FACTORS INFLUENCING DISASTER MANAGEMENT PREPAREDNESS IN PUBLIC SECONDARY SCHOOLS IN NAKURU SUB COUNTY, NAKURU COUNTY

By

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DECLARATION

This research project is my original work and has not been submitted for a degree in any other university

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This research project has been submitted for examination with my approval as a university supervisor

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DEDICATION

This work is dedicated to my husband, Amos Norman Njuguna and our beloved son Arden Norman.

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I would like to absolve all individuals mentioned above for any errors of omission or commission or any interpretational error for these, I remain solely responsible.

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LIST OF ABBREVIATIONS AND ACRONYMS

DQASO	District Quality Assurance and Standards Officers
FEMA	Federal Emergency Management Agency
GoK	Government of Kenya
HFA	Hyogo Framework for Action
KRSC	Kenya Red Cross Society
MDGs	Millennium Development Goals
MOE	Ministry of Education
NGO	Non Governmental Organisation
NFPA	National Fire Protection Agency
TSC	Teachers Service Commission
UNDP	United Nations Development Fund
UNICEF	United Nations International Children's Education Fund
UNISDR	United Nations International Strategy for Disaster Reduction
USDE	United States Department of Education
UNESCO	United Nations Educational, Scientific and Cultural Organisation

ABSTRACT

This research focused on the factors influencing disaster management preparedness in public secondary schools in Nakuru Sub County, Nakuru County. Many of the schools still remain unprepared if disasters occur. There is a gap between policy makers and implementation in the ministry of education and the schools since the guidelines on safety in schools still seem an alien concept to many of the schools. The research was guided by the following objectives: to establish the extent to which school funding influences preparedness in disaster management; to ascertain to what extent entrenched corruption influences preparedness in disaster management and to establish the extent to which stakeholdersô participation influences preparedness in disaster management in public secondary schools in Nakuru Sub-County. The research was based on the Chaos Theory by Henri Poincare (1854-1912) whose premise is that systems sometimes reside in chaos, generating energy but without any predictability or direction. The target population of this study was the 25 Public secondary schools in the Sub County. The research used descriptive survey research as its research design so as to allow the researcher to obtain data that had not been manipulated. The Krejcie and Morgan table (1970) was used to select the sample of schools which was 24 public secondary schools. The principals, teachers, support staff, parents, school neighbours and students of the sampled schools were purposively sampled as respondents. Questionnaires and observation checklists were used to collect primary data from the respondents. A combination of both qualitative and quantitative analysis techniques was used to analyse the data. The validity and reliability of the instruments was tested through piloting. The findings indicated that most schools depend on M.O.E funds (56.6%) and school fundraisings (23.3%) to facilitate disaster management preparedness; school stakeholders are partially involved in the budgetary process in their schools and they thus, lack awareness on how school funds are utilised (40%). Furthermore, the stakeholders lack adequate training (59.8%) to enlighten them on disaster management preparedness. The study recommends that all schools adapt an all inclusive and participatory approach on disaster management preparedness to ensure accountability and transparency.

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

The United Nations defined disasters as óA serious disruption of the functioning of a community or a society causing widespread human, material, economic and environmental loses which exceed the ability of the affected community/society to cope using its own resources, (UNDP). A disaster is therefore an event or series of events, which give rise to casualties and/or damage or loss of property, infrastructure, essential services or means of livelihoods on a scale which is beyond the normal capacity of the affected community to cope with unaided. This event or events disrupt the normal patterns of life (or ecosystem) and extraordinary emergency interventions are required to save and preserve human lives and/or the environment. Disasters can either be manmade or natural, and either of slow or rapid onset, Kikuvi (2011).

These disasters are thus a result of combination of hazard, vulnerability and insufficient capacity or measures to reduce the potential chances of risk. Since disasters are unexpected events that cause great damage or loss of life, they can either be natural or man-made. Natural disasters include floods, fires, high winds, earthquakes, and drought. Man-made disasters include terror attacks, nuclear accidents, urban fires, technological accidents, human trafficking, environmental degradation and other emerging disasters, National policy, (2009). Disaster preparedness can be defined as activities, programs and systems developed prior to a disaster that are used to support and enhance mitigation of response to, and recovery from disaster emergencies (NFPA 1600).

According to a Federal Emergency Management Agency (FEMA) in the United States of America preparedness is defined as the leadership, training, readiness and exercise support and technical and financial assistance to strengthen citizens, communities,

states and local governments and professional emergency workers as they prepare for disasters, mitigate effects of disasters, respond to community needs after a disaster and launch effective recovery efforts. Disaster management aims to reduce or avoid the potential losses from hazards, assure prompt and appropriate assistance to victims of disaster and achieve rapid and effective recovery. Itôs made up of disaster preparedness, mitigation, response and recovery.

In the event of a school disaster, children are the most affected, schooling systems disrupted thus affecting a fundamental right of children, the right to education. Natural disasters affected millions of people in 2014. In China a 6.5 magnitude earthquakes hit Zhaotong in Chinaôs Western Yunnan Province in August 3rd. the third of four earthquakes to rock the province that year. It killed over 600 people. Nearly 155,000 were displaced and 268 schools plus roads and infrastructure were destroyed, World Vision (2014).

In the same year, Nigerian government decided to postpone the opening of all public schools till October from July to give schools enough time to prepare all safety measures needed to guard against the spread of Ebola virus. Meanwhile, in Liberia schools re-opened in February 2015 after a seven month closure of all schools due to the Ebola outbreak, UNICEF (2014).

In February, the Boko Haram attacked Federal Government College in Yobe state and left 59 studentsô dead and many more injured. The raiders stormed the dormitories and sprayed the students with bullets before setting the 24 buildings in the institution on fire. Two months later 279 girls were kidnapped in the town of Chibok in Borno state from school and taken into captivity. The Standard newspaper (2014).

In Kenya, on 22 November 2014 Al-Shabaab terrorists hijacked a Nairobi bound bus and executed 28 people in a chilling dawn attack. Of those 22 were teachers of different schools in the border towns. Learning in Mandera, Garissa and Wajir has been adversely affected since teachers refused to report back to work due to the attack.

The teachers cite insecurity as one of the major issues that the government of Kenya (GoK), Ministry of Education (MOE) and their employer the Teachers Service Commission (TSC) must address before they agree to return to work .The Standard newspaper (2015). Schools are an integral part of every society. They offer learning opportunities for students and employment for professionals in teaching, administration and support staff. Moreover they have other diverse uses like polling centres, meeting places, marking centres for national exams and even health centres.

As a result, itôs critical that schools be made safe for the students. Teachers, support staff and other individuals or groups that use these institutions. Security is not thus, a stand-alone capability; it should be handled critically continually reviewed and scrutinized regularly. Guidance for standard operating procedures in response to different types of disasters and emergencies is a pre-requisite for localization at the school and local community level. By planning in advance and anticipating school disasters, schools can ensure that the decisions made by different stakeholders on the day of crisis are not only made quickly and effectively, but they will be correct and automatic responses arising from pre-planning for school disasters.

In the U.S.A various approaches are used in enhancing safety in schools. School wide policies are effected to systematically address, the needs of students, school personnel, the community and physical plans of the school. The United States Department of Education (USDE) requires safety policies to be adhered to strictly. This is in view of threats posed by terrorism, drug related violence, proliferation of firearms and natural disasters like floods, typhoons and hurricanes. Cavanagh (2004) in a report on schoolsô response to the threat of terrorism notes that the implementation of schools safety and security in European countries has been influenced by tragedies. The September, 2004 school hostage crisis which led to the massacre of 320 children, teachers and parents at school Number One in Beslan, Russia led to the provision of military personnel to guard schools.

According to the Comprehensive School Safety framework in the U.S which has been widely endorsed, adopted and adapted to guide partnership work. Many stakeholders are recognized at all levels of government and society that are needed to make schools safe and ensure educational continuity, FEMA (2012). At the heart of the framework is child-cantered multi hazard risk assessment and itôs wrapped around by education sector policies and plans aligned to disaster risk management policies and plans. The holistic approach to school disaster management sees this embedded in education management at all levels. Itôs not response oriented instead it incorporates systematic, pro-active, risk reduction measures to reduce the need for external assistance.

In 2008, UNISDR shared a report on Disaster Prevention for schools: Guidance for Education Sector Decision Makers; identifying four goals of a comprehensive school disaster prevention programme. They included: to save lives and prevent injuries; to prevent interruption of education through disasters; to safeguard investments in school infrastructure and to develop citizenry able to reduce the social, economic and cultural impacts of disasters.

To achieve the Millennium Development Goals (MDGs) respond to the Hyogo Framework for Action (HFA) and to contribute to the achievement of Kenyaôs vision 2030 for sustainable development an effective disaster management system is important for creating a safe resilient and sustainable society, National Policy (2009).

The Hyogo Framework for Action is the first plan to explain, describe and detail the work that is required from all different sectors and actors to reduce disaster losses. It was agreed on and developed by the 168 partners of United Nations. Its goal is to substantially reduce disaster losses by 2015 by building the resilience of nations and communities to disasters. This means reducing loss of lives and social, economic and environmental assets when hazards strike. The Safety Standards Manual and Guidelines by the MOE provides guidelines for use in all Kenyan Schools. Chapter six of the manual incorporates the following main issues: - safety on school grounds, safety in physical infrastructure, Health and Hygiene Safety, food safety, Safety

against Drug Abuse, Social-Cultural environment of the school, Transportation Safety, Disaster Risk reduction and School ï Community Relation among other key components.

The National Policy on Disaster Management includes the enhancement of disaster awareness and disaster management capability by mainstreaming disaster Management education at all levels of institutional structural structures and training. The partial or total lack of the implementation of school safety policies has been a cause of concern. In India, a report Reuters (2004) documenting the Indian school fire of July 2004 blames the disaster in which 90 children died on failure to fully implement safety norms. The school building was overcrowded and had only one exit. There were no emergency doors or fire fighting equipment.

In Kenyan, history, secondary schools are susceptible to high incidents of fire because of carelessness, faulty electrical installation and even Arson. The Kenya Red Cross Society (KRCS) observes that secondary schools are vulnerable to disasters because of lack of specialized training such as fire drills, lack of appropriate fire fighting equipment, lack of adequate resources, lack of systematic disaster mitigation and response mechanisms (GoK, 2008). Lack of knowledge and awareness of the risk factors reduce the level of fire disaster preparedness in institutions. Omuterema (2009) study on ñMega store fire preparedness, response and mitigationò found that ignorance and lack of appropriate training for staff on fire safety and response is a major contribution to fire tragedies.

Safety policies may not attain perfect implementation due to factors in the school and outside of school. As soon as one policy objective is met, other safety needs emerged. Safety policy implementation is therefore a continuous rather than terminal process Nyakundi (2012). Absence of a central authority for integrated disaster management and lack of co-ordination within and between disaster related organizations is responsible for effective and efficient disaster management. State level disaster preparedness and mitigation measures are heavily tilted towards structural aspects and

undermine non-structural elements such as the knowledge and capacities of local people and related livelihood protection issues.

From the year 2010 several fire disasters have taken place in Kenyan Secondary School leading to destruction of life and property. They include Bungoma and St. Stephens Kisilu Schools in January; Kerugoya and Kolonya Boys High Schools in February; Malindi High School in July; Endarasha High School in Nyeri in October all these in 2010. Other recent cases reported include Nakuru High School in February 2011, Bunyore Girls 2011, Sacred Heart Boys Rongai in 2013 and Gilgil Girls Secondary School in 2013, Nyabisawa Girls in January 2015, St. Augustineôs Mixed Day Secondary in Tharaka Nithi in February 2015 among other disasters in schools.

1.2 Problem Statement of the study

School safety is an integral and indispensable component of the teaching and learning process. It is therefore important that educational stakeholders foster safe and secure school environment to facilitate learnersô environment, retention, completion and hence quality education (Republic of Kenya, 2008). In Kenya, there is neither a coordinated policy framework nor a legal basis for the current disaster management system. What exists is partly a spontaneous system, which has assisted the Government and its development partners (the UN system and other relief agencies) to respond to disasters in the country, such as the 1999-2001 droughts that affected more than 4.5 million Kenyans according draft national policy for disaster management in Kenya (2009)

The Secretary General of Kenya National Association of Parents said according to a report on disaster preparedness and security in schools carried out in 5,000 schools established that 96% of schools were prone to disasters. Respondents to the survey included teachers, support staff and parents, all of whom admitted that they had no capacity to deal with disasters and in general insecurity. The Nairobian (2015). A recent attack on a school in Pakistan by Taliban gun men that left more than 132 children dead should be a wakeup call for our countryôs security apparatus given the

attack. This is because schools are among the least protected institutions in Kenya, hence may come out as soft targets for terrorists. The Standard (2014).

Despite the inclusion of disaster management in the M.O.E schools safety standards manual, disasters still face our schools. School managers are thus advised to be vigilant at all times. Available literature reveals that most schools have no capacity to handle disasters and are yet to implement the M.O.E schools safety standards and recommendations on what should be done in disaster management in secondary schools of Nakuru Sub County. It also sought to assist in averting any impending calamity; enhance disaster management in secondary schools for the safety of the learners, teachers and other stakeholders involved in the day to day running of the schools.

1.3 Purpose of the study

The purpose of the study was to assess the factors influencing preparedness in disaster management in public secondary schools in Nakuru Sub County.

1.4 Research Objectives

The research study was guided by the following objectives:

i. To examine the extent to which schools funding influences preparedness in disaster management in secondary schools in Nakuru Sub County.
ii. To ascertain to which extent entrenched corruption influences preparedness in disaster management in secondary schools in Nakuru Sub County.
iii. To establish the extent to which stakeholdersô participation influences preparedness in disaster management in secondary schools in Nakuru Sub County.

1.5 Research Questions of the study

This study sought to answer the following research questions:

i) To what extent does school funding influence preparedness in disaster management in secondary schools in Nakuru Sub County?

ii) To what extent does entrenched corruption influence preparedness in disaster management in secondary schools in Nakuru Sub County?

iii) How does stakeholdersô participation influence preparedness in disaster management in secondary schools in Nakuru Sub County?

1.6 Significance of the study

Kenya as a country has been rocked by disasters over the years as indicated elsewhere above. Secondary schools have received been on the receiving end of these disasters yet time and again the schools like the country are caught unawares and lost for action. There is no known way to avoid disasters from completely occurring but there are numerous ways to mitigate and lessen the pain, loss and the extent of these disasters. This research explored the levels of preparedness in case a disaster struck and also raise awareness on the need to remain alert since danger is always laying in wait to strike. Secondary schools would thus be the primary beneficiaries of this research while the ministry of education, department dealing with special needs and disaster preparedness and the community at large would be the secondary beneficiaries.

The study provided useful information to the school administration, teachers and students on the need to be prepared for disaster in their respective schools in order to enhance school safety. In addition, it would also expose the roles of different stakeholders in the schools in disaster management and how an all-inclusive approach can be applied in disaster management in secondary schools. It would enable

education stakeholders and policy makers to assess the use of funds, critically monitor and evaluate disaster management in schools.

Further, the study would enable policy makers at M.O.E to develop a framework on Disaster Management. As well, the findings would enable stakeholders and policy makers to come up with strategies for preventing disasters in public secondary schools and form a basis for recommendation of any amendments to the National Disaster Management Policy. The findings of the proposed study would therefore have both theoretical and practical implications for the future of disaster management in secondary schools.

1.7 Assumptions of the study

The study was based on the following assumptions: The respondents provided truthful information about disaster management in their schools and the questionnaires were an adequate instrument for the study. The last assumption was that, the sample population was a true representation of the whole population and respondent rate would be 100%.

1.8 Limitations of the study

The study only explored disaster management in Nakuru Sub County due to constraints of time and finances. The questionnaire return rate was not 100% as assumed. Since preparedness in disaster management is a fairly new phenomenon school administrators are not very conversant with the emerging complicated and dynamic nature of school disasters. The school administrators might have also withheld important information or given dishonest information.

1.9 Delimitation of the study

The purpose of this study was to investigate the preparedness in Disaster Management in Nakuru Sub County. The researcher obtained the total population from data of 25 secondary schools and collected data from 24 secondary schools in the Sub County. The study was delimited to public secondary schools in the constituency. The research participants of the study were students, teachers, support staff and stakeholders. The study was also guided by five out of the thirteen key components of safety standards and guidelines as indicated in MOE safety standards manual (Republic of Kenya, 2008). These include the physical safety components; safety of schools grounds; safety on school infrastructure; safety in school environment; disaster reduction and health hygiene safety.

1.10 Definitions of significant terms

Corruption refers to the systematic use of public office for private benefit whose impact is significant on the availability and quality of educational goods and services and has a consequence on access, quality or equity in education.

Disaster refers to a serious disruption of the functionality of a community/society causing widespread human, material, economic or environmental losses which exceed the ability of the affected community /society to cope within its own resources.

Disaster management is the systematic process of using directives and operational skills as well as capacities to implement policies and improve coping mechanisms in order to lessen the adverse impacts of disasters in schools.

School Funds are the monies that the schools receive for the smooth running of the institutions

Guidelines are the recommended practices that the school should undertake to meet the safety standards set.

Physical infrastructure is any building put up in a school to facilitate learning.

Policy is a course of action taken by a government or school outlining the desired means for a desired end.

Preparedness refers to a continuous cycle of planning, equipping, exercising, evaluating and improvement of activities to equip schools administrators to respond to recover from and mitigate effects of a disaster.

Public secondary school refers to secondary schools that are established and run by the government.

School safety is measures undertaken by stakeholders in a school to prevent loss of life or reduce injury, destruction of property or cause disruptions in schools normalcy.

Stakeholder is any individual that has a role to play in a school that is Board of Governors, parents, sponsor and schoolôs neighbours.

1.11 Organisation of the study

The research study is organised into five chapters: chapter one consists of introduction of the study. It has the background of the study, statement of the problem, objectives of the study, research questions of the study, significance of the study, delimitations of the study, basic assumptions of the study and definitions of significant terms. Chapter two was on the literature review on disasters and disaster management in schools, international provisions on disasters; the global status, preparedness and response to disasters; Kenyaôs status, preparedness and response to disasters; funding of disaster management, influence of entrenched corruption on disaster management and stakeholders participation in disaster management. Chapter three comprised of the research methodology used. It included the research design, target population, sample and sampling procedure, research instruments, validation and reliability of the research instruments, data collection procedures and data analysis techniques. Chapter four consisted of data analysis, interpretation and discussion of findings while chapter five is on summary, conclusions, recommendations and suggestions for further research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section contains the reviewed literature of the studies carried out on the preparedness level of institutions on disaster management. It also included the theoretical framework, conceptual framework of disaster preparedness and management. Related theories that explain the area of study and the attributing variables were also be explored in this chapter. The chapter covered related studies on disasters preparedness and management outside and in African countries including Kenya. The forms and types of disasters, the factors heightening these disasters will be identified and the relationship between independent and dependent variables established in the conceptual framework. Lastly, the chapter dealt with the research gaps from the studies in the reviewed literature.

2.2 General Perspectives on Disaster Preparedness in Schools

A disaster is a serious disruption of the functioning of the society causing widespread human, material or environmental damage and losses which exceed the ability of the affected community to cope with using their own resources (ISDR, 2002). Danger has often resulted in disaster or disastrous events around the world; even in the face of advanced science and technology.

In any society, children represent hope for the future because of their direct link to youths and thus adults and families. Schools are universally regarded as institutions of learning, for instilling cultural values and passing on for both traditional and conventional knowledge to the young. Protecting our children from natural and man-made hazards, therefore, requires two distinct yet inseparable priorities for action: disaster risk education and school safety (ISDR, 2002).

The education sector is the breeding ground for our future leaders, experts and parents. A nation without well-groomed pupils at schools is subject to poor development (Nyerere 1977). In view of this, the education sector should be given a high priority in all aspects including disaster prevention, mitigation and preparedness. This can help to make sure that school surroundings are safe, with preparedness measures in place in case of any disaster. School communities should also be aware of what to do in case of any emergency. Since prevention is better than cure, preparedness is better than emergency response which most of the time is an ad hoc and creates a lot of problems leaving trauma to the victims.

In order to understand the education sector in regard to disaster and emergency mitigation, prevention and preparedness in secondary schools, the research focused in preparedness and management as well as prevention and protection steps in secondary schools. It will also examine strategies, policies and legislations dealing with safety and/or risk reduction in the education sector. It will look on how these are integrated with other sector indirectly or directly in the protection of school children and school community from hazards and emergencies.

Schools as educational facilities store flammables reading materials such as liquids and chemicals for laboratory tests. They are also connected to and use electricity and electrical material for different activities. With the understanding that students in these schools comes from different backgrounds with some of them having never seen or used some of these equipment found in schools, danger is always lurking. These students also have a tendency of experimenting on new things, are curious and hence may create potential hazards hence necessitating the proper emergency preparedness at schools.

2.3. International organizations provisions on disasters

International Humanitarian Law (Geneva conventions, 1949).It describes the critical tenets that guide humanitarian action and asserts the right to protection and assistance. The charter recognises that preparedness in the education sector advocates for

preservation of the right to life with dignity, protection against threats and availability of basic needs in case of disasters (Sphere standards project, 2004).

The United Nations Convention on the Right of the Child outlines the rights of children worldwide. It has five broad areas; Survival rights: these are basic rights to life and include shelter, food and medical care, Developing rights: these are requirements that enable a child to reach his/her fullest potential and include access to information, education and freedom of thoughts, play and cultural activities, Protection rights: these relate to safeguarding children from neglect and other forms of abuse, Participation rights: advocate for children to actively engage in various roles in their community and Environmental rights: every child has a right to a clean environment (UNCRC, 1989).

The United Nations International Strategy for Disaster Reduction (UN/ISDR) the two year secretariat (2006 ï 2007) and its partners made disaster risk education and safer school facilities the two key themes of the 2006-2007 World Disaster Reduction Campaign. The Campaign, entitled ñDisaster Risk Reduction Begins at Schoolò aimed to inform and mobilize Governments, communities and individuals to ensure that disaster risk reduction is fully integrated into school curricula in high risk countries and that school buildings are built or retrofitted to withstand natural hazards. The Campaignôs key partners were UNESCO, UNICEF, Action Aid International, the IFRC, and the ISDRôs thematic cluster on knowledge and education. (ISDR, 2006)ò.

The African charter of the rights and welfare of the child also advocates for mentally or physically disabled children to have the right to special protection in keeping with their physical and moral needs and under conditions which ensure their dignity, promote self-reliance and active participation in the community (UNCRC, 1989). Both the Humanitarian Charter, United Nations convention on the right of the child and the recommendation concerning the status of teachers affirm the importance of safety for school, school community and the pupils. It affirms that the safe environment is one of the contributing factors for better education environment at

school. The safe environment at schools will only come if people are aware and prepared, and more importantly are willing to spend more resources for disaster preparedness and prevention.

Floods have had devastating impacts on schools with as many as 350 schools and a student population of about 150,000 affected. UNICEF, (2007). Floods have severely damaged many schools, water and sanitation facilities, leaving behind a pungent smell and the risk of diarrhea diseases including cholera. The strong winds that accompanied the rain blew off the roofs in some schools in Emuhaya district compromising the safety of the students (UNICEF, 2007).

According to the International Strategy for Disaster Reduction (ISDR, 2010), in many earthquakes around the world, school buildings which were not built as per hazard resistant standards collapsed, causing severe setback to primary education. Earthquakes are one of the form disasters that have rocked schools around the world include. For example In Skopje, Yugoslavia in 1963, where 44 schools were destroyed (57 percent of school building stock); El Asnam, Algeria in 1989 where 80 schools collapsed or were severely damaged; Pereira, Colombia in 1999, whereby 74 percent of schools were damaged; Xinjiang, China in 2003, where dozens of schools collapsed; and Boumerdes, Algeria in 2003, where 130 schools suffered extensive to complete damage (ISDR, 2010).

2.4.1 School Funds and Preparedness in disaster management

Every school requires money and other resources for their daily operations. Usually these are provided by the government through various administrative layers .It has been noted that there exists a weak link between public education funding and educational outcomes. The main reason cited being in some cases, money allocated to schools by government does not reach the schools. (UNESCO, 2007)

Standardisation of financial procedures, homogeneous staff management regulations, harmonisation of procurement rules and adoption of an agreed format for production

of financial reports at the school and the intermediate authority can play a great role in promoting transparency.(UNESCO, 2007)

Kirui et al (2011) found out that the budgetary allocation for school safety in most schools was below 10% of the total school budget. This was due to competing interests in schools.

In cases of emergency, the release of funds often takes a long time due to complex government procedures. This leads to gaps and duplications, inappropriate assistance and inefficient use of resources. Budgetary constraints result in departments (both with a primary role and those with a secondary support role) having limited capacity to respond effectively with minimum resources (Nabutola, 2012).

The M.O.E in 2006, disbursed 810 million Kenyan shillings to all county boarding secondary schools to purchase fire equipment. National schools were left out since they had received similar funds earlier and sub county schools were left out because they are mainly day schools.(Nyakundi, 2012)This raised a major concern since sub county schools are the majority schools in all counties.

2.4.2 Corruption and preparedness in disaster management

According to a Transparency International report (2011), the United States and Britain suspended aid to Kenya for the education sector after reports of more than $1 million had gone missing. The Treasury followed the paper trail to the schools where the money was disbursed and discovered that the monies never reached the schools. Itôs unfortunate that money meant for public education was diverted into private accounts resulting to student paying school fees when school is supposed to be free.

Access to information by the public at large is indispensable for building participation, ownership and social control. The school must be sufficiently well informed not only to be able to detect fraud, but also to claim what they are entitled to. Combating corruption requires clear norms and regulations, transparent procedures and explicit policy framework specifying for each of the steps involved, the distribution of

responsibilities between different stakeholders in the allocation, distribution and use of educational resources. (UNESCO, 2007)

Preparedness in disaster management has been downplayed by school administrators, Board of governors, DQASO and parents. This is evidenced in the selective provision of safety measures, inadequate funds allocation, high handedness by the administration, inefficient use of resources and low level of awareness in disaster management in schools (Nyakundi, 2012) This results to schools having limited capacity to respond effectively to disasters when and after they occur.

The DQASO also have been reported to show selective school inspections since they have too many schools to visit and inspect which leads to the recommendation for promotions of only a few select school administrators (Nyakundi, 2012).

In the absence of clear policy framework, Kenyaôs disaster management lacks a definitive planning structure or approach. This is reflected both in the lack of legislation and in the setting of priorities in government expenditure allocations. The draft policy fails to take into account the need of adequate personnel at national, county, location, sub-location and village levels; the absence of or limited available guidelines to public and private sectors at national/county levels on their roles in disaster management criteria for state intervention are based on the magnitude of the event instead of the needs of the communities affected by the events and absence of contingency plans or with these plans which lack preventative and mitigative measures (Nabutola 2012). All these factors facilitate the misappropriation of funds and misallocation of resources meant for disaster management in the country.

Schools are not only expected to play the essential role of offering formal education, but must also protect children in the event of hazards. Investing in preparedness (Prevention and protection of hazards) before disaster occurs reduces long term cost, protect the generation of children and ensure education continue after events (ISDR, 2006)

2.4.3 Role of stakeholders in disaster management

The priorities of the HFA include to ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for action; to identify, assess and monitor disaster risks and enhance early warning; to use knowledge, in innovation and education to build a culture of resilience in communities, UNISDR (2012) All the 168 member states of the United Nations are expected to meet these priorities by 2015. The Participatory Vulnerability Analysis (PVA) tool according to an Action Aid report 2009, is a tool for building awareness and understanding on why disasters happen and how they can be reduced. This shared analysis helps assign roles and responsibilities to different actors so that in the event of a disaster, communities can hold these actors to account.

In Haiti, PVA exercises have successfully contributed to change in the way the local communities approach disaster management, helping them undertake initiatives to reduce risks and protect themselves. In Bois-chadeque, in the south east part of the country, parents were engaged in building a protective wall around a local school commonly used as a community shelter in emergency events. In Kenya, the MOE, principals of schools, communities, schools, relevant ministries and NGOs have a role to play in the reconstruction of education during and after a disaster, Kikuvi (2011).

Achoka and Maiyo (2008) governments and communities need to formulate legislations specific to disaster preparedness in schools which should be considered when developing plans. Embrace continuous integration, coordination, training of all school and community members which remain the key to the reduction of death and injury in any school or community disaster.

Bishop Lawi Imathiu of Kenya was a chairman of the commission of inquiry that probed the Bombolulu Secondary School fire incident in 2000. Among other things, he proposed that school managers should avoid crowding dormitories. In 2001, during the Kyanguli Secondary School fire, the dormitory had 130 students, apparently, above the required capacity of 80 students. Such overcrowding could have been

avoided. If the number of students in the dormitory had been smaller, the number of deaths would have been lower Rowan, (2001). Other recommendations from the commission were provision of exit routes in every dormitory and hostel which should not to be locked from outside when students are inside.

The fire incidents at schools seem to have similarities in several aspects. The fire safety regulations are not effectively enforced due to several reasons. The issue of non-adherence to the building codes has been manifested in several cases, a situation which hinders accessibility of fire vehicle to reach incident site, hence failing to fight the fire. Lack of emergency exit doors is also very common. Furthermore school unrest, lack of awareness of school management and parents on matters relating to fire safety, contributed to fire incidents in most of the African secondary schools. The closure of schools, damage of school properties, death, injuries and trauma are very common depending on the magnitude and severity of the fire itself (Blackaby, 2007).

The magnitude and severity of the fire varies depending on the level of preparedness. In this regard, most of the secondary school fire incidents in developing countries had severe impact on human being due to the poor level of preparedness. While school management, parents and children themselves need to be keen on the safety of school environment, United Nations agencies and other humanitarian organizations have been advocating for school safety. The protection of children from disaster has been alluded to in the Humanitarian Charter and the staff writer of the website dealing with safety issues, safety products and safety tips in community (safetyissues.com), said that ó*If you trust a school to educate your children and to house them you would not want to worry about fire in the dormitories of college and school (*Blackaby, 2007).

This raises a lot of questions to the parents and guardians. Do they really trust the school, which educates their children? Are they aware about fire preparedness? If the answer is yes, how many times the parents have visited the school asking questions or advising about the safety features at school; talked to students and teachers about fire drills asked them if they have experienced fire at school?

The parents are part and parcel of school community. They have a responsibility to advise the school management on any important issue, particularly, the safety of a school in general. All together, they have to be fire wise; therefore protect and prevent fire in the schools (Blackaby, 2007).

According to a report on Nairobi, (IRIN 2010) Kenyaôs failure to put in place a comprehensive disaster preparedness policy means its response to high risk tends to be slow, poorly coordinated and unnecessarily expensive. Most of the disaster responses have not been sustainable as they have dealt with outward symptoms and not the underlying causes of the problem.

2.4.4 Challenges facing implementation of guidelines

According to the draft national policy in Kenya, owing to lack of a co-ordinated policy framework, to give strategic guidelines on disaster management the existing institutional framework for disaster management is heavily weighted towards emergency response. Other concerns raised in the draft policy include inadequate information and data, inadequate funding, weak disaster management capabilities within communities and institutions, poor governance and lack of political will.

In the absence of clear policy framework, Kenyaôs disaster management lacks a definitive planning structure or approach. This is reflected both in the lack of legislation and in the setting of priorities in government expenditure allocations. The draft policy fails to take into account the need of adequate personnel at national, county, location, sub-location and village levels; the absence of or limited available guidelines to public and private sectors at national/county levels on their roles in disaster management criteria for state intervention are based on the magnitude of the event instead of the needs of the communities affected by the events and absence of contingency plans or with these plans which lack preventative and mitigative measures (Nabutola 2012).

As a result most of the disaster responses have not been sustainable as they have dealt with outward symptoms and paid little attention to the underlying causes of the problem, Kikuvi (2012).

2.5 The global status, response and preparedness to disasters

Rising frequency, amplitude and number of natural disasters and attendant problems coupled with loss of human lives like the Mexico earthquake of 1985, prompted the general Assembly of the United Nations (UN) to proclaim 1990s as the international Decade for Natural disaster reduction (Alexander, 2002). Man-made disasters are a major contributor to human suffering. The Columbine High school Massacre of 1999 where two senior students killed twelve students and one teacher and then committed suicide was one of the deadliest disasters in the United States of America. Brown (1999).The response from this disaster in USA was however swift with schools adopting new security backpacks, metal detectors and computer generated identity cards among others.

Further, in 2007, more than 30 people were killed on the campus of Virginia Polytechnic Institute, the worst such rampage in U.S. history (De Voe, Ruddy, Miller, Planty, et al, 2004). Other countries as far apart as Australia, Belgium, France, South Africa, and the United Kingdom have, in recent years, experienced tragic events in schools that have alarmed communities and governments alike. Disaster occurrences greatly hamper the education process in many ways such as loss of lives and injury, social upheaval, school property damage and closings, and often with children having to leave school for long periods in the recovery period - their families needing their help in meeting basic needs (FEMA, 2007). Some of the children may not get another chance to attend school, which is tragic deepens the vicious cycle of educational lack and vulnerability. Another common type of disaster in schools globally is fire. Fire incidents in secondary schools have been happening worldwide, and no country is spared from this problem. Though the magnitude and severity differ from one country to another, the awareness and preparedness level do differ. United Kingdom, one of the developed countries has also experienced several fire incidents in schools.

According to the survey conducted in United Kingdom by Arson Control Forum in 2006, nearly half of all secondary schools surveyed had experienced a fire serious enough to call fire and rescue services in the past three years. Arson Control Forum, (2006).

The Government of UK however moved swiftly and has created awareness to school children through providing fire safety education and give advice on fire prevention, risk assessment, evacuation and anti ï arson measures. Arson Control Forum, (2006). Despite of these prevention and protection measures in place, fire and rescue services in England and Wales attend around 1200 school fire episodes every year Arson Control Forum, (2006). The survey results by the Arson Control Forum showed that 64 percent of the schools they taught fire safety education and 62 percent had taken some precautions against fire. Fire incidences in schools were reported to have long term and short-term impacts depending on the magnitude and severity of the fire itself.

Some of the common effects noted were temporary closure of schools, disruptions of lessons, loss of teaching notes, and loss of morale amongst teachers and pupils and negative publicity of the school. The most common causes of schools fires in England and Wales were identified to be of two types, the one started by suspicious or deliberate circumstances or accidental. Arson Control Forum, (2006). The suspicious or deliberate circumstances are like setting fire on the bin, toilet rolls or paper, rubbish or litter. The accidental fire causes are careless disposal of cigarette butts. Arson Control Forum, (2006).

Still in U.S.A the cases of fire in secondary schools have decreased tremendously, which reflects the high level of preparedness which is in place. A Report from United States Fire Administration, National Fire 2007 revealed that there were no reported school related fire deaths in 2007. This does not mean that there were no fire cases in secondary schools, but the impact to the life of people was minimal. This situation is contributed by the enforcement of policies and strict monitoring. Fire drills and fire education in schools are taken very seriously. United States Fire Administration,

(2007). These fire accidents both the USA and United Kingdom have some similarities, in both prevention and protection measures, as both awareness and equipment have been put in place. Preparedness reduces the severity of the fire accident to the people and properties. There is significant reduction in death cases in most of the fire accidents in UK and USA compared to other countries.

Fire emergencies that happen in schools might directly or indirectly deprive the survival, development, protection, participation and environmental rights of children, as stipulated in the convention on the rights of children. The right of teachers according to the 5th October 1966 recommendation concerning the status of teachers by UNESCO in collaboration with ILO, in Paris, France, among other things stipulates the safety to teachers in regards to school buildings in two tiers, school buildings should be safe and attractive in overall design and functional layout; they should lend themselves to effective teaching. They should be constructed in accordance with the established sanitary standards and with a view to durability and easy, economic maintenance. Authorities should ensure that school premises are properly maintained, so as not to threaten in any way the health and safety of pupils and teachers (ILO/UNESCO, 1966).

2.6 Disasters in other African countries.

In Africa, fire cases in secondary schools are very common and frequent. For example, in 2001, fire gutted a girl secondary school in Gindiri village, Northern Nigeria (Independent newspaper, March 2001), which killed twenty-three students and injured fourteen. Students were trapped in the dormitory because it was locked and fortified with iron bars and a chain. Local residents managed to save some of them by opening a bathroom door. The fire was caused by overturned kerosene lantern (Independent newspaper, March 2001).

In Uganda, in March 2009, a dormitory of Alliance Secondary School in Ibanda district was gutted by fire and property worth millions of Uganda shillings was destroyed (New Vision, March 2009). Despite Police Fire Unit arrival at the fire

scene, the truck could not be driven closer to the dormitory because of lack of access (New Vision, March 2009). In April 2008, fire gutted Ugandan Budo Junior School near Kampala and at least 19 girls and two adults died. It was not clear how many children were in the room. It was established that the hostel doors were locked from outside (BBC, 15th April 2008).

In March 2008, Maracha Secondary School in Maracha Terengo district in Uganda was gutted by fire at 7.30 am and two boysô dormitories were burnt (New Vision, March 2008). There were no injuries but properties of students and school were destroyed. A land dispute involving the school and the community and animosity among teaching staff were suspected to be one of the causes that led to fire (New Vision, March 2009). In July 2006, thirteen children were killed and several injured when fire gutted an Islamic Secondary School in Western Uganda (New Vision, July 2009).

2.7 Kenya's status, preparedness and response to disasters

In Africa, violent incidences have been reported mostly in South African black-township schools and in the killings and destruction in Kenya (NACADA, 2002). Students are victims of a spectrum of problem behaviors at school, ranging from minor disciplinary problems to criminal victimization. With the tropical climate and unstable landforms coupled with a high population density, poverty, illiteracy and lack of adequate infrastructure, Kenya is one of the most vulnerable developing countries to suffer very often from various natural as well as technological (human-made) disasters which strike causing a devastating impact on human life, economy and environment (Alexander,2002). These disasters include drought, floods, fires, landslides, transportation accidents, terrorist attacks and the post- election violence to mention but a few. For instance, during the 1997ï 1998 El Niño events, most parts of Kenya and schools were affected. Sinclair (2002) noted that education can be part of a solution to crises, and that the absence of education will be destabilizing locally and maybe a threat to regional and global security.

In Kenya and specifically Nakuru County, where schools are mushrooming in all corners with very little control mechanisms, disasters at schools is a time bomb. Those concerned with regulating, registering and authorizing establishment of schools either do not their jobs or corruption reigns supreme. Schools are not only expected to play the essential role of offering formal education, but must also protect children in the event of hazards. Investing in preparedness (Prevention and protection of hazards) before disaster occurs reduces long term cost, protect the generation of children and ensure education continue after events (ISDR, 2006). According to the International Strategy for Disaster Reduction (ISDR, 2010), in many earthquakes around the world, school buildings which were not built as per hazard resistant standards collapsed, causing severe setback to primary education.

In July 10th 2008, Mitaboni ABC High School in Machakos district was closed and 500 students were sent home after fire gutted a dormitory. On 10 June 2008, Mukuunu Secondary School students in Eastern province in Kenya attempted to burn their school but did not succeed (Daily Nation, 2009). Several commissions of inquiry formed in Kenya after every fire incident, which identified causes of the fire and gave recommendations for avoiding such incident from happening again. There is no evidence as to whether the recommendations were taken seriously. In addition, 26 primary schools and four secondary schools in different parts of the country were burnt (Ministry of Education, 2008). Such incidences call for schools to be adequately equipped to deal with disasters. Nderitu (2009) notes, despite the stringent safety measures put in place by schools, disasters still occur. However it is the degree of preparedness of the schools' entire system that makes the critical difference. It is, therefore, imperative that educational stakeholders foster disaster preparedness to either minimize or eliminate risky conditions or threats.

Education in a crises and post crises is a human right, promoting personal development and preparedness for responsible citizenship, it can provide protection from harm and itôs needed to prepare for reconstruction, social and economic development, Sinclair (2002). During the post-election violence of 2007/2008 schools

and the entire education sector was hugely affected from the destruction of schools, displacement of learners and teachers. Statistics by the Ministry of Education (2008) indicated that a total of 62,848 primary school pupils and 9,200 secondary school students were displaced as a result of the violence. These clashes also affected Nakuru schools as the displaced persons were also temporarily settled in these schools.

Nyakundi et al (2014) notes that the perceived selective provision of fire equipment, inadequate funds, ignorance and low level of awareness in disaster management were cited as challenges in implementation of safety standards for schools.

According to Giddens (1991), the body is in some sense perennially at risk even in the most familiar surroundings. This shows the inseparability of danger and humankind and by extension the inevitability of disasters. Munyasi (2002) noted how disasters are disruptive to life such as when earthquakes, floods, lighting, drought, and fire effecting child care, health, nutrition, water supplies, hygiene and sanitation, food production, shelter and security. From such negative impacts disasters have on the lives of those affected, there is an urgent need for improved disaster reduction, management and preparedness strategies.

Monitoring and evaluation on school safety standards and guidelines to enhance preparedness on disaster management is a challenge in schools since most schools lack an internal mechanism to monitor and evaluate disaster management. Additionally, 26 primary schools and four secondary schools in different parts of the country were burnt (Ministry of Education, 2008). Such incidences call for schools to be adequately equipped to deal with disasters. It is, therefore, imperative that educational stakeholders foster disaster preparedness to either minimize or eliminate risky conditions or threats.

In 1998 there was the Bombolulu Secondary School disaster in which 23 girls were burnt to death. Then in 1999 there was the Nyeri High School tragedy where fellow students attacked and killed four prefects. Machakos Girls High School a student lost

her life in an accident while travelling from the Drama festival which had been held in Nairobi. This made the state to issue a circular requiring all school teams to travel only during the day, before 6.00pm (Orido, 2010). High fatalities in these tragedies seem to suggest that schools are not adequately prepared or are ill-equipped to deal with disasters. Efforts by the government of Kenya to formulate the National Disaster management policy to emphasize proactive and preventive strategies in addressing disaster situations seems not to be bearing fruits.

2.8 Theoretical Frame work

The study was based on the chaos theory by Henri Poincare (1854-1912) He explained that small differences in the initial conditions produce great ones in the final phenomenon. Thus an error in the former will produce an enormous error in the latter and therefore prediction becomes impossible. Gleick (1987), states that Chaos theory is a scientific principle describing the unpredictability of systems. Its premise is that systems sometimes reside in chaos, generating energy but without any predictability or direction.

According to Bower (1988), chaos is the irregular, uncertain discontinuous aspect of change within the confines of a patterned whole. He further notes that as a qualitative study, chaos theory investigates a system by asking about the general characters of its long time behavior, rather than arriving at numerical predictions of its exact future state. This meant that disaster and emergency situations epitomize the unpredictability or the non linearity of human events. Disaster management in schools involves different stakeholders i.e. students, teachers, non-teaching staff, parents, B.O.G and schoolsô communities who need to be coordinated to reduce vulnerability to disasters for schools. Disaster management includes mitigation, preparedness, response and recovery. It therefore requires interaction of different stakeholders and at all levels of disaster management.

2.9 Conceptual Framework

This is a model of presentation where researchers present the relationship between variables in study and show the relationship graphically or diagrammatically. Ideally all schools should adhere to the schools safety standards and guidelines manual to enhance disaster management and ensure safety as indicated in the conceptual framework next:

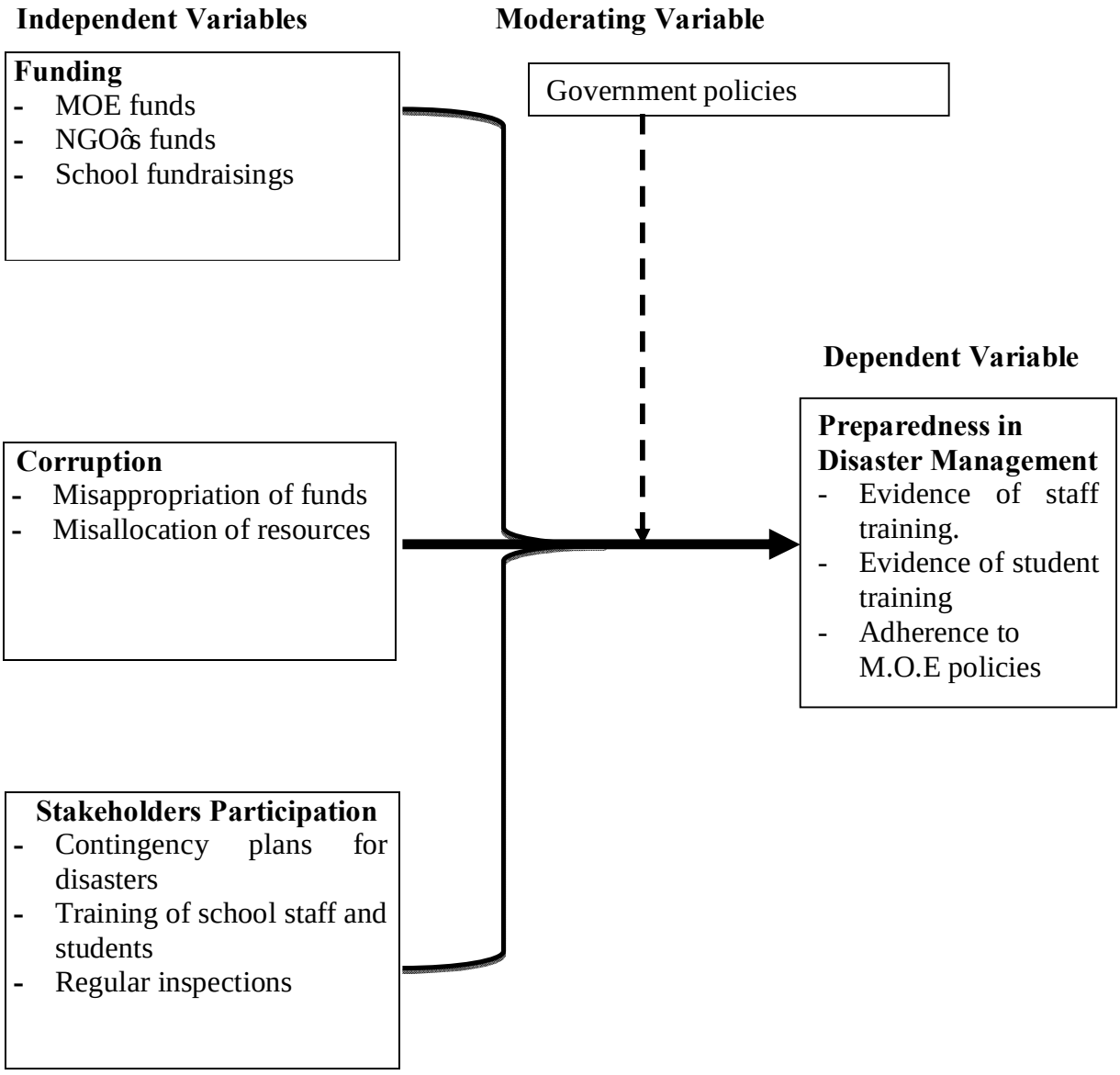


Figure 2.1: Conceptual Frame Work

The conceptual framework illustrated the dependent and independent variables of the study. Disaster management in schools is determined by a composite of various variables. The government formulates such policies like the National Policy on Disaster Management (2009) the Education Acts (1980). Public Health Act (9186). Public Works Building Regulation and the MOE safety standard manual (2008) which gives direction concerning safety in all educational institutions which must be strictly followed to ensure school safety guarding against disasters in schools.

The school administration should ensure the Ministry of Public Works Building Regulations especially in the development of school infrastructure are adhered to. School administrators should ensure that adequate funding is available for disaster management and that these funds are prudently managed. It should ensure that teachers, students and support staff are not only exposed to disaster management skills but are also involved in their practice. School management should ensure that all stakeholders are involved in disaster management preparedness to foster the creation and maintenance of safe schools.

2.10 Research Gap

Disaster management in schools is a fairly new and dynamic concept that most school administrators have to accept and include in their schools. Though similar studies o the implementation of school safety guidelines Mwangi (2008); Omolo and Simatwa (2010) ;Nyakundi (2012) and Kikuvi (2011) this research sought to give insights on the roles of M.O.E, teachers, students, support staff and Board of Governors on preparedness in disaster management in Nakuru Sub County since no such study has been undertaken in the county. The study sought to add to the existing knowledge on school safety strategies to ensure uninterrupted learning, reduce loss of life and destruction of school property that is caused by disasters.

2.10 Summary of Literature Review

The literature review was based on the three objectives as seen in the conceptual framework. It was also based on the chaos theory propounded by Henri Poincare (1854-1952).The literature review done indicated that disasters throughout the years have continued to be a challenge to schools and the larger community. With their massive increase and dynamic nature, many have come up with different mechanisms to mitigate against them; Kikuvi (2011). The review gave a critique of the literature, international provisions on disaster management, the influence of school funds on disaster management, the influence of corruption on disaster management and the influence of stakeholders participation on disaster management. It also looked into challenges facing implementation of preparedness in disaster management, the global status, preparedness and response to disasters, Africaôs status, preparedness and response and Kenyaôs status, preparedness and response to disasters. Omolo and Simatwa (2010) noted that persistent recurrence of safety problems in public schools posed serious questions that demand urgent answers if similar cases are to be avoided in future. In light of this, this research sought to investigate the factors influencing preparedness in disaster management in public secondary schools.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The study sought to investigate school disaster preparedness and management in public secondary schools. This chapter describes the research design, location of the study, target population, sampling procedures, research instruments and piloting. It will also deal with data collection procedures and methods of data analysis.

3.2 Research Design

The descriptive survey research design was used to collect factual information in preparedness for disaster management in public secondary schools. It was relevant because it enabled the researcher to collect data from a sample of informants that was used in the study.

According to Orodho (2009), survey design is the most frequently used method for collecting information about peopleôs perceptions, attitudes, roles and values or any of the variety of education or social issues. The design is in agreement with the views of Gay (1992), who proposed that it is used to assess attitudes and opinion about events, individuals or procedures. Therefore the survey design was used to collect information from principals, staff, stakeholders and students in Nakuru sub county, Kenya, on the factors influencing disaster management preparedness in public secondary schools. Descriptive Survey design research was suitable because it sought to obtain information that describes existing phenomena by asking respondents about their perceptions, attitudes, roles and values on the preparedness for disasters in schools.

3.3 Target Population

Target population refers to the population which the researcher will use to generalize the results of the study, Mugenda and Mugenda, (2003). The target population for this study was public secondary schools in Nakuru sub county, Nakuru County, Kenya.

There are 25 Public secondary schools that the study focused on. The sub county was chosen since no study on preparedness for disasters management has ever been carried out in the sub county.

3.4 Sample size and Sampling Procedures

A sample is a small group obtained from the accessible population, Mugenda and Mugenda (2003). The research studyôs sample was 24 public secondary schools calculated according to Krjcie and Morgan table (1970).The schools were selected through simple random sampling.

The school Principals of the 24 public secondary schools were purposively sampled and comprised the principalôs sample. The school staff sample was purposively sampled to include 2 teachers and 2 support staff members. The teachers sample was made up of a class teacher and a guidance and counselling teacher. The support staff members sample was made up of a member from the security staff and another from the kitchen staff. The students sample was made up of a prefect from each form while the stakeholders sample compromised a parent, sponsor, school neighbour or B.o.G member conveniently sampled. Purposive sampling involves handpicking of subjects based on the basis of certain specific characteristics and those that ensure representation among school members.

3.5 Research Instruments

The study used three methods of data collection, mainly questionnaires, interviews and observation. A questionnaire has the ability to collect a large amount of information in a reasonably quick space of time, ensure anonymity, permit use of standardized question and have uniform procedures besides being easier to complete, Orodho (2009).

The questionnaire was used to elicit information on the influence of school funds on preparedness in disaster management, influence of corruption on preparedness in

disaster management and the influence of stakeholdersô participation in preparedness in disaster management in Nakuru sub-county. The instruments contained both open and close-ended items. The open ended items, gave respondents more freedom to express their opinions, views and make suggestions. Close-ended items guided the respondents to give specific responses as given by the researcher.

The researcher made observations of the physical environment that included school buildings, school gate. Assembly point (fire) and the entire school compound with a view to establish the measures in place towards disaster management preparedness.

3.6.1 Validity of Instruments

Validity is the degree to which results obtained from the analysis of data actually represent the phenomenon under study, Orodho (2009). Itôs the degree to which a test measures what it purports to measure, Mugenda and Mugenda (1999). The research instruments were validated through the application of content validity procedures. The researcher sought expert judgment from the supervisor while developing and revising the research instruments. The experts were requested to review the suitability of format and content for the instruments. Their recommendations were used to improve the quality, content, and structures of the instruments. The researcher also found out the validity of the instruments by conducting a pilot study which was administered in two phases, by considering the responses given by the respondents.

Piloting is important since it helps in revealing deficiencies in a questionnaire, Mugenda and Mugenda (2003). Therefore it ensured classification and improvement of content in the instruments to be administered.

3.6.2 Reliability of the Research Instruments

Best and Khan (2001), define reliability as the level of internal consistency or stability over time of measuring research instruments. This instrument reliability is the degree of consistency that instruments or procedures demonstrate Nyakundi (2012). The test-

retest method was used in the study. The research instrument was piloted at two different times to the same group to assess reliability, Orodho, (2009).The questionnaire was administered to 10 schools in a neighbouring sub county to test its reliability. The Pearsonôs product moment correlation coefficient was used to judge the reliability of the instruments. Test-retest reliability of 0.7 and above would qualify the instrument for use in the study. The Test-retest gave a coefficient of about 0.85 for school staff, 0.8 for the school stakeholders and 0.82 for the students. Mugenda & Mugenda (1999) asserts that a coefficient above 0.75 or more implies that there is a high degree of reliability of data.

3.7 Data Collection Procedures

An introductory letter was sought from the in University of Nairobi to carry out the research. A research permit from the National Council of Science and Technology was also sought to allow the researcher to carry out research legally. The researcher made visits to the samples schools for familiarization, distribution of questionnaires observation, interviews and collection of completed questionnaires. The researcher self administered the questionnaires to the respondents and collected them in order to achieve a good return ratio. Follow up visits were also made whenever need arose to clarify issues pertaining to the research questions and also ensure a high respondent return rate.

3.8 Data Analysis Methods

The researcher carefully scrutinized the completed questionnaires to ensure they were accurately entered. According to Kerlinger (1973) data analysis is categorization, ordering, manipulation and summarizing of data to obtain answers to research questions. Data collected was analyzed based on descriptive statistics. In order to examine the pattern of the responses the data was coded and the Statistical Package for Social Sciences was used to generate frequency distributions using descriptive statistics. The findings were presented in the form of tables, frequencies, percentages and figures. For each table and figure there were descriptions.

Qualitative data was transcribed and analyzed. This involved the use of content analysis Cooper and Emoly (1995) state that content analysis measures the semantic content or the aspect of a message. Its breadth makes it a flexible and wide ranging tool of analysis.

Table 2.2: Operational definition of variables

Objective	Variable	Indicator	Measurement	Data source	Instrument	Data Analysis
i) To examine the extent to which school funds influence preparedness in disaster management	Independent	• MOE funds • School sponsor funds • NGOôs funds • School fundraisings	Ordinal	• Principal • School staff • Students	• Questionnaire • In-depth interviews	Quantitative Qualitative
ii) To ascertain the influence of entrenched corruption on preparedness in disaster management.	Independent	• Misallocation of resources • Misappropriation of funds	Ordinal Nominal	• Principal • School staff • Students	• Questionnaire • In-depth interviews • Observation	Quantitative Qualitative
iii) To examine to what extent stakeholders participation influences preparedness in disaster management	Independent	• School community participation • School neighbours participation • School sponsor participation • NGOôs participation	Ordinal Nominal	• Principal • School staff • Students	• Questionnaire • In-depth interviews • Observation	Quantitative Qualitative
iv) Preparedness in disaster management.	Dependent	• Evidence of training among staff • Evidence of training among students • Adherence to MOE Safety guidelines	Ordinal	• Principal • School staff • Students	• Interviews • Observation • Questionnaires	Quantitative Qualitative

3.9 Ethical Considerations

Consent to carry out the research in schools was first sought from the National Council of Science and Technology and also from the school Principals. The findings of this research would be used only for the purposes of the research. Strict confidentiality would be observed on the data collected.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION, INTERPRETATIONS AND DISCUSSION OF FINDINGS

4.1 Introduction

This chapter presents the results of the field research. In presenting the findings, the chapter has been organized in three parts: Questionnaire return rate, demographic information of respondents and specifics based on the research questions as well as school staffsô, studentsô and stakeholdersô suggestions on disaster management preparedness among secondary schools.

4.2 Questionnaire return rate

Data was collected from a sample of 18 principals, 32 teachers, 46 support staff, 40 stakeholders and 60 students out of the sampled 24 principals, 48 teachers, 48 support staff, 48 stakeholders and 72 students.

Trends observed in table 4.1 below indicate that principals recorded a 75% return rate, teachers 67% return rate, support staff 95% return rate, students 83% return rate and stakeholders 83% return rate.

Table 4.1: Trends Observed

	Sampled population	Returned Questionnaire	Return Rate (%)
Principals	24	18	75
Teachers	48	33	67
Support staff	48	46	95
Stakeholders	48	40	83
students	72	60	83
	240	197	82

This implies that the sample was a representation of the key players involved in disaster management preparedness in secondary schools. This was because Principals, teachers and school support staff are the custodians of policy guidelines and provide guidance to the students. The other stakeholders on the other hand are charged with the responsibility of ensuring the schools are safe while the students help to curb or reduce disasters among students in schools.

4.3 Demographic information

This section has dealt with the background information of the school staff, students and stakeholders. The areas that have been discussed include gender, age, professional qualification, duration of service, inspection of school by M.O.E, disaster occurrence and disaster recovery.

4.3.1 Gender of school staff, students and stakeholders

The researcher was interested in the gender of the respondents. Quantitative data was collected from a sample of 96 school staff, 60 students and 48 stakeholders. Table 4.2 below shows the gender of the school staff.

Table 4.2: Gender of school staff

Gender	Frequency	Percent
MALE	64	66
FEMALE	33	34
	97	100

In relation to gender, majority of the school staff were male with 64 respondents that was 66% while the female respondents were 33 which was 34%. This indicated that more males participated than females.

The researcher was also interested in the gender of the students. Table 4.3 below shows the gender of the students.

Table 4.3: Gender of students

Gender	Frequency	Percent
MALE	34	57
FEMALE	26	43
	60	100

Among the students 57% of the students were male which was 34 students. It is evident therefore that male respondents were more in this study the female students sampled were also adequate at 43% of the sampled students which was 26 students.

Gender of school stakeholders

The researcher was keen on the gender of the stakeholders. Figure 4.3 below shows the gender of the schools stakeholders.

Table 4.4: Gender of school stakeholders

Gender	Frequency	Percent
MALE	20	50
FEMALE	20	50
TOTAL	40	100

4.3.2 School staff Professional Qualification

Data was collected from 97 school staff members. Most of the school staff had diploma level of education followed by degree graduates and finally mastersô holders. This data was to help the researcher establish the education level of the custodians of policies on disaster management.

Table 4.5: Professional qualifications of school staff

Qualification	Frequency	Percent
Diploma	45	46.4
Degree	36	37.1
Masters	16	16.5
Total	97	100

This implied that most of the school staff had a diploma level of education 46 % and a degree 37.1% showing they had the basic professional qualification that can empower them and put them in a better place of formulating and implementing policies in disaster management preparedness.

The researcher was interested in the professional qualification of the school stakeholders. Table 4.6 below illustrates the findings.

Table 4.6:Professional qualification of stakeholders

Qualification	Frequency	Percent
Diploma	10	25
Degree	16	40
Masters	14	35
Total	40	100

It was discovered that most of the school stakeholders had a degree with 40% of the stakeholders being degree holders 25% diploma holders and 35% were masters degree holders. This also showed that the school stakeholders had the basic educational qualification to enable them to participate fully in disaster management in their respective schools.

4.3.3 Duration/Length of stay in the school

Data was gathered from a sample of 97 school staff. Each was asked to state the number of years they had been serving the schools in their various capacities.

Table 4.7: School staff length of stay

Duration(yrs)	Frequency	Percent
1	2	2.1
3	20	20.6
5	41	42.3
Over 5	34	35.1
	97	**100**

The responses gathered indicated that a majority 42.3% of the school staff had been part of the school for 5 years.20.6% had been part of the school for 3 years and 35.1% had been part of the school for over 5 years. The results also indicated that only 2% had been part of the schools for 1 year. This was relevant to this study because the researcher wanted to find out if the staff experience in the school was at variance with or inimical to the level of disaster management preparedness in the schools.

The research was interested in the responses of how long the stakeholders had, had a relationship with the school.

Table4.8: Relationship period

Duration (yrs)	Frequency	Percent
3	16	40
4	10	25
5	6	15
Over 5	8	20
	40	100

The results indicated that 40% of the stakeholders sampled had been part of the school for 3yrs and it was followed by 4yrs which was 25%; over 5 years had 20% and 5 years had 15%.This was relevant for the study since the stakeholders duration of a relationship with the school would affect their opportunity to improve or approve measures put in place in disaster management preparedness.

4.3.4 School inspection by M.O.E

The researcher also sought responses on the number of times that the secondary schools were inspected by the M.O.E officials on safety of their schools. Table 4.8 shows the responses from the school staff.

Table 4.9: Number of inspections

Inspection	Frequency	Percent
1 yr ago	36	37.1
3 yrs ago	22	22.7
5 yrs ago	14	14.4
Over 5 yrs ago	25	25.8
	97	100

When asked to indicate when the last inspection was carried out results indicate that 37.1% of the schools had been inspected in the last one year, 22.7% 3 years ago and 14.4% 5 years ago. Also to note was that 25% of the schools were inspected over 5 years ago.

These results agree with the findings of Simatwa (2002) which revealed that only 73% of the schools had been inspected at least once in the preceding year. The other 27% had not been inspected in the same period. The policy requires that qualified professionals should be used in site planning, construction and maintenance of school buildings to safeguard against quacks that are likely to put up unsafe buildings and endanger the lives of learners .The failure to inspect some schools may lead to disasters in those schools. Monitoring and evaluation on school safety standards and guidelines to enhance preparedness on disaster management is a challenge in schools since most schools lack an internal mechanism to monitor and evaluate disaster management.

4.3.5 Fire Drills conducted in schools

Due to the high incidence of school fire disasters the researcher sought to find out whether the schools sampled carried out fire drills as a measure in disaster management preparedness. School safety policies in Kenya as indicated in the M.O.E circular No. G9/1/169 (Republic of Kenya, 2001) includes that fire drills should at least be held twice each year in schools. Questions were put forward to the school staff and the students to elicit responses on the number of fire drills conducted in the schools. Table 4.13 depicts the responses gathered from the school staff

Table 4.10: Fire Drills frequency responses from school staff

Number	Frequency	Percent
None	80	82.5
One	12	12.4
Two	5	5.2
Total	97	100.0

The results of this study indicated that 82.5% of the schools do not conduct fire drills only 12.4 % of the schools had conducted a fire drill in the last two years and 5.2% had conducted one in the last two years. The results of this study indicate that the schools do not conduct fire drills as required by the M.O.E. This trend should change and fire drills should form part of the terms events and fire equipment is checked in preparation for any fire disaster. This is because lack of awareness among students, school management and parents on matters relating to fire safety, contributed to fire incidents in most of the African secondary schools. The closure of schools, damage of school properties, death, injuries and trauma are very common depending on the magnitude and severity of the fire itself (Blackaby, 2007).

Table 4.11: Students' responses on Fire drills conducted

Number	Frequency	Percent
None	29	48.3
One	22	36.7
Two	9	15.0
Total	60	100.0

Responses obtained from the students also indicated that the most schools-48% had not conducted a fire drill in the last two years, 36.7% had conducted one and only 15% had conducted two. The findings are contrary to the United Nations Convention on the Right of the Child which outlines the rights of children worldwide. It has five broad areas; Survival rights: these are basic rights to life and include shelter, food and medical care, Developing rights: these are requirements that enable a child to reach his/her fullest potential and include access to information, education and freedom of thoughts, play and cultural activities, Protection rights: these relate to safeguarding children from neglect and other forms of abuse, Participation rights: advocate for children to actively engage in various roles in their community and Environmental rights: every child has a right to a clean environment (UNCRC, 1989).

Regular drills are important for they prepare the students on what they need to know and how to plan an escape in advance in case of a fire disaster. Regular fire drills are also a strategy for disaster management preparedness.

4.3.6 Disasters experienced in schools

The study sought to find out the type of disaster their schools had experienced from the school staff. This was relevant in ascertaining the safety levels of schools hence the safety of the school communities. The responses were as follows;

Table 4.12: School staff responses on disasters experienced in schools.

Disaster	Frequency	Percent
School Strike	3	3.1
Arson	20	20.6
Robbery	27	27.8
Road Accident	11	11.3
Electrical Hazard	13	13.4
None	23	23.7
Total	97	100.0

As per the findings, itôs evident that though 24 % of the schools had not experienced any disaster, 28% of the schools had experienced Robbery while 21% had experienced arson or fire disaster.13% had experienced electrical hazard and 11% had experienced a road accident. Most schools thus had experienced a disaster leading to destruction of property, loss of life or causing disruption in learning .Disaster management preparedness in schools should focus on taking pre-emptive measures and mitigation to assist schools avoid disasters and become better equipped in disaster management preparedness.

According to Mutugi and Maingi (2010) it is even more important however, that the ability to predict a disaster before it happens allows mechanisms such as evacuations which drastically reduce loss of life. It would be expected that a community that has lived through a disaster would learn from it and therefore be prepared if faced with a similar

occurrence. The schools should examine the disaster to establish its cause and dynamics: as well as institute mechanisms to either cope or avoid such a disaster in future.

Table 4.13: Students' responses on disasters experienced in schools

The students were also asked to give the type of disaster they had experienced in school.

Disaster	Frequency	Percent
School strike	10	16.7
Arson	8	13.3
Robbery	13	21.7
Road accident	5	8.3
Electrical hazard	16	26.7
None	8	13.3
Total	60	100.0

The results obtained from the students sampled indicated that electrical hazards in schools were most frequent disasters in schools- 27%.Robbery was at 22% and school strikes at 17% followed by arson at 13%.These findings revealed that indeed schools are unsafe and hence the need for all schools to put in place disaster management preparedness plan. Nderitu (2009) notes, despite the stringent safety measures put in place by schools, disasters still occur. However it is the degree of preparedness of the schools' entire system that makes the critical difference. It is, therefore, imperative that educational stakeholders foster disaster preparedness to either minimize or eliminate risky conditions or threats.

4.3.7 Disaster recovery strategies in schools

The research sought to find out how schools recovered from the disasters once they occurred. School staff and students responses were sought. Table 4.16 revealed the teachers responses

Table 4.14: School staff responses on recovery strategies

Strategy	Frequency	Percent
Assistance from M.O.E	29	29.9
Assistance from school neighbours	16	16.5
Assistance from sponsor	3	3.1
Assistance through fundraising	26	26.8
None	23	23.7
Total	97	100.0

The responses obtained from the school staff indicated that 29.9% of the schools got assistance in recovering from a disaster from the M.O.E and 26.8% recovered through holding a fundraising.16.5% got assistance from school neighbours especially during the disaster while only 3.1% were assisted by school sponsors. This was to mainly rebuild or rehabilitate school buildings that had been destroyed in the disasters .

Table 4.15: Students' responses on disaster recovery strategies

Strategy	Frequency	Percent
Assistance from MOE	20	33.3
Assistance from sponsor	6	10.0
Assistance through fundraising	26	43.3
None	8	13.3
Total	60	100.0

The responses obtained from the studentsô sample showed that 43.3% of the schools recovered from a disaster through carrying out a fundraising and 33.3% through assistance from the M.O.E. Only 10% got assistance from the school sponsor.

4.3.8 Teaching and learning of preparedness in disaster management

The study sought to find out if preparedness in disaster management was part of learning in the schools .Students were asked to indicate in which activity disaster management was learnt. The studentsôresponses are given in Table 4.16 below.

Table 4.16: Students responses on learning preparedness in disaster management in school

Learning	Frequency	Percent
Curricular activity	3	5.0
Co curricular activity	14	23.3
Extra curricular	43	71.7
Total	60	100.0

According to their responses 43% of the students felt that disaster management skills and knowledge were learnt in the extracurricular activities. This included clubs like First aid club, scouts/ rangers clubs or.5% Learnt about it in subjects like Home science and 23.3% learnt it in co curricular activities like in life skills and peer counselling programmes.

The study agrees with Ndiangôui (2006) who recommended that safety courses like First aid and fire fighting courses be made part of the school curriculum. Frequent courses, in-service and refresher courses on safety assessment should be availed to the teachers and school principals.

4.4.1 Influence of school funding on preparedness in disaster management in Nakuru Sub County

The first research question was to examine to which extent schoolsô funding influenced preparedness in disaster management in Nakuru Sub County. Data was collected from the school staff, students and stakeholders on the extent to which M.O.E funds, school sponsor funds, school fundraisings, school entrepreneurial activities and NGO funds enabled schools to fund preparedness in disaster management. It also looked into the availability of these funds and their adequacy in funding preparedness in disaster management in the schools.

Table 4.17: School staff responses on the influence of school funds on disaster management preparedness

Research Question		No Extent	Small Extent	Non Committal	Moderate Extent	Great Extent
To what extent have MOE funds enabled you to fund disaster management in your school?	Count	14	26	7	32	18
	Percent	14.4%	26.8%	7.2%	33.0%	18.6%
To what extent has school sponsor funds enabled you to fund disaster management in your school?	Count	36	19	19	15	1
	Percent	37.1%	19.6%	19.6%	15.5%	1.0%
To what extent has school fundraisings enabled you to fund disaster management in your school?	Count	33	37	9	17	1
	Percent	34.0%	38.1%	9.3%	17.5%	1.0%
To what extent has school entrepreneurial activities enabled you to fund disaster management in your school?	Count	37	34	34	4	1
	Percent	38.1%	35.1%	35.1%	4.1%	1.0%
To what extent are the school funds available in funding disaster management in your school?	Count	6	27	29	30	5
	Percent	6.2%	27.8%	29.9%	30.9%	5.2%
To what extent has NGO funds enabled you to fund disaster management in your school?	Count	49	12	22	11	3
	Percent	50.5%	12.4%	22.7%	11.3%	3.1%
To what extent are the school funds adequate in funding disaster management in your school?	Count	13	37	5	40	2
	Percent	13.4%	38.1%	5.2%	41.2%	2.1%

The studyôs findings indicated that most of the school staff respondents (32%) felt that M.O.E funds moderately enabled the schools to fund preparedness in disaster

management. On the influence of school sponsor funds, majority of the respondents (32%) felt that there was no extent of influence by school sponsor funds on preparedness in disaster management. Most of the respondents 38% felt that school fundraisings had a small extent of influence on disaster management. In addition a majority of 38% of the respondents reported that school entrepreneurial activities had no influence on funding of disaster management. The available funds were reported to be moderately available by most (31%) of the respondents while 41% reported the funds available were moderately adequate to fund disaster management in schools.

Thus, according to these findings funds available for disaster management were inadequate and schools were not able to carry out activities in disaster management as expected.

37.1% of the school staff felt that sponsor funds and 34% school fundraisings assisted to fund disaster preparedness in their schools. It was an indication that school sponsors needed to increase funding in their schools.50% of the school staff reported that NGO funds did not assist in funding disaster preparedness in public schools hence the need to sensitize them on the need to fund disaster preparedness in public schools.

42.2% of the respondents felt that the funds were inadequate to fund disaster preparedness in their schools hence the need for schools to seek additional sources for funding disaster preparedness.

Table 4.18: Students' responses on influence of school funds on preparedness in disaster management

Research Question		No Extent	Small Extent	Non Committal	Moderate Extent	Great Extent
To what extent have MOE funds enabled you to fund disaster management in your school?	Count	13	11	2	23	11
	Percent	21.7%	18.3%	3.3%	38.3%	18.3%
To what extent has school sponsor funds enabled you to fund disaster management in your school?	Count	12	21	2	16	9
	Percent	20.0%	35.0%	3.3%	26.7%	15.0%
To what extent has school fundraisings enabled you to fund disaster management in your school?	Count	20	9	17	11	3
	Percent	33.3%	15.0%	28.3%	18.3%	5.0%
To what extent has school entrepreneurial activities enabled you to fund disaster management in your school?	Count	31	17	7	3	2
	Percent	51.7%	28.3%	11.7%	5.0%	3.3%
To what extent are the school funds available in funding disaster management in your school?	Count	20	14	3	17	6
	Percent	33.3%	23.3%	5.0%	28.3%	10.0%
To what extent has NGO funds enabled you to fund disaster management in your school?	Count	33	3	6	10	8
	Percent	55.0%	5.0%	10.0%	16.7%	13.3%
To what extent are the school funds adequate in funding disaster management in your school?	Count	17	14	2	21	6
	Percent	28.3%	23.3%	3.3%	35.0%	10.0%

Responses elicited from the sampled students indicated that most students (38%) felt that M.O.E funds moderately enabled the schools to fund preparedness in disaster management. On school sponsor funds a majority of 35% of the students reported that the funds had influenced disaster management to a small extent. School fundraisings had some influence in funding disaster management as reported by a majority of 33% of the sampled students while 52% felt that school entrepreneurial activities had no influence on disaster management.NGO funding in schools also had no influence in funding disaster management according to 55% of the respondents. This suggested that most schools had never received funds from NGOs to fund disaster management preparedness hence the need to sensitize schools on how to solicit funds from NGOs. A majority of 35% felt that the funds available were moderately available and 28% felt that though available the funds were to no extent adequate.

As per these findings the M.O.E was mainly responsible for funding disaster management in schools and school sponsors. The funds were also reported to be inadequate hence the partial implementation of disaster management preparedness in schools.

51.7% of the students reported that school entrepreneurial activities did not fund disaster management. Schools thus should redirect funds from these activities to have adequate funds for disaster preparedness. Since 33.3% of the students reported that the funds were to no extent available and 35% moderately available.

Table 4.19: Stakeholders' responses on the influence of school funding in preparedness in disaster management

Research Question		No Extent	Small Extent	Non Committal	Moderate Extent	Great Extent
To what extent have MOE funds enabled you to fund disaster management in your school?	Count	1	10	16	1	6
	Percent	2.5%	25.0%	40.0%	2.5%	15.0%
To what extent has school sponsor funds enabled you to fund disaster management in your school?	Count	24	8	4	2	2
	Percent	60.0%	20.0%	10.0%	5.0%	5.0%
To what extent has school fundraisings enabled you to fund disaster management in your school?	Count	24	12	0	4	0
	Percent	60.0%	30.0%	0.0%	10.0%	0.0%
To what extent has school entrepreneurial activities enabled you to fund disaster management in your school?	Count	22	12	4	2	0
	Percent	55.0%	30.0%	10.0%	5.0%	0.0%
To what extent are the school funds available in funding disaster management in your school?	Count	8	14	10	8	0
	Percent	20.0%	35.0%	25.0%	20.0%	0.0%
To what extent has NGO funds enabled you to fund disaster management in your school?	Count	38	0	2	0	0
	Percent	95.0%	0.0%	5.0%	0	0
To what extent are the school funds adequate in funding disaster management in your school?	Count	10	12	8	8	2
	Percent	25.0%	30.0%	20.0%	20.0%	5.0%

40% of the school staff abstained from giving a response on the availability of M.O.E funds. This was a concern since the school staff is expected to be involved in the budgeting and expenditure of the school. However, 25% of the respondents revealed that M.O.E funds had enabled the school to fund disaster management to a small extent. Most

of the respondents (60%) revealed that sponsor funds and school fundraisings (60%) had to a small extent enabled preparedness in disaster management. 30% though, felt that school fundraisings had to a small extent enabled preparedness in disaster management.55% revealed that school entrepreneurial activities had not enabled funding in disasters management but 30 % revealed that they had enabled funding albeit to a small extent. On availability of school funds and their adequacy, the respondents gave a majority of 35% and 30% respectively. This implied that though the funds were available they were inadequate. Majority of the respondents (95%) on the question on NGO funds revealed that NGO funds had not enabled their schools to fund disaster management activities.

These findings on school funds revealed that though the M.O.E sent funds to schools for disaster management preparedness, most schools required more funds for it. Funds from school sponsors and fundraisings assisted schools mainly after disasters had struck to rebuilt school structures.

4.4.2 The extent to which entrenched corruption influenced preparedness in disaster management in Nakuru Sub County secondary schools.

The second objective was to ascertain to which extent entrenched corruption influenced preparedness in disaster management in Nakuru sub county public secondary schools. Data was gathered on the adherence to M.O.E procurement procedures, purchase of standard institutional facilities, school inspections by M.O.E, auditing of school financial records, utilization of school funds and the observation of recommendations from M.O.E auditors on school funds expenditure. The school staff, students and stakeholders were requested to respond to each of these areas.

Table 4.20: School staff responses on influence of entrenched corruption on disaster management preparedness.

Research Question		Strongly Disagree	Disagree	Indifferent	Agree	Strongly Agree
The school adheres to MOE procurement procedures in facilitating disaster management	Count	0	14	14	41	28
	Percent	0.0%	14.4%	14.4%	42.3%	28.9%
The school purchases standard quality institutional facilities for the school	Count	0	11	4	61	21
	Percent	0.0%	11.3%	4.1%	62.9%	21.6%
The school is regularly inspected by the MOE staff to ensure school safety	Count	10	37	6	44	0
	Percent	10.3%	38.1%	6.2%	45.4%	0.0%
The schools financial records are checked by the MOE auditors	Count	3	2	14	45	33
	Percent	3.1%	2.1%	14.4%	46.4%	34.0%
The school receives the allocated funds from MOE to use in preparedness in disaster management	Count	0	1	12	66	18
	Percent	0.0%	1.0%	12.4%	68.0%	18.6%
The funds meant for disaster preparedness are channelled to other uses in the school	Count	7	16	41	30	1
	Percent	7.2%	16.5%	42.3%	30.9%	1.0%
The school observes what the MOE auditors recommend on the use of school funds	Count	0	14	18	45	20
	Percent	0.0%	14.4%	18.6%	46.4%	20.6%

Most of the respondents (42.3%) agreed that the schools adhered to M.O.E procurement procedures; 28.3% strongly agreed and 14.4% were indifferent while only 14.4% disagreed. 62.9% of the respondents also agreed that the schools purchased standard quality facilities for preparedness in disaster management ;21.6% disagreed, 11.3% strongly disagreed while only 4.1% remained indifferent. Majority of the respondents

45.4% revealed that the schools were inspected by M.O.E staff but 38.1% disagreed,10.3% strongly disagreed These findings agree with Simatwa (2002) who revealed that only 73% of the schools in his study had been inspected at least once a year. The other 27% had not been inspected in the same period.

On the inspection of schools financial records, by M.O.E auditors 46% which was a majority of the respondents reported that the financial records were checked as stipulated and further that 46.4% of the respondents agreed that the schools observed recommendations from M.O.E staff on school funds expenditure,34% also strongly agreed but 14.4% remained indifferent .A majority of 68% of the sampled school staff reported that the school received the allocated funds from the M.O.E,18.65 agreed;12.4% were indifferent only 1% disagreed. This was an indication that the ministry of education funds do reach the schools. Most of the respondents (42.3%) abstained from the question on channelling of funds meant for disaster management to other uses which showed a lack of awareness among school staff on the use of funds. However, 31% agreed that funds meant for disaster management were channelled to other vote heads. This is in concurrence with Kirui et al (2011) found out that the budgetary allocation for school safety in most schools was below 10% of the schoolôs total budget. This was due to other competing interests in the schools.

It thus shows that schools observe the stipulated rules in school funds expenditure but there was a need to come up with an all inclusive approach to ensure the school community are conversant with school expenditure. The lack of transparency in expenditure fosters corruption.

Table 4.21: Students' response on the influence of entrenched corruption on preparedness in disaster management.

Research Question		Strongly Disagree	Disagree	Indifferent	Agree	Strongly Agree
The school adheres to MOE procurement procedures in facilitating disaster management	Count	0	2	7	24	27
	Percent	0.0%	3.3%	11.7%	40.0%	45.0%
The school purchases standard quality institutional facilities for the school	Count	0	2	5	35	18
	Percent	0.0%	3.3%	8.3%	58.3%	30.0%
The school is regularly inspected by the MOE staff to ensure school safety	Count	2	0	8	45	5
	Percent	3.3%	0.0%	13.3%	75.0%	8.3%
The schools financial records are checked by the MOE auditors	Count	2	3	17	18	20
	Percent	3.3%	5.0%	28.3%	30.0%	33.3%
The school receives the allocated funds from MOE to use in preparedness in disaster management	Count	6	11	5	22	16
	Percent	10.0%	18.3%	8.3%	36.7%	26.7%
The funds meant for disaster preparedness are channelled to other uses in the school	Count	17	8	22	10	3
	Percent	28.3%	13.3%	36.7%	16.7%	5.0%
The school observes what the MOE auditors recommend on the use of school funds	Count	0	9	5	31	15
	Percent	0.0%	15.0%	8.3%	51.7%	25.0%

Most of the students sampled 45% agreed that the school adhered to M.O.E procurement procedures in facilitating disaster managemen40%agreed; 11.7% were indifferent while 3.3% disagreed. In addition 58.3% agreed that their school purchased standard quality facilities for disaster management, while 30% strongly agreed only3.3% disagreed and 8.3% were indifferent.13% of the respondents abstained from the question on school inspection which showed a level of ignorance among the students.75% of the students agreed that the schools were inspected by M.O.E staff for school safety,8.3% strongly agreed;8.3% were indifferent and only 3.3% strongly disagreed. There was an indication that most schoolsô financial records were audited as stipulated.33.3% of the sampled students strongly agreed and 30% agreed that school finances were checked by auditors; 28.3% were indifferent; 5% disagreed and 3.3% strongly disagreed.

36.7% of the sampled students agreed and 26.7% strongly agreed that the school received the allocated funds from M.O.E but raised concern on the delay experienced in disbursement of the funds to schools. However, 18.3% disagreed and 10% strongly disagreed that their schools received funding. Most students (36.7%) abstained from the question on rechanneling of funds meant for disaster management which showed a lack of awareness in budgetary allocations.28.3% disagreed with the statement that schools diverted disaster management funds to other uses, 13.3% disagreed but 16.7% agreed.

On the use of school funds as recommended by M.O.E auditors, most of the students (51.7%) revealed that school funds were utilised as recommended; 25% strongly agreed but 15% disagreed while 8.3% were indifferent.

The findings therefore revealed that students were generally aware of the financial situations in their schools but not conversant with the specific school budgetary allocations. This lack of awareness thus influenced disaster management negatively.

Table 4.22: Stakeholders' response on the influence of entrenched corruption on preparedness in disaster management

Research Question		Strongly Disagree	Disagree	Indifferent	Agree	Strongly Agree
The school adheres to MOE procurement procedures in facilitating disaster management	Count	0	4	16	14	6
	Percent	0.0%	10.0%	40.0%	35.0%	15.0%
The school purchases standard quality institutional facilities for the school	Count	2	0	4	22	12
	Percent	5.0%	0.0%	10.0%	55.0%	30.0%
The school is regularly inspected by the MOE staff to ensure school safety	Count	6	4	8	18	4
	Percent	15.0%	10.0%	20.0%	45.0%	10.0%
The schools financial records are checked by the MOE auditors	Count	2	6	6	14	12
	Percent	5.0%	15.0%	15.0%	35.0%	30.0%
The school receives the allocated funds from MOE to use in preparedness in disaster management	Count	4	0	0	22	14
	Percent	10.0%	0.0%	0.0%	55.0%	35.0%
The funds meant for disaster preparedness are channelled to other uses in the school.	Count	8	2	14	16	0
	Percent	20.0%	5.0%	35.0%	40.0%	0.0%
The school observes what the MOE auditors recommend on the use of school funds	Count	1	0	9	24	6
	Percent	2.5%	0.0%	22.5%	60.0%	15.0%

40% of the schools stakeholders were indifferent to whether the school adhered to M.O.E procurement procedures in facilitating preparedness in disaster management. However 35%indicated that the schools adhered to M.O.E procurement procedures in facilitating disaster management only 15% strongly disagreed and 10% disagreed. On the question

on purchase of standard quality facilities, a majority of 55% agreed and 30% strongly agreed that the schools purchased standard quality facilities, however 10% were indifferent and 5% strongly disagreed. A majority (45%) of the stakeholders agreed and 10% strongly agreed that their schools were inspected by the M.O.E staff for school safety but 20% were indifferent, 10% disagreed and 15% strongly disagreed. The school finances were audited according to 35% of the respondents who agreed and 30% who strongly agreed that the school financial records were audited; 15% disagreed and 15% remained in different .Most of the respondents 55% reported that the schools received funds allocated by the M.O.E, 35% agreed but 5% disagreed . 40% agreed that the funds for disaster management were channelled to other uses.35% remained indifferent which indicated that school stakeholders were not involved in the budgetary process in schools.10% disagreed that the M.O.E funds got to their schools as intended. 60% of the stakeholders noted that their schools observed directives from M.O.E auditors and 15% strongly agreed. 22.5% remained indifferent while only 2.5% disagreed.

This revealed that schools received M.O.E funds but some of these funds were diverted to other uses in the schools instead of disaster management preparedness. This indicated that corruption affected disaster management negatively.

4.4.3 The extent to which stakeholders' participation influenced preparedness in disaster management in Nakuru Sub County

The third objective was to establish to which extent shareholders participation influenced preparedness in disaster management. Data was collected on whether stakeholders were involved in the formulation of disaster management strategies, attendance of seminars on disaster management, access to disaster management materials, training of school stakeholders among themselves and the ability of stakeholders to assess and improve preparedness in disaster management in schools.

Table 4.23: School staff response on the influence of stakeholders' participation on preparedness in disaster management

Research Question		Never	Rarely	Sometimes	Very Often	Always
The stakeholders are involved in the formulation of schoolôs preparedness in disaster management	Count	3	21	22	8	43
	Percent	3.1%	21.6%	22.7%	8.2%	44.3%
School stakeholders attend seminars on disaster management to benefit the school	Count	23	35	21	16	2
	Percent	23.7%	36.1%	21.6%	16.5%	2.1%
Because of the seminars in disaster management stakeholders have been able to assist the school before and during disasters	Count	36	16	24	20	1
	Percent	37.1%	16.5%	24.7%	20.6%	1.0%
School stakeholders have access to materials on disaster management in the school.	Count	6	18	39	17	17
	Percent	6.2%	18.6%	40.2%	17.5%	17.5%
Trained stakeholders in disaster management have been able to train other stakeholders in the school	Count	65	14	6	11	1
	Percent	67.0%	14.4%	6.2%	11.3%	1.0%
Stakeholders are able to asses and improve disaster management in the school	Count	11	18	44	14	10
	Percent	11.3%	18.6%	45.4%	14.4%	10.3%

The majority of the respondents (44.3%) among the school staff felt that the school stakeholders were always involved in the formulation of strategies in preparedness for disasters especially during school annual general meetings.8.2% involved stakeholders very often; 22.7% sometimes but 21.6% rarely involved stakeholders and 3.1% never.

Attendance of seminars on disaster management had a majority of 36.1% rarely attending seminars and 23.7% having never attended any seminar only 21.6% sometimes trained stakeholders and 16.5% very often invited parents and neighbours for seminars on school security. A majority of 40% of the respondents stated that they sometimes had access to materials available on disaster management,17.5% very often had access; 17.5%always had access but 18.6% rarely had access to materials on preparedness in disaster management especially in school that lacked libraries.67% of the school staff had never trained their colleagues in disaster management due constraints of time and resources; 14.4% rarely trained other stakeholders;11.3% very often trained the other stakeholders especially during school staff meetings. A majority of 45.4% of the school staff felt that sometimes the school stakeholders were able to assess and improve disaster management in the school.14.4% very often and 10.3% always were able to asses and improve the school disaster management preparedness.18.6% rarely assisted and 10.3% always assisted.

According to Okumba (1998) for the purposes of effectiveness an effective in service training should be provided for school managers and curriculum implementers.

Stakeholders participation influenced disaster management preparedness negatively since the stakeholders lacked training and only participated during or after a disaster had occurred.

Table 4.24: Students' response on the influence of stakeholders' participation on preparedness in disaster management

Research question		Never	Rarely	Sometimes	Very often	Always
The school stakeholders are involved in the formulation of preparedness strategies in disaster management in the school	Count	0	9	12	19	20
	Percent	0.0%	15.0%	20.0%	31.7%	33.3%
School stakeholders attend seminars on disaster management to benefit the school	Count	10	12	11	11	8
	Percent	16.7%	20.0%	18.3%	18.3%	10%
Because of the seminars in disaster management stakeholders have been able to assist the school before and during disasters	Count	3	3	29	11	14
	Percent	5.0%	5.0%	48.3%	18.3%	23.3%
School stakeholders have access to materials on disaster management in the school	Count	0	0	14	21	14
	Percent	0.0%	0.0%	23.3%	35.0%	23.3%
Trained stakeholders in disaster management have been able to train other stakeholders in the school	Count	27	16	14	3	0
	Percent	45.0%	26.7%	23.3%	5.0%	0.0%
Stakeholders are able to asses and improve disaster management in the school	Count	3	25	22	5	5
	Percent	5.0%	41.7%	36.7%	8.3%	8.3%

The findings reveal that 31.7% of the students felt that their schools very often; 33.3% always and 20% sometimes involved school stakeholders in the formulation and implementation of preparedness in disaster management.15% on the other hand felt that stakeholders participated rarely. 20% of the students revealed rarely and 20% never were

the stakeholders taken for seminars on disaster management while 18.3% noted that stakeholders sometimes and 18.3% very often attended seminars. Only 10% noted that stakeholders always attended seminars. 48.3% also reported that stakeholders sometimes; 23.3% always and 18.3% very often had been able to assist the school before and during disasters because of the training they had received. 35% of the students felt that stakeholders had access to materials on disaster management available in the school, 23.3% reported they always had access and 23.3% revealed that they sometimes had access especially during school functions or meetings. Most of the students 45% felt that the trained stakeholders had never trained others; 26.7% rarely did so but 23.3% sometimes trained others. Trained stakeholders thus should have trained others in the schools to reinforce preparedness in schools. This would make school communities better prepared in case of a disaster.

41.7% of the students revealed that stakeholders rarely visited the schools to assess and improve disaster management. 36.7% reported that they did so sometimes: 8.3%very often and 5% never visited the schools. These findings disagreed with Blackaby (2007) who noted that parents are part and parcel of a school community. They have a responsibility to advise the school management on any important issue, particularly, the safety of a school in general.

According to the findings stakeholders require training in disaster management and schools need to avail materials on disaster management preparedness in the schools. This is since stakeholdersô participation influenced disaster management preparedness. In addition parents and school neighbours need to be sensitized on their important roles in the schools in making regular inspections to ensure disaster preparedness in the schools.

Table 4.25: Stakeholders' response on the influence of stakeholders' participation on preparedness in disaster management

Research Question	Never		Rarely		Sometimes		Very often		Always	
	Count	%	Count	%	Count	%	Count	%	Count	%
The school stakeholders are involved in the formulation of disaster management	8	20.0	5	12.5	12	30.0	9	22.5	6	15.0
School stakeholders attend seminars on disaster management to benefit the school	14	35.0	12	30.0	10	25.0	4	10.0	0	0.0
Because of the seminars in disaster management stakeholders have been able to assist the school before and during disasters	22	55.0	7	17.5	8	20.0	0	0.0	3	7.5
School stakeholders have access to materials on disaster management available in the school	9	22.5	4	10.0	16	40.0	5	12.5	6	15.0
The trained stakeholders in the school have been able to train other stakeholders after training	26	65.0	9	22.5	0	0.0	3	7.5	2	5.0
Stakeholders are able to asses and improve disaster management in the school	16	40.0	8	20.0	6	15.0	0	0.0	10	25.0

The stakeholders sampled reported that a majority of them (30%) sometimes were involved in the formulation of preparedness in disasters management; 22.3% very often and 15% rarely but 20% were never involved with 12.5% rarely being involved. Majority of the respondents (35%) had never attended a seminar on disaster management and 30% rarely attended seminars. Only 10% attended seminars often. The trained stakeholders had never assisted the school according to most of the stakeholders (55%) 17.5% rarely assisted them and 20% sometimes assisted the schools. Most of the respondents (40%) revealed that stakeholders had access sometimes to available materials on disasters but 22.5% never had access and 10% rarely had access. In addition, 65% of the stakeholders revealed that the trained stakeholders had never trained other school stakeholders on disaster management mainly because of time constraints. Finally 40% of the respondents felt that school stakeholders never assessed or improved the school in disaster management and 20% rarely did so. 25% always visited the schools to assess and improve them while 15% sometimes did so.

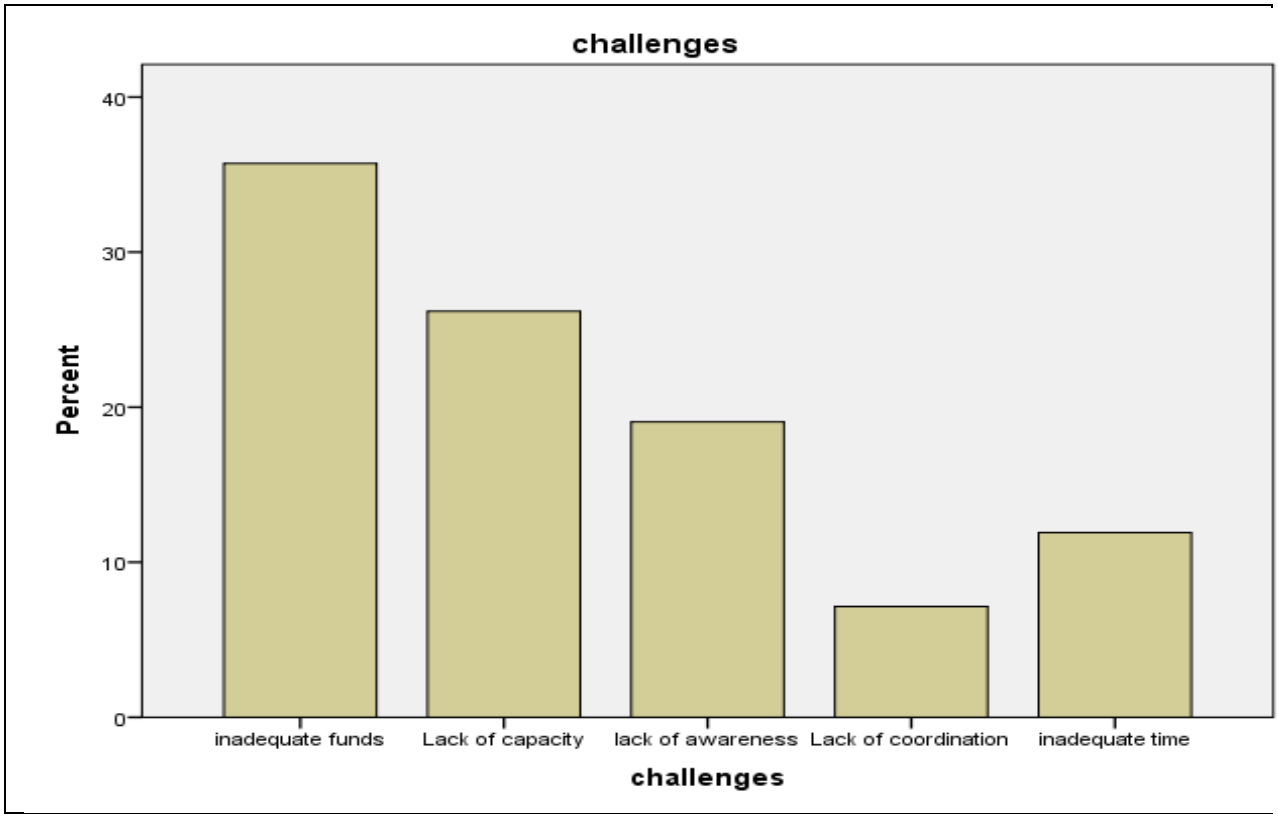
Achoka and Maiyo (2008) assert that governments and communities need to formulate legislations specific to disaster preparedness in schools which should be considered when developing plans. Embrace continuous integration, coordination, training of all school and community members which remain the key to the reduction of death and injury in any school or community disaster. Thus the need to involve parents, school neighbors, school sponsor and Board of Governors in the schools preparedness plans.

From the findings the stakeholders participation was inadequate due to lack of training and unawareness of their role in schools, it influenced disaster management preparedness in the schools greatly.

4.4.4 Challenges faced in preparedness in disaster management in public secondary schools

The researcher also sought to find out the major challenges facing preparedness in secondary schools. A question was put to elicit responses on the challenges facing schools in preparedness in disaster management.

Figure 4.1: Challenges faced in disaster management preparedness



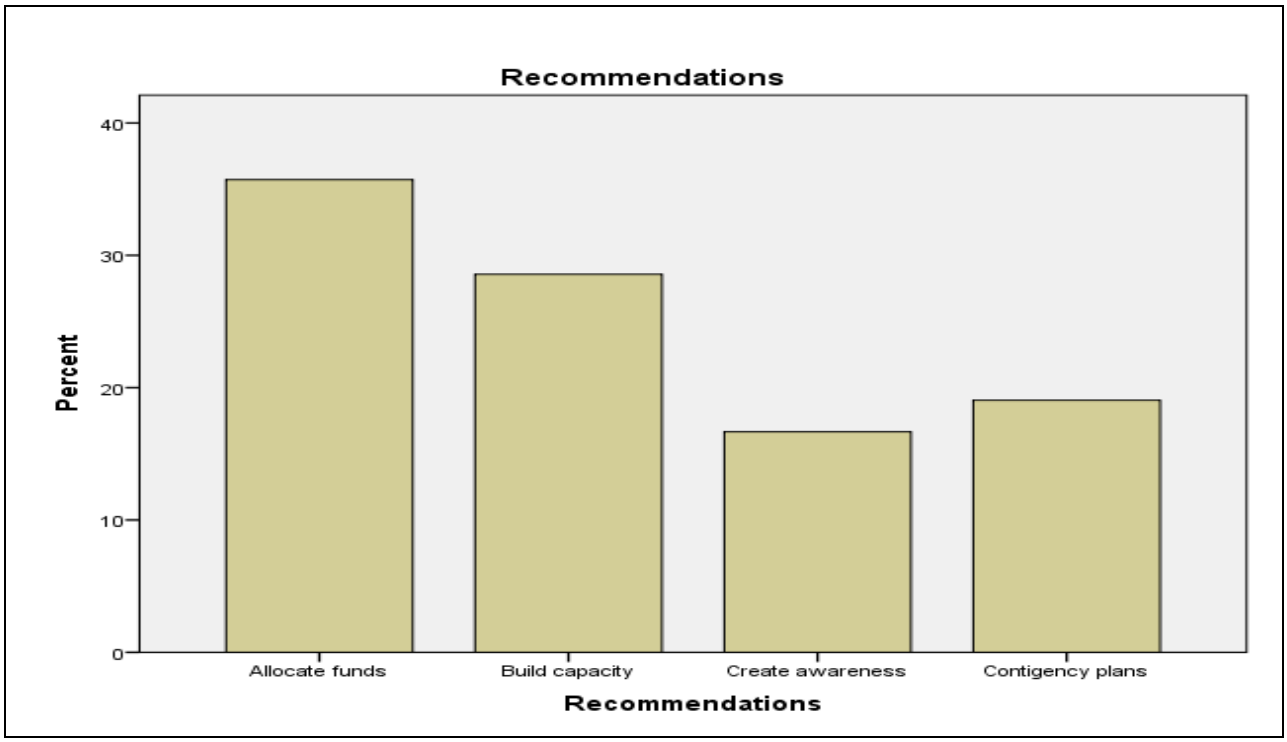
36% of all the respondents sighted inadequate funding as a major challenge. Lack of adequate capacity among school community was stated by 24% of the respondents while lack of awareness about disaster management was given by 19% of all the respondents. Additionally, lack of proper coordination within and without the school community was sighted by 7% of the respondents and 12% felt that inadequate time was a major challenge.

The results agree with Simatwa (2002) who reported that the factors influencing school safety as stated by DQASOs included: Inadequate funds (86.7%); late school remittances (30%); low enrolments (6.67%); Inadequate time (10%); Inadequate capacity (26.67%) and lack of coordination from the M.O.E (6.67%). Nyakundi et al (2014) also notes that the perceived selective provision of fire equipment, inadequate funds, ignorance, low level of awareness in disaster management are challenges facing implementation of preparedness in disaster management.

4.4.5 Recommendations on ways to improve preparedness in disaster management in secondary schools

The researcher sought to find out the opinions of the respondents on strategies to improve preparedness in disaster management in the schools.A question on how to improve preparedness in disaster management was posed to all the respondents.

Figure 4.2: Recommendations



43% of all the respondents felt that the funds allocated to disaster management should be increased, 18% of the respondents stated that building of capacity through trainings and seminars was a way of improving preparedness in disaster management in schools while 19% of the respondents felt that creating awareness in schools on disaster management would suffice. Finally, 20% of the respondents stated that an all inclusive school contingency plan against disasters was a main strategy to improve coordination in disaster management.

In relation to the building of capacity, the results also support the findings of Omolo and Simatwa (2010) that, the strategies of organizing workshops and going for trainings helps to build capacity that enables the school community to cope with new and expanded demands of school duties.

The researcher therefore observed that other factors affecting preparedness in disaster management in secondary schools included inadequate funding, lack of awareness on disaster management, inadequate capacity, inadequate school inspections, low technical capacity and poor coordination within and without the school community.

4.4.6 Number of facilities available in schools

The researcher was interested in the number of facilities available in the schools as required by the M.O.E. Data was collected through observation. Its findings were presented in the table below:

Table 4.20: Observation checklist on number of facilities

Facility	Available	%	Unavailable	%
Classrooms	20	100	-	100
Dormitories	3	15	17	85
Laboratories	16	80	4	20
Dining Hall	13	65	7	35
Toilets	0	100	-	100
Kitchens	20	100	-	100
Water Tanks	20	100	-	100
First Aid kits	20	100	-	100
Fire Extinguishers	20	100	-	100
Perimeter Fence	14	70	6	30
Alarm/Warning system	12	60	8	40
Safety Notices	12	60	8	40
School Gate	15	75	5	25
Library	15	75	5	25
Telephone	20	100	-	-

The researcher visited 20 schools of which only 3 were boarding schools and 17 were day schools. Data obtained revealed that all schools had classrooms, toilets, kitchens, water tanks, first aid kits, Fire extinguishers and a telephone. However, the fire extinguishers in some schools were located inside the rooms but not at an exit. These findings agreed with those of Gikandi, Ogutu and Obwocha (2006) who reported that while some schools installed fire extinguishers strategically, others had not done so. 30% of the schools did not have a secure perimeter fence and 25% did not have a proper school gate. This differed with findings of Omolo and Simatwa (2010) who reported that in their study findings 28 out of 30 schools had a secure fence and gate. A strong and sturdy fence is symbolic of a safe and secure school; it enables the school to safely contain the students while they are in school. 25% lacked a library. 40% of the schools lacked alarm /warning systems and 40% also lacked safety notices displayed. To some level the degree of exposure to disasters can be attributed to the administrative structure of the school. For example the lack of an early warning system/alarm system and lack of safety notices displayed expose schools to disasters.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS OF THE STUDY

5.1 Introduction

This chapter is divided into three sections. In the first section a summary of the findings is given, in the second section a conclusion is drawn from the findings and, in the third section, the study recommendations are given.

5.2 Summary of the Findings

This research sought to investigate the factors influencing preparedness in disaster management in public secondary schools of Nakuru sub county, Kenya. Three objectives guided the study namely: To examine the extent to which school funding influences preparedness in disaster management, to ascertain to which extent entrenched corruption influenced preparedness in disaster management and to establish the extent to which stakeholdersô participation influenced preparedness in disaster management in schools in Nakuru Sub County.

From the results of this study, it can be said that public secondary schools were regularly inspected by M.O.E on school safety 45.4% Table 4.9 but many schools had not been inspected (38.1%). Only 12.4% of the schools conducted fire drills in the last two years while 82.5% had not conducted any fire drill Table 4.10. The results also revealed that though some schools had not experienced any disaster (8%) Table 4.13, most schools had experienced fire/arson, robbery and electrical hazard disasters. The M.O.E assistance (29.9%) and school fundraisings (26.8%) Table 4.14 were cited as recovery strategies for most schools. Learning of disaster management among students was seen as part of extracurricular and co curricular activities in schools Table 4.16.

The study showed evidence on the perceptions of school staff, students and stakeholders on the influence of school funds on disaster management preparedness. Schools reported that M.O.E funds (56.6%) Table 4.17 and funds from school fundraisings (23.3%) mainly enabled the schools to fund preparedness. NGOs did not fund the schools in disaster management at all. The funds available were also not adequate to fund disaster (38.1%) Table 4.19.

Data was also collected on the influence of entrenched corruption to preparedness in disaster management. Majority of schools observe and adhere to M.O.E procedures in facilitating disaster management as shown in Table 4.20, Table 4.21 and Table 4.22. The schools also observe recommendations given on school funds expenditure by the auditors. In the utilization of the school funds most students (36.7%) Table 4.21 and stakeholders (35%) Table 4.21 were unaware on whether the schools diverted funds meant for disaster management to other school vote heads .According to the stakeholders, many respondents (40%) Table 4.22 had no knowledge on whether the school adhered to procurement procedures as stipulated by M.O.E.

The findings revealed that the schools involved stakeholders in formulation of policies in disaster management. There is need though for the schools to organize for seminars and in service training to build capacity in schools because these were rarely planned. This is as shown on Table 4.23 where 59.8% of stakeholders had no training and 45% Table 4.24. Those that had been trained did not train others due to time constraints 67% Table 4.23. In addition 40% Table 4.25 of the stakeholders reported that they had never assessed their schoolsô preparedness in disaster management.

5.3 Conclusions from the study

The study set out to investigate the factors influencing preparedness in disaster management in public secondary schools in Nakuru sub county, Kenya. The results show that most schools had somewhat implemented policy guidelines on preparedness of

disasters. Itôs expected that fire drills form part of the school termly events and fire equipment be checked regularly for readiness in case of an emergency. The need for comprehensive inspections as stipulated by the ministry of education in all schools also arose.

The findings gave an indication that schools depended on the ministry of education and school fundraisings to fund disaster management. Additional sources of funds for schools like school entrepreneurial activities and NGO funding if sought would also go a long way into funding disaster management in secondary schools since the funds available were insufficient. It was also evident from this study that most school stakeholders were excluded in the school funds expenditure process. School administrations should thus hold consultative budgetary sessions with representatives from teaching staff, support staff, students and parents. This is to foster accountability and transparency in the use of school funds.

The degree of exposure to disasters in schools was influenced by inadequate strategies to cope with disasters since the school community lacked training in basic disaster management skills. There is an urgent need for training of the teachers, school support staff, students, school neighbours and parents in disaster management. It was concluded that school staff, students and other school stakeholders had an important role to play in the preparedness in disaster management. Each had a role to play in managing school safety and as result every school should have a disaster contingency plan outlining the action to take in case of a disaster and the responsibility of each member of the school community before, during and after a disaster.

5.4 Recommendations

In light of the findings and conclusions of this study, it was recommended that: The Ministry of Education should ensure that all schools are duly inspected on school safety and financial expenditure at least once every year. It should ensure proper collaboration

and coordination of information on preparedness in disaster management so that schools have accurate, timely and relevant information to act upon in case of any disaster. With schools facing increased pressure to improve, teachers have an expanded responsibility in managing school safety, hence the need for regular in service training in disaster management for school staff. The Ministry of Education should also include disaster management in the main curriculum especially as part of the Physical Education lesson and explore possibility of insuring school property to allow for compensation after disasters. Information on disaster management in the form of books, booklets, news papers, magazines, journals and notices should be made readily available and accessible in the schools. Parents and school neighbours should be part of the school safety committee to ensure that they constantly assess and improve the school preparedness level.

School administrations should implement safety policies, ensure that emergency drills are carried out regularly and the school support staff is trained in disaster management to enhance preparedness in case of a disaster. The funds meant for disaster management should not be diverted to other uses in the schools budget. The administration should also consider technological advances and instil surveillance cameras in the schools as part of their early warning systems. Each school must formulate an all inclusive disaster contingency plan which should be disseminated to the whole school community. The county fire department should be involved in school inspections to recommend changes to assure school safety, conduct fire drills, and demonstrate care and proper use of fire equipment to enhance preparedness.

5.5 Suggestions for further research

Based on the findings from this study, the research recommends the following areas of study: The results of this study should not be generalized to the whole Kenyan population because it involved a small sample drawn from one county. The research should be replicated to cover a larger sample drawn from all over the country. Also, a study on preparedness in disaster management should be carried out at university and tertiary college institutions in the country considering what happened recently at the Garrisa University College and the University of Nairobi, Kikuyu Campus.

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APPENDIX I

INTRODUCTION LETTER

P.O. BOX 3480 ï 20100
NAKURU

The Principal
é é é é é é é é ...Secondary School.

Dear Madam/Sir,

RE: RESEARCH IN YOUR SCHOOL

I am a Master of Arts student of University of Nairobi currently carrying out a research on the secondary schoolsô preparedness on disaster management in schools in Nakuru Town Constituency, Nakuru County, Kenya.

Your school has been selected to take part in the study. I kindly ask for your support and permission to collect the primary data through questionnaires and in-depth interviews.

The information gathered will be treated with utmost confidentiality and be used strictly for the purpose of this study.

Thank you.

Yours faithfully,

HELLEN WANGUI NJURU

APPENDIX II

QUESTIONNAIRE

SECTION A: SCHOOL STAFF QUESTIONNAIRE

1. What is your gender? Male ☐ Female ☐

2. Which is your highest professional qualification?

Diploma ☐ Degree ☐ Masters ☐ PhD ☐

3. Indicate the position you hold in the school.

Principal ☐ Teacher ☐ Support staff ☐

4. How long have you held the current position in the school?

1yr ☐ 3yrs ☐ 5yrs ☐ Over 5yrs ☐

5. When was the last school inspection by the M.O.E?

1yr ago ☐ 3yrs ago ☐ 5yrs ago ☐ ver 5yrs ago ☐

6. How many fire drills have been conducted in the school in the last two years?

None ☐ One ☐ Two ☐ Over three times ☐

7. What type of disaster has your school experienced in the last 3years?

DISASTER	YES	NO
School Strike		
Arson/Fire		
Robbery		
Road Accident		
Electrical Hazard		

8. How did the school recover from the disaster?

RECOVERY STRATEGY	YES	NO
Assistance from M.O.E		
Assistance from school neighbours		
Assistance from school sponsor		
Assistance from NGO		
Assistance through Fundraising		

SECTION B: STUDENTS QUESTIONNAIRE

1) What is your sex? Male ☐ Female ☐

2) Which form/class do you represent?

Form 1 ☐ Form 2 ☐ Form 3 ☐ Form 4 ☐ hool prefect

3) How many fire drills have been carried out in your school in the last two years?

None ☐ One ☐ Between 2 and 4 ☐ Over 4 times ☐

4) Preparedness in disaster management is part of learning in my school as:

Curricular activity ☐ Co curricular activity ☐ Extracurricular activity ☐

5) What type of disaster has been experienced in your school in the past 3 years?

DISASTER	YES	NO
School strike		
Arson/Fire		
Robbery		
Road accident		
Electrical hazard		

6) How did the school recover from the disaster?

RECOVERY STRATEGY	YES	NO
Assistance from M.o.E		
Assistance from school sponsor		
Assistance from school neighbours		
Assistance through fundraising		
Assistance from NGO		

SECTION C: STAKEHOLDERS QUESTIONNAIRE

1) What is your gender? Male ☐ Female ☐

2) Which is your highest qualification?

Diploma ☐ Degree ☐ Masters ☐ hD ☐

3) What relationship do you have with the school?

School neighbour ☐ Parent ☐ Board of Governors ☐

School sponsor ☐

4) Which age group applies to you?

Below 24 yrs ☐ Between 25 and 34yrs ☐

Between 35 and 44 yrs ☐ Over 45 yrs ☐

5) How long have you been part of the school?

Less than 3 yrs ☐ 4yrs ☐ 5 yrs ☐ ver 5 yrs ☐

SECTION D: PERCEPTIONS ON PREPAREDNESS IN DISASTER MANAGEMENT

i) Questionnaire on school funds

In this section, you are requested to tick (ã) against the number in the scale with regards to the statement provided. The options are:

Great extent [5]
Moderate extent [4]
Non committal [3]
Small extent [2]
No extent [1]

No.	Statement	5	4	3	2	1
1.	To what extent have M.o.E funds enabled you to fund disaster management in your school?					
2.	To what extent has schoolôs sponsor funds enabled you to fund disaster management in your school?					
3.	To what extent has school fundraisings enabled you to fund disaster management in your school?					
4.	To what extent has school entrepreneurial activities enabled you to fund disaster management in your school?					
5.	To what extent are the school funds available in funding disaster management in your school?					
6.	To what extent has NGO funds enabled you to fund disaster management in your school?					
7.	To what extent are school funds adequate in funding disaster management in your school?					

ii) Questionnaire on Corruption

In this section, you are requested to tick (ã) against the number in the scale with regard to the statement provided. The scale options are:

Strongly agree [5]
Agree [4]
Indifferent [3]
Disagree [2]
Strongly disagree [1]

No.	Statement	5	4	3	2	1
1	The school adheres to M.O.E procurement procedures in facilitating disaster management					
2	The school purchases standard quality institutional facilities for the school					
3	The school is regularly inspected by the M.O.E staff to ensure school safety					
4	The schools financial records are checked by the M.O.E auditors as stipulated by the ministry					
5	The school receives the allocated funds from M.O.E					
6	The funds meant for preparedness in disaster management are channelled to other uses in the school					
7	The school observes what the auditors recommend on the use of school funds					

iii)Questionnaire on Stakeholders Participation

In this section, you are requested to tick (ã) against the number in the scale with regards to the statement provided. The options are:-

Always [5]
Very often [4]
Sometimes [3]
Rarely [2]
Never [1]

No.	Statement	5	4	3	2	1
1	I am involved in the formulation and implementation of disaster management in the school					
2	I attend seminars on disaster management to benefit the school					
3	Because of the seminars on disaster management I have been able to assist the school before and during disasters					
4	I have access to materials on disaster management available in the school					
5	I have been able to train other stakeholders on disaster management after training					
6	I am able to assess and improve disaster management in the school					

iv) Would you please state two major challenges that you face in preparedness in disaster management

1)
2)

v) In your opinion, would you please suggest two ways of improving Preparedness in disaster management in your school

1)

2)

APPENDIX V

OBSERVATION CHECKLIST

Facility/Resource	Available	Not Available	Total
Classrooms			
Dormitories			
Laboratories			
Dining Hall			
Toilets			
Bathrooms			
Workshops			
Kitchens			
Water Tanks			
Libraries			
First Aid Kits			
Fire Extinguishers			
Alarm/Warning Systems			
Lighting System			
Telephone			
Gate at school entrance			
Safety Instructions			
Perimeter Fence			
Guidance and Counselling office			
School Field			

APPENDIX VI

TABLE FOR DETERMINING SAMPLE SIZE

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	246
25	24	130	97	320	175	950	274	4000	351
30	30	140	103	340	181	1000	278	4500	351
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	181	1200	291	6000	361
45	40	180	118	400	196	1300	297	7000	364
50	44	190	123	420	201	1400	302	8000	367
55	50	200	127	440	205	1500	306	9000	368
60	52	210	132	460	210	1600	310	10000	373
65	56	220	136	480	214	1700	313	15000	375
70	59	230	140	500	217	1800	317	20000	377
75	63	240	144	550	225	1900	320	30000	379
80	66	250	148	600	234	2000	322	40000	380
85	70	260	152	650	242	2200	327	50000	381
90	73	270	155	700	248	2400	331	75000	382
95	76	280	159	750	256	2600	335	100000	384

Note: N - Population Size
S - Sample Size

Source: Krejcie and Morgan, 1970

UNIVERSITY OF NAIROBI
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SCHOOL OF CONTINUING AND DISTANCE EDUCATION
DEPARTMENT OF EXTRA - MURAL STUDIES

Tel 051 - 2210863

P. O Box 1120, Nakuru
6th May 2015

Our Ref: *UoN/CEES/NKUEMC/1/12*

To whom it may concern:

RE: HELLEN WANGUI NJURU – L50/71690/2014

The above named is a student of the University of Nairobi at Nakuru Extra-Mural Centre Pursuing a Masters degree in Project Planning and Management.

Part of the course requirement is that students must undertake a research project during their course of study. She has now been released to undertake the same and has identified your institution for the purpose of data collection on "Factors Influencing Preparedness in Disaster Management in Nakuru Sub- County," Nakuru County.

The information obtained will strictly be used for the purpose of the study.

I am for that reason writing to request that you please assist her.

Yours Faithfully,

NAKURU EXTRA-MURAL CENTRE
RESIDENT LECTURER
P.O. Box 1120
NAKURU
UNIVERSITY OF NAIROBI

Mumo Mueke
Ag. Resident Lecturer
Nakuru Extra-Mural Centre