milka Jepkemboi Korir
Moi University
P. O. Box 3900
ELDORET

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Challenges of the implementation of the physical facilities safety policy in public primary schools: A case of Nandi Central District"*** I am pleased to inform you that you have been authorized to undertake research **in Nandi Central District** for a period ending ***31st December 2011.***

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

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

P. N. NYAKUNDI
FOR: SECRETARY/CEO

Copy to:

The District Commissioner
Nandi Central District

The District Education Officer
Nandi Central District