DISASTER PREPAREDNESS IN PUBLIC PRIMARY SCHOOLS FOR
MENTALLY HANDICAPPED CHILDREN IN NAIROBI CITY COUNTY,
KENYA

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REQUIREMENTS FOR THE AWARD OF DEGREE OF MASTER IN ARTS OF
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NOVEMBER, 2014
DECLARATION

This research project is my original work and has not been presented to any other university for any other Degree programme.

Sign ___________________ Date 1st Dec, 2014

KIILU PENINNAH ÑGINA

This project has been submitted for review with our approval as university supervisors.

Sign ___________________ Date 14th Dec, 2014

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DEDICATION

I dedicate to my husband, Anthony Mbasi, and to our daughters Evelyn Mbithe and Abigail Musembi. May God bless you all.
ACKNOWLEDGEMENT

I am deeply indebted to many people without whom this work would not have reached its present form. First I would like to express my sincere appreciation to my supervisors, Dr. Felix Kiruthu and Dr. Francis Kerre for their scholarly and constructive suggestions, advice, guidance and encouragement, without which this study would not have reached its completion.

I would also like to thank the lecturers and academic peers in the Department of Public Policy and Administration for their continued encouragement and support during the entire course.

My appreciation also goes to the Nairobi County Education Director, DEOs in Dagoretti, Embakasi, Starehe and Kasarani for allowing me to access schools in their districts for this study. I must also thank the head teachers for all the special public schools that participated in this study. My appreciation also goes to the class teachers and pupils for the sample schools for positively responding to the research instruments at very short notices.

Special thanks go to my family and especially my husband Mbasi, whose encouragement and financial support to facilitate my studying. To our daughters Mbithe and Abigail for accepting to forego my company and care, while I was studying.
ABSTRACT

The purpose of this study was to investigate disaster preparedness in public primary schools for mentally handicapped children in Nairobi City County, Kenya. The study sought to identify the measures put in place in schools for the mentally handicapped to deal with disaster events; to document disaster preparedness plan for the mentally handicapped schools; to examine how disaster management policies and guidelines are followed when enrolling mentally handicapped pupils and to assess whether there exist a disaster preparedness policy regarding the mentally handicapped public schools. The study was guided by Social Learning Theory by Albert Bandura which stresses modelling. It is also known as observational learning, modelling or learning theory. The study employed descriptive research design. The target population of the study included all the four public primary schools in Nairobi City County that have children with mental disability. Sampling was purposive for all the four institutions and the headteachers. Simple random sampling was also used to select pupils and teachers from the target population. The sample size was seventy three pupils, fifty one teachers and four headteachers. Questionnaires, interview guides and observation schedules were used for the study. To determine validity of the instrument, a pre-test was carried out in one pilot school which helped the researcher to evaluate the validity, clarity of the questionnaires and interviews suitability of language used in the instrument and the feasibility of study. To determine the reliability a test-re-test was used. A research permit was obtained from the National Council of Science and Technology to undertake this research. The quantitative data analysis used descriptive statistics to analyse the data. Data were presented in form of frequency tables. The study findings revealed that 57.5% of the teachers and school management had put in place disaster prevention measures such as fire extinguishers and an exit door in every dormitory in case of a disaster. However, the study found out that despite these measures being in place most pupils had no knowledge of how they could use the fire extinguishers or the process one should follow in case fire breaks out. In every school that was analysed it was found that disaster management policies and safety guidelines from the Ministry of Education Science and Technology were issued but not implemented by the school management. This means that if implementation in the schools for mentally handicapped the pupils would have better knowledge on how to deal with the effects of disaster if it occurred. The study recommends that funds be availed to train and equip teachers with disaster preparedness skills, and to give basic training on disaster to pupils. Particularly on the use of equipment and more drills on how to give signals and identify the escape routes. This will enable the schools minimise disaster effects or impacts if they occur. The schools should also to develop a safety code that should to be practiced and used in case of danger.
<table>
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<tr>
<td>DALYs</td>
<td>Disability Adjusted Life Years</td>
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<td>EARS</td>
<td>Educational Assessment and Resource Services</td>
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<td>GoK</td>
<td>Government of Kenya</td>
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<td>IDEA</td>
<td>Individuals with disabilities Education Act</td>
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<td>KICD</td>
<td>Kenya Institute of Curriculum Development</td>
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<td>MoE</td>
<td>Ministry of Education</td>
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<td>SNE</td>
<td>Special Need Education</td>
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<td>UNCRC</td>
<td>United Nations Convention on the Rights of the Children</td>
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<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organization</td>
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<td>UNICEF</td>
<td>United Nations International Children’s Emergency Fund</td>
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DEFINITION OF TERMS

**Chronological age** The life age or actual age of an individual

**Children with Special Needs** Children who have physical, mental, behavioural or sensory characteristics that, differ from the majority of children, such that they require special education and related services, to develop their potential to the maximum.

**Disability** Any restriction or lack of ability to perform an activity in the manner or within the range considered normal for a human being.

**Disaster** Adverse or unfortunate event, a sudden misfortune or calamity caused by external factors like fire, flood, drought, pests, earthquakes, hurricanes, volcanic eruptions or other forms of emergency.

**Disaster preparedness** refers to measures taken to limit the impact of disaster events on people. Preparedness is a continuous cycle of planning, managing, organizing, training, equipping, exercising, creating, evaluating, monitoring and improving activities to ensure effective coordination and the enhancement of capabilities of concerned organizations to prevent, protect against, respond to, recover from, create resources and mitigate the effects of natural disasters, acts of terrorism, and other man-made disasters.

**Disaster Mitigation** refers to efforts or attempts to prevent hazards from developing into disasters altogether or to reduce the effects
of disasters. Mitigation is the effort to reduce loss of life and property by lessening the impact of disasters.

<table>
<thead>
<tr>
<th>Hazard</th>
<th>refers to a general term for a wide range of phenomena that pose a threat to humans, human society and human populations, as opposed to incidents, accidents and disasters (actual events that have taken place).</th>
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<tr>
<td>Intelligence Quotient (IQ)</td>
<td>A numerical expression of intelligence based upon an Intelligence test.</td>
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<td>Mental age</td>
<td>Level of intellectual development compared in terms of chronological age.</td>
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<td>Mental Handicap</td>
<td>A delay or slowness in mental development, which is manifested in immature reactions to environmental input, and below average intellectual and social performance. Also called mental retardation.</td>
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<tr>
<td>Special Education</td>
<td>A specially designed form of instruction aimed at meeting the unique educational needs of a child with disability.</td>
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<td>Special public primary school</td>
<td>Refers to a learning institution that is funded by the government to cater for children with disabilities.</td>
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<tr>
<td>Vulnerable</td>
<td>Refers to a person in need of special care, support, or protection because of disability, or risk of abuse or neglect</td>
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CHAPTER ONE
INTRODUCTION

1.1 Background to the study

The study focused on disaster preparedness in public special primary schools for the mentally handicapped in Kenya. The reason behind taking this study is because in disaster situations many institutions are caught off guard, thus the impact of disaster becomes catastrophic. UNICEF (2010) noted that disaster management, disaster preparedness refers to measures aimed at enhancing life safety when a disaster occurs, such as protective actions. It also includes actions designed to enhance the ability to undertake emergency actions in order to protect property and contain disaster damage and disruption, as well as the ability to engage in post-disaster restoration and early recovery activities. Disaster management has three phases that is pre-disaster, during disaster and post-disaster management. However, with the experience that Kenya has gone through in schools that do not have handicapped children, the management tends to have very little knowledge about disaster preparedness. It is important when creating awareness about disaster in institutions, that management is educated and trained on how to deal with disaster. This type of training may start with addressing disaster issues in sequence that is pre-disaster, during and post disaster preparedness (International Finance Corporation (UNICEF, 2010). It is not clear whether these steps are being taken when running special schools.

For disaster preparedness to be effective there should be a disaster management policy for guidance. The policy encompasses full continuum of preparedness, relief, rehabilitation, mitigation and prevention of disaster. The policy emphasizes preparedness on the part of the government, communities and stakeholders in Disaster risk reduction. It is aimed at
establishing and strengthening disaster management institutions in partnership, networking and mainstreaming disaster risk reduction in the development process so as to strengthen the resilience of vulnerable groups to cope with potential disasters (National Disaster Management policy; April 2007).

Mental handicapped disorders accounts for a high proportion of all disability adjusted life years (DALYs) lost, and this burden is predicted to grow significantly (UNESCO, 2010) in the future. In addition to the obvious suffering due to mental disorders, there exists a hidden burden of stigma and discrimination faced by those with mental disorders. In both low- and high-income countries, stigmatization of people with mental disorders has persisted throughout history, manifested by stereotyping, fear, embarrassment, anger and rejection or avoidance. Violations of basic human rights and freedoms and denial of civil, political, economic, social and cultural rights to those suffering from mental handicapped are a common occurrence around the world, both within institutions and in the community. Physical, sexual and psychological abuse is an everyday experience for many with mental disorders. In addition, they face unfair denial of employment opportunities and discrimination in access to services, health insurance and housing policies. Much of this goes unreported and therefore this burden remains un-quantified (Arboleda-Flórez, 2001).

The vulnerable or special groups include the old, the poor, women, children and people living with disabilities among others. The Ominde report of 1964, recommended special education and training for disabled children and other issues in the Education sector. This placed Kenya in the forefront in the provision of special education in Africa. However in the 1970s, the development and expansion of special education remained relatively slow.
It was not until 1976, that the Kenya government took a keen interest in special education (Ndurumo, 1993), which resulted in the rapid growth of special education programmes including schools for mentally handicapped in the 1980s and the 1990s.

In 1987, the MoE altered its goals for special education to focus more on children rather than on expansion of physical facilities. As a result, in 1994, the Kenya government set up a national programme, the Educational Assessment and Resource Services (EARS) to provide early assessment, identification and intervention services for handicapped children. The establishment of EARS in 1984 as a national programme promoted the identification and assessment of children with disabilities in the districts, so that they could be offered the most suitable training and education (MOE, 2000). The main objectives of EARS were to identify and assess handicapped children as early as possible. After assessment the handicapped children are placed in special schools which according to Sessional paper of 2012 have inappropriate infrastructure, inadequate facilities and lack of equipment this compound the difficulties being faced in the area. This shows that in case of a disaster in these special schools there is no preparedness put in place by the government (MOE & MOHEST, 2012).

Special schools and institutions admit learners who are challenged in sensory (hearing, seeing), mobility (physically challenged) intellectually (mentally challenged) socially maladjusted, hence the need for greater caution in dealing with people who are already challenged during disaster. According to sessional paper No.10 of 1965 on African socialism and its application “disaster management is a vital component of the societal efforts towards improvement of livelihood.” Learners with various challenges are already
vulnerable to disaster hence will be adversely affected when disaster strikes and therefore the need for holistic preparedness in learning institutions.

The history of disasters in Kenya has been collected to assist in predicting and planning for future occurrences, thus documenting the period of disaster occurrence, area covered and the kind of disaster and the estimated cost. Like other institutions, schools in Kenya have been affected by various accidents that disrupt the normal learning programme. For example one of the traumatic grief is the “Kyanguli school fire in Machakos county that occurred on the night of March 25/26 2001 that consumed one of the dormitories in which students were sleeping. Sixty seven (67) of them were burnt to death while others sustained various physical injuries (Nguli, 2012).

In 1999, Nyeri high school in Nyeri district lost four prefects when they were burnt to death after some students locked their room and set it on fire (Akala, 2000). On 13th July, 1991, at St. Kizito-Meru secondary school, boys invaded girls’ dormitory and raped seventy girls and in the melee that followed, nineteen girls lost their lives (GoK, 2001). In August, 2012, a fire gutted down a dormitory in Asumbi Girls in Homabay County in which eight students lost their lives (Nguli, 2012). Another example was on Friday 25th October 2013, when a dormitory in Kihome Secondary school was burnt down and more than 70 students lost property of an unknown value (Kanyi, 2013).

From the above we can only imagine what would have happened if schools such as Nyeri High, Kyanguli had learners who were mentally handicapped. Nairobi City County has the highest number pupils in special public primary schools and public special units at around 8,850 mentally handicapped children which are mainly based on the fact that it
had the highest prevalence of persons with mental disability. Other areas such as Kirinyaga have a population of 5,453 pupils and Muranga has a population of 4,356 pupils as indicated in the (Kenya National Census, 2009). Nairobi County has the highest number of special units for learners with mentally handicapped pupils. The impact would have been greater. In disaster management individuals with disabilities are referred to as special or vulnerable groups. This is just one special group out of the many who fall in this category. In this project the idea is to address mentally handicapped in disaster preparedness.

1.2 Problem Statement

For a long time, the problems of children with disabilities have been compounded by a disabling society that has focused upon their impairments rather than their potential. In the past, relatively fewer children with disabilities have had access to education, especially in the developing nations. It is estimated that, less than 1 percent of children with special educational needs are included in existing provisions (EFA FTI, 2008).

Accidents which have befallen our schools in the recent years have triggered the curiosity to question about safety in schools. Accidents may occur without any prior warning hence the question. “How are our schools prepared to cope with disaster when they occur? If disaster affects regular schools to a great magnitude as cited in the Kyanguli fire (2001) and St. Theresa Asumbi girls (2012), what about when it occurs to schools for learners with special needs? Late 2013 and early 2014 five dormitories and a food store in Sacred Heart Secondary school in Rongai Constituency, Nakuru were gutted down by a fire and property worth millions of shillings lost. Although this did not result to any injuries or fatalities, there is need for greater awareness in disaster preparedness for special schools.
and especially schools with mentally handicapped children. The mentally handicapped learners have limited intellectual capability hence have a limitation on their reactions to a disaster situation.

Although the Ministry of Education has established disaster preparedness policies (Republic of Kenya, 2008), there is very little said about mentally handicapped schools on disaster preparedness to govern special education as such and has been using several commissions’ recommendations to run and manage special education programmes to the best of the researcher’s knowledge. The programmes and services for special education have to compete, usually unsuccessfully with other human services, which makes the nature of educational services rendered to be far from adequate in comparison with the magnitude of the prevailing problem in the country. There are directives to assist when disaster strikes in schools for the mentally handicapped and therefore this study seeks to address disaster preparedness before, during and after the disaster. Thus the need for an investigation into how well special schools are prepared in coping with disaster, prior, during and post in; preparedness plans, emergency training, warning and communication systems, information and education in Nairobi City County.

1.3 Research Questions

The study was guided by the following questions.

1. What disaster management policies and guidelines are followed when enrolling mentally handicapped pupils within special school?

2. What are the measures put in place in special schools for the mentally handicapped in case of a disaster?
3. What are the coping mechanisms of children with disability when disaster strikes in their schools in Nairobi City County?

1.4 Objectives of the Study

1. To examine whether disaster management policies and guidelines are followed when enrolling mentally handicapped pupils in special schools in Nairobi City County.

2. To analyse the measures special schools for the mentally handicapped have taken to deal with disaster events in Nairobi City County.

3. To examine how children with disability cope during disaster in their schools.

1.5 Research Assumptions

1. There are no disaster management policies and guidelines followed when enrolling Mentally Handicapped pupils in special schools.

2. There are no stipulated measures put in place in special schools for the mentally handicapped in case of a disaster.

3. Children with special needs have limited coping mechanism during disaster.

1.6 Justification and significance of the study

Disability sensitivity in disaster management could be improved if existing guidelines on disaster preparedness and response plans at schools levels included specially designed programme which catered to the needs of disabled people. Disability disaster management development and disaster management should not be considered charity or assistance to helpless groups within society; it has to be considered as part of the process to provide a more equitable solution to peoples’ needs. Everyone has the right to access opportunities, which ensures the liberties of humans to live a respectable life. Thus, just
as disaster management is being considered as part of the development process of a country the disabled should not be relegated to the corners of society.

Since the introduction of Free Primary Education (FPE) in 2003, many pupils with special needs have been enrolled in regular primary schools, in response to the Inclusive Education approach. The Ministry of Education (2004) emphasized that regular schools with inclusive orientation, were the most effective means of combating discriminatory attitudes and creating welcoming communities.

Taking into account the magnitude of the population of children with mental handicap and the inadequate special education facilities and other forms of rehabilitation services, it is crucial to address the educational services they are receiving in special schools. The prevalence of children with disabilities and their status of education in the country is not yet fully known and analysed for effective education and rehabilitation service delivery. The major constraint to the development of special education is lack of up-to-date data and information about children with mental disabilities. No comprehensive survey has been carried out in Kenya on the number of children with mental disabilities to the best of the researcher’s knowledge although the statistics from EARS give a variable indication of the prevalence.

This study therefore may provide and generate useful information on the enrolment and the effectiveness of service delivery to mentally handicapped pupils in special public primary schools. This may enhance the quality and extent to which their educational needs are met. The findings may promote awareness and sensitisation towards mentally handicapped pupils on disaster management. The study may also give recommendations
that are helpful in disaster management preparedness for mentally handicapped pupil in Nairobi County public primary schools and public special units.

1.7 Scope and Limitations

Nairobi City County is purposively selected because assessment and identification of children with disabilities have been carried out since 1949, and the number of mentally handicapped children was very high in comparison to other disabilities (Kenya National Survey for Persons with Disabilities (2008). The researcher also has work experience in public primary school for the mentally handicapped in the county. Persons with disabilities are not excluded from the general education system on the basis of disability and therefore are vulnerable to disaster in-case it occurs. Persons with disabilities can access an inclusive, quality and free primary education and secondary education on an equal basis with others in the communities in which they live. Reasonable accommodation of the individual’s requirements is provided with disaster management strategies being put in place. Persons with disabilities receive the support required during disaster, within the institution and to facilitate their effective evacuation in case of a disaster. Effective individualized support measures are provided in environments that maximize academic and social development and consistent with the millennium goals of education.
CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction
This chapter reviewed other literature that examined the measures the special schools for the mentally handicapped have taken to deal with disaster events, disaster preparedness plan for the mentally handicapped schools; how disaster management policies and guidelines are followed when enrolling mentally handicapped pupils in special schools and to establish how there are disaster preparedness policy regarding the mentally handicapped schools.

2.2 Children, Disability, and Disaster
By the end of the 20th century, disasters affected an estimated 67 million children around the world each year (Penrose & Takaki, 2006). This number is projected to be more than triple over coming decades, mostly due to population growth, especially in hazardous regions such as low-lying coastal zones, and the growing prevalence and severity of climate change-related disasters (Bartlett, 2008). Conservative estimates suggest that over 7 million of these disaster-affected children experience various forms of disability (United Nations International Children’s Emergency Fund, 2007), and millions more may acquire disabilities as a result of increasingly frequent and intense disaster activity, wars, and landmine explosions (World Health Organization, 2005).

When disaster strikes, children are among those most vulnerable to death and injury, especially in developing countries (Neumayer & Plumper, 2007). Children and individuals with disabilities share a number of common risk factors that increase the
probability that they will experience negative physical impacts during and following disaster.

Peek and Stough (2010) notes that children and people with disabilities are more likely to live in poverty both in developed and developing nations. In the United States, a higher percentage of children (18.3%) and individuals with severe disabilities (26%) live in poverty than the population as a whole (13.3%; U.S. Census Bureau, 2006). In most high-income countries, people under 18 years of age make up about 20% of the population; in low-income countries, where children are more likely to experience disability, children represent closer to half of the total population (e.g., 42% in Bangladesh, 51% in Nigeria, 57% in Uganda; Bartlett, 2008) hence there is little or no intervention carried out during disaster among the disabled.

According to Peek and Stough (2010) also noted in the case of sudden onset disasters that allow little warning time, such as tornados or earthquakes, children with disabilities may have a more difficult time taking recommended protective actions, escaping, or withstanding the force of the disaster. For instance, children with mobility limitations may be incapable of crouching under their desks in an earthquake, hiking up a hillside in a flash flood, or running to an evacuation point on higher ground in the event of a tsunami. All of these are recommended protective actions developed for people without mobility limitations. Children with cognitive impairments may not recognize signs of environmental danger or understand impending threats (Kailes & Enders, 2007) or may become anxious and confused in response to emergency signals (Scotti et al., 2007).
2.2.1 Educational Vulnerability

Childhood is a time of rapid intellectual development, and thus children are uniquely vulnerable to negative educational outcomes that may accompany disaster (Peek, 2008). Disasters often destroy school buildings, especially in locations where engineering standards and building codes are not enforced or where buildings are of less structural integrity. Hewitt (2007) inventoried tens of thousands of schools that collapsed in earthquakes over the past two decades in Pakistan, India, Nepal, Egypt, Turkey, Armenia, China and other countries. The loss of schools may leave surviving children with few alternatives for an adequate education, and this issue may be especially problematic for children with disabilities as they face many barriers in accessing education during non-disaster times in both developed and developing countries (International Federation of Red Cross and Red Crescent Societies, 2007). When disaster disrupts a community's educational system, schools accessible to children with disabilities may be among the last to be rebuilt. Ramps and other forms of access into inclusive schools may become a secondary priority.

2.3 Measures that the special schools for the mentally handicapped have taken to deal with disaster events

Pupils' protection mandates is the responsibilities and commitment of Ministry of Education to provide a safe and supportive learning environment, prevent and respond to harm or risk of harm for all pupils. Harm in this context is limited to that caused by a school employee, another pupil, someone outside the school environment, and pupils self-harm (Berkman, 2008), or even the logistics of their management (Cauchemez et al., 2009). People with disabilities are often dependent on others for important aspects of their daily activities, and their support system can be disrupted in disaster situations (Campbell
et al., 2009). This is particularly the case with school children, who might be separated from their parents for prolonged periods (Peek & Stough, 2010). Pupils with limited mobility are vulnerable in the acute phase of a disaster when evacuation might be necessary (Asher & Pollak, 2009; Peek & Stough, 2010), and additionally vulnerable in the recovery phase when accessibility accommodations are often the last components of infrastructure to be restored (Peek & Stough, 2010). Communication disorders can affect how quickly a student becomes aware of an (impending) disaster, their access to emergency information during a disaster, and their ability to request assistance (Campbell et al., 2009).

According to the Ministry of Education Science and Technology (2008), schools should have fire fighting equipment, regular painting and white washing of buildings; involvement of registered professionals in site planning, design, construction and maintenance of school buildings; regular health inspection of premises and pupils; prevention of overcrowding in classrooms and dormitories; classrooms should be built upwind from laboratories, kitchens and play grounds and their longer sides to run in an east to west direction; one toilet to be provided for every thirty students and wholesome water to be provided for consumption by students; and clearly demarcated school grounds with proper fencing and secure gates.

Campbell et al., (2009) in addition, indicated that transportation being a vital aspect in the event of a disaster; schools are required to have school buses and vans with competent and reliable drivers that come in to assist in the event of an evacuation. Schools are also equipped with medical units that deal with simple complications and other chronic
diseases that may arise and are stocked with medication that may assist in the administering of solutions to the complications.

2.4 Disaster preparedness plan for the mentally handicapped schools

Republic of Kenya (2001) noted that all schools must have emergency management plans and policies to address all pupils’ needs, including the most vulnerable with disabilities or special healthcare needs. Moreover, schools need appropriate curricula to disseminate information about disaster to their pupils and to prepare them for any likely emergency situation. For example in Kenya schools a safety measures has been put in place through the school safety policies in Kenya as indicated in the Ministry of Education Circular No. G9/1/169 (Republic of Kenya, 2001) which requires that; head teachers should reside in schools; fire drills should be held at least twice every year; emergency doors should be created in dormitories and special rooms; safety instructions should be prominently displayed in laboratories and workshops.

According to Otula (2007), disaster management involves all actions aimed at reducing or preventing calamities and providing adequate measures to combat any catastrophe or mishap. Otula (2007) further argues the main aim of disaster preparedness is to set up appropriate systems and infrastructure for response in case disaster strikes. This includes laying down essential tools and procedures aimed at ensuring operational readiness to combat calamities. Measures should also be put in place to combat future disaster outbreaks as well as communicated and understood by all. Disaster preparedness minimizes the adverse effects of a disaster by ensuring a realistic level of pre-incident take up of risk reduction strategies as well as ensuring speed and timeliness in handling
emergencies or disaster so as to minimize devastating effects. Timeliness is arriving at the scene and combating the disaster without undue delay can save lives and properties.

The Ministry of Education in collaboration with stakeholders, for example the Ministry of Health ensure that learners with special needs and disabilities are provided with regular treatment and medicine to preserve or improve their level of functioning (GOK, 2009). However, there is little evidence to suggest that available resources are sufficient to actively involve disadvantaged groups in planning because of limited understanding of the culture of poverty and its impact on preparedness. In each special need group, there is a scarceness of policy and planning resources.

2.5 Disaster management policies and guidelines followed when enrolling mentally handicapped pupils in special schools

Learners with SNE require services of other professionals and members of the community apart from teachers. Such personnel include teacher aides, house mothers/fathers, sign language interpreters, and readers’ etcetera. Services of these professionals were lacking in the education system either due to lack of their training institution or money for their remuneration. Learners with special needs and disabilities in schools and institutions are sometimes marginalized and are not represented in positions of management and decision making processes. Learners with special needs and disabilities have not been actively involved in sporting, cultural and recreational activities. Their participation is limited due to inaccessibility and/or unsuitability of the facilities (GOK, 2008).

Although Kenya has experienced a number of disasters in the recent years, common disasters experienced range from human action to natural phenomenon. Collapse of
buildings due to tremors and or poor construction standards have been experienced in urban areas. Flooding and slight tremors have caused disasters among populations resulting in loss of human life. Social crisis occasioned by various issues such as community conflicts, land clashes, political clashes and accidents involving vehicles, planes and trains have become a common occurrence globally and in the Country (GOK, 2008).

Children with special needs are more vulnerable to disasters and conflicts. Unfortunately, the attitude of parents and other service providers to children with special needs makes them appear as second class human beings. This exposes them to neglect and immense suffering during emergencies, conflicts and disasters. Lack of specific training for handling people with special needs among essential services officers is a major constraint in providing preferential attention to these target groups in situations of disaster and conflict. There is need to sensitize fire fighters and other evacuees to give children and people with special need first priority in times of need (GOK, 2009).

2.6 Disaster preparedness policies put in place regarding the mentally handicapped schools.

According to the Ministry of Education (2008) the government has been conscious of the fact that capacities and skills of staff at all levels within Special Need Education (SNE) should be commensurate with the tasks they perform. This was made successful by SNE teachers in the country being trained at Kenya Institute of Special Education (KISE), Kenyatta and Maseno universities. It was estimated that in 2003, there were 4255 SNE teachers trained in Kenya against an estimated 1.8 million learners with SNE requirements. In most cases there are gaps between competencies and the responsibilities
of staff who undertake provision of Special needs education. The MOE faces various challenges in respect to capacity building and human resource development, especially in SNE. There is lack of systems to provide adequate information and skills inventory to guide those who perform deployment functions in the ministry.

DFID (2010) noted that during disaster the most vulnerable groups such as children, the elderly and people with disabilities are the most affected. In many situations, people evacuate leaving behind those with special needs who cannot evacuate as fast as normal functioning people. It is therefore important that special and extra attention be given to people with special needs and disabilities during instances of disaster. Hence there is need for the government to address the issue of disaster preparedness through essential forces who are normally the first to arrive at scenes of disaster. However, more education and disaster preparedness needs to be carried among the public and communities. Specific emphasis needs to be placed on handling persons with special needs during disaster response. Close collaboration and coordinated effort is required between the government and partners such as the Red Cross to ensure people with special needs are adequately cared for during situations of conflict, emergencies and disasters.

The government offered Free Basic Education to learners with special needs through provision of funds to institutions hosting them. It also offered to continue to work with ICT partners to increase ICT services to educational institutions particularly for persons with disabilities and SNE. Establish mechanisms to ensure persons with special needs and disabilities venture into technical training in ICT.
2.7 Summary of Reviewed Literature

Vulnerable populations, including children with disabilities, are especially at risk in disasters (Balbus & Malina, 2009). Hence disaster preparedness is inevitable for children with intellectual disability. Nderitu (2009) sought to investigate disaster preparedness in public secondary schools in Githunguri Division, Kiambu District. The major findings of the study were the Ministry of Education safety guidelines had not been adequately implemented in schools. The study established that lack of funds was a major constraint in effective implementation of the safety requirement. The study recommended enhanced school inspection, provision of funds and integration of disaster management in the school curriculum. The study is somehow similar to the current study however the point of departure is that while the study was based on the Wangai policy circular the current one is based on disaster preparedness of mentally handicapped pupils in special public primary schools. In Nairobi City County research has been done on visually and hearing impaired pupils though not on disaster preparedness but on other areas especially how they deal with HIV challenges. This study therefore concentrates on mentally handicapped pupils and how they deal with disaster preparedness.

2.7 Theoretical Framework

Singleton et al (1988) asserts that all empirical studies should be grounded on theory. A theoretical framework is essential in the understanding of factors that may influence the education of mentally handicapped children.

2.7.1. Developmental Theory

A conceptualisation of mentally handicapped children from a developmental viewpoint is essential. Developmental theory postulates that a retarded person goes through the same
developmental stages that a normal person does, but more slowly, and does not reach the same final level (Schneider, Korkel & Weinert, 1987). The best example of such a theory is that of Piaget (1984). His theory of cognitive development is the most popular of the theories on the child's mental maturation process. It has also become the cornerstone (Ndurumo, 1993) in understanding the child's reasoning and intellectual levels. The theory is divided into stages and Piaget believes that all children follow these stages. When the child significantly deviates from the pattern of intellectual development, professionals become concerned.

Piaget's theory can be used in understanding the learning of the mentally retarded child. According to Payne et. al., (1977), Piaget views all individuals as progressing through stages of development with each stage representing both quantitative as well as qualitative changes in cognitive skills. The developmental stages have been identified as Sensori-motor, pre-operational, concrete operations and formal thought.

The Sensori-motor stage (0-2 years) is concerned with perceptual organization, the origins of intelligence, and the infants' methods of dealing with simple behaviour. In the pre-operational stage, (2-7 years) the child begins to develop the ability to use symbols, first as objects in his world and later to use words and numbers. The stage of concrete operations (7-11 years) furthers the child ability to order and classify things, but it is generally limited to learning of a concrete, non-abstract nature. The stage of formal thought (11 years and over) encompasses the ability needed to deal with the abstract and hypothetical thought.
Piaget observes that children develop in the same sequence and the imperfections experienced by children at certain levels of development are alike (Roger, 1965). Assessment of the mentally handicapped child according to developmental consequences helped to determine readiness for certain tasks. The theory helped to pinpoint where deviation takes place and the effects of the deviation on the child. Thus when related to disaster preparedness plans, it assisted the education managers in such institutions to put in place measures that enabled the mentally handicapped learners to cope with disastrous events when they strike.

2.7.2 Deviance Theory

Handicapped people are often perceived as deviants and are stigmatized. However, people with mental retardation are regarded as the most deviant of all the groups of people with disabilities (Thornburn and Marfo, 1994). The degree to which such people are regarded as deviant varies with, and is dependent on the way in which they are perceived as different in the attributes on which the society places greatest value.

A person can be said to be deviant if he is perceived as being significantly different from others in some aspects that is considered of relative importance or if this is negatively valued. An overt and negatively valued characteristic which is associated with, deviance is called ‘stigma’. This is attributed to individuals who do not conform to normative behaviour in society. People with visual and physical impairments tend to be accepted more readily because they can articulate their feelings, needs and rights more effectively than those with communication and intellectual impairments (Thornburn and Marfo, 1994). The theory helped to pinpoint where deviation takes place and the effects of the deviation on the child in school and how teachers attitude influence the way they perceive
mentally handicapped children. Although this theory was relevant to the study, Albert Bandura's social learning theory was found to be more relevant as it relates to environment and social behaviour.

2.7.3. Social Learning Theory

Social Learning Theory stresses the development of social behaviours. It is also known as observational learning, modelling or learning by example (Ndurumo, 1993). It is based on the premise that a person's interaction with his meaningful environment establishment a wide region with wide potential for investigation.

Albert Bandura who has been associated most often with research on this theory noted that the four underlying processes involved in imitation are attention, retention, motoric reproduction and incentive or motivation (Polloway and Payne, 1977). It has been closely tied with the concepts of identification and internalisation that involves learning through the imitation of the behaviour of others. The person consciously and deliberately tries to learn or perform similar behaviours without token reinforcements.

The social learning theory which involves modelling of behaviour if adopted in public primary schools for the mentally handicapped in Nairobi City County would be useful in developing disaster management policies and guidelines suitable for mentally handicapped pupils that would be followed when enrolling them in schools. The theory assisted to analyses the suitability of the measures that the special schools for the mentally handicapped pupils have in place to deal with disastrous events when they occur in Nairobi City County. The Social Learning Theory focus on processes of imitation
would be useful in training the mentally handicapped learners to acquire skills needed to cope when disaster strikes in their schools in Nairobi City County.
CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction
This chapter discussed the methods that were used in carrying out the study. It included research design, target population, sample size and sampling procedure, research instruments, instrument validity and instrument reliability, data collection procedures, and data analysis techniques.

3.2 Research design
A research design is a plan showing how the problem of investigation will be solved (Orodho and Kombo, 2003). Descriptive research design was employed in the study. This research design was useful as it involves collecting information by interviewing or administering a questionnaire to a sample of individuals. It can be used when collecting information about people's attitudes, opinions or habits. The design allowed the researcher to collect views from the respondents to facilitate descriptions of the disaster preparedness in special education for mentally handicapped children in public primary schools in Nairobi City County.

3.3 Location of the study
The study was carried out in Nairobi City County public primary schools that handle children who are mentally handicapped. Nairobi is the capital city of Kenya. There are nine districts in Nairobi County namely Kasarani, Starehe, Kamukunji, Makandara, Langata, Embakasi, Njiru, Westlands and Dagoretti. The study was carried out in four districts that were purposively picked, that was where the four schools purely for the
mentally handicapped are located. These include Embakasi, Kasarani, Dagoretti and Starehe districts.

3.4 Target population
This study drew its population from all the four public special primary schools in Nairobi City County that have children with mental disability. The respondents were four (4) headteachers, one hundred and seventy (170) teachers and seven hundred and thirty four (734) pupils in the public special primary schools (DEO, 2014).

3.5 Sample size and sampling procedure
According to Mugenda and Mugenda (2003) 10% of the population can be picked from a large population. Mulusa (1990) states that in small population of 30 cases or less it is possible to leave out one or two cases which would not make much difference to the resources and time required. Hence this study used all the four (4) institutions since they are few. Purposive sampling was used to select all headteachers. Simple random sampling was used to select the teachers. Hence all the names of the teachers were written down, the papers were then placed in a basket and the researcher picked randomly from the basket to pick 77 teachers who are incharge of classes. Ten percent (10%) of the pupils’ population were selected which constituted 73 pupils. Hence the sample size included 4 head teachers, 77 teachers and 73 pupils.

3.6 Research instruments
The research instruments that were used in this study were questionnaires, interview guides and observation schedules. Questionnaires were more efficient in that they require less time, they are less expensive and permit collection of data from a wide population
Questionnaires were therefore adopted as the ideal one for use to gather information on the disaster preparedness in public primary schools for mentally handicapped children.

### 3.6.2 Interview guide

This is a set of questions that the interviewer asks when interviewing. It helps in obtaining data required to meet specific objectives of the study. The responses are noted as the interview progresses, and facilitate data analysis since the information is readily accessible and already classified into appropriate categories by the interviewer. Note taking in the process of the interview was important since no information was left out during the interviews (Mugenda and Mugenda, 2003). Interviews were conducted in order to collect data mainly from the pupils who could not respond to the questionnaires due to their intellectual challenge. The information gathered from interviews were taped recorded for further content analysis.

### 3.6.3 Observation Guide

This allowed the researcher to evaluate the preparedness in public primary schools for mentally handicapped children in Nairobi City County. This method was supported by Creswell (1998) who asserts that this is the most natural way of studying phenomena. According to Mugenda and Mugenda (2003) the purpose of naturalistic observation is to record and study behaviour as it normally occurs. Furthermore, Ogula (2002) avers that observation is a way of obtaining information about the progress or outcome of an educational programme through observing directly selected aspects of its development as they happen. The observation entailed both participant and non-participant methods and
was covered the sampled schools and pupils. The data collected was then analysed, interpreted and generalized to the entire population.

3.6.4 Instrument validity

Validity is the degree to which an instrument measures what it purports to measure (Borg & Gall, 1996). To determine validity of the instrument, a pre-test was carried in one pilot school which helped the researcher to evaluate the validity, clarity of the questionnaires, suitability of language used in the instrument and the feasibility of study. Expert advice from the supervisors assisted to make corrections and modifications on the items of the instrument which was consistent with the views of Kasomo (2006).

3.6.5 Instrument reliability

To be reliable an instrument must be consistent in such a way that it considered stable and can be depended on to yield similar test results under similar circumstances (Borg & Gall, 1996). To test reliability of the instrument test-retest technique were used. This test-retest method involved administering the same instrument twice to the same group of subjects. The second administration was done after a time lapse of one week after the first test. After the two tests were scored, the Pearson’s product-moment correlation was computed to determine correlation co-efficient, which showed whether the scores on the two tests correlated. Orodho (2005) argues Pearson product moment correlation establishes the extent to which content of the instruments was consistent in eliciting the same responses every time the instrument is administered. A correlation coefficient of about 0.7 to 1 is considered high enough to judge the instrument as reliable. The correlation coefficient of the teachers’ questionnaires was 0.7 while that of the headteachers questionnaire was 0.8 and the interview guide for the pupils was 0.72. This
meant the questionnaires were reliable. Mugenda and Mugenda (2003) noted that the reliability of the instrument should be between 0.7 to 1.

3.7 Data collection procedures

A letter of introduction was obtained from Kenyatta University to introduce the researcher to the National Commission for Science and Innovation. The permit of the study was presented to the County commissioner, County Director of Education, Nairobi and headteachers’ of participating schools. Familiarization visits to the schools that took part in the study was done both to introduce the researcher and establish time for administration of instruments. The headteachers’ and teachers’ questionnaires were then administered by the researcher and completed questionnaires were collected immediately.

3.7 Data analysis techniques

Analysis refers to a variety of activities and processes that a researcher administers to a data base in order to draw conclusions and make certain decisions regarding the data collected from the field. Descriptive analysis was used to summarize quantitative data. Data analysis involved summarizing large quantities of raw data, categorizing data, rearranging and ordering data (Mbwesa, 2003). The researcher used descriptive statistical and inferential statistics to analysis the data collected from the four schools.

Qualitative data

All parts of the questionnaires needed both qualitative and quantitative data. In this type of data coding categories were developed as a way of organizing the qualitative data collected according to the particular questions items. This involved going through the data numbering, sequentially and searching through the data for regularities and the
patterns related to the question items. This was followed by writing down words and the phrases to represent the regularities and patterns. Material bearing on a given question physically separated from the other data. The data was analysed using frequencies and percentages in accordance with Mbwesa (2003).
CHAPTER FOUR
DATA ANALYSIS AND PRESENTATION

4.1. Introduction

This chapter presents a descriptive analysis of the data gathered information on disaster preparedness in public primary schools for mentally handicapped children in Nairobi County, Kenya. In this study a total of 4 headteachers that constitutes (100.0%), 52 teachers (67.5%) and 73 pupils constituting (100.0%) from the county were involved in the study through use of questionnaires, oral interview and observation schedules. This method ensured an equal chance of representation of all the public primary schools for mentally handicapped children in Nairobi County.

The study was guided by the following specific objectives.

i. To examine whether disaster management policies and guidelines are followed when enrolling mentally handicapped pupils in special schools in Nairobi City County.

ii. To analyse the measure special schools for the mentally handicapped have taken to deal with disaster events in Nairobi City County.

iii. To examine how children with disability cope during disaster in their schools.

Descriptive research design was used to organize, summarize and interpret quantitative information. Data were then presented in form of frequency tables and charts where applicable. This presentation was based on the questionnaire administered, interviews and observation were done.
4.1.1 Questionnaire Return Rate

Completion rate is the proportion of the sample that participated as intended in all the research procedures. The returned questionnaires were from 4 headteachers, 52 teachers and 73 pupils from 4 public primary schools in Nairobi County. Analysis and data interpretation was based on these returns.

Table 4.1 Questionnaire return rate

<table>
<thead>
<tr>
<th>Level of administration</th>
<th>Target</th>
<th>Returned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headteachers</td>
<td>4</td>
<td>4 (100.0%)</td>
</tr>
<tr>
<td>Teachers</td>
<td>77</td>
<td>52 (67.5%)</td>
</tr>
<tr>
<td>Pupils</td>
<td>110</td>
<td>73 (66.4%)</td>
</tr>
</tbody>
</table>

Source: Field Data, 2014

From Table 4.1, the study realized all the headteachers, 66.4% pupils and 67.5% teachers returned their questionnaires as targeted. Mulusa (1990) stated that 50 percent return rate was adequate, 60 percent good and 70 percent very good. The return rate was hence considered good to provide required information for the purpose of data analysis.

4.2. Background characteristics of the respondents

This section presents the characteristics of personal attributes of individual respondents. They include; gender, age, highest academic level and professional qualification. The rationale behind inclusion of these attributes in the analysis was that they help to shed some light on the characteristics of the school headteachers and teachers preparedness on disaster for mentally handicapped children in public primary school in Nairobi County, Kenya.
4.2.1 Gender and age of respondents

The respondents were asked to indicate their gender. Majority of the teachers (76.9%) were female and 23.1% of them male. Majority of the headteachers (75.0%) of them were female while 25% were male. The study also sought to the age of the teachers and the headteachers. The results are as shown in Table 4.2.

| Age          | Teachers |  |  | Headteachers |  |  |
|--------------|----------|  |  |              |  |  |
| 36-40 Years  | 3        | 5.8 |  | 0            | 0 |  |
| 41-45 Years  | 12       | 23.1|  | 0            | 0 |  |
| 46-50 Years  | 11       | 21.2|  | 1            | 25| |
| 51-55 Years  | 10       | 19.2|  | 1            | 25| |
| 56-60 Years  | 16       | 30.8|  | 2            | 50| |
| **Total**    | 52       | **100.0** |  | **4**        | **100.0** |  |

Source: Field Data, 2014

From Table 4.2 it is clear that half of the headteachers were aged 56-60 years while 25.0% were aged between 46-50 years and 51-55 years respectively. On the other hand 30.8% of the teachers were aged 56-60 years while 23.1% were aged 41-45 years, with 21.2 aged between 46-50 years and 19.2% of them aged between 51-55 years. This implies that all the teachers and headteachers were beyond 36 years and above. This may indicate that old teachers had gained experience to handle children with special needs hence were able to go for training to handle the same. On the other hand as people grow old in their
professions they become experts hence these teachers may have gained expertise to handle children with all cases hence interests on special cases.

**Teachers and headteachers Qualifications**

The headteachers and teachers highest professional qualifications were captured because they offered the study with the information on the quality of leadership expected within the schools. The results are as shown in Table 4.3.

**Table 4.3 Teachers and Headteachers qualification**

<table>
<thead>
<tr>
<th></th>
<th>Teachers</th>
<th></th>
<th></th>
<th>Headteachers</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
<td>Frequency</td>
<td>Percent</td>
<td></td>
</tr>
<tr>
<td>P1</td>
<td>3</td>
<td>5.8</td>
<td>0</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>Diploma</td>
<td>15</td>
<td>28.8</td>
<td>1</td>
<td>25.0</td>
<td></td>
</tr>
<tr>
<td>BEd</td>
<td>24</td>
<td>46.2</td>
<td>2</td>
<td>50.0</td>
<td></td>
</tr>
<tr>
<td>Master</td>
<td>8</td>
<td>15.4</td>
<td>1</td>
<td>25.0</td>
<td></td>
</tr>
<tr>
<td>No Response</td>
<td>2</td>
<td>3.8</td>
<td>0</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>52</strong></td>
<td><strong>100.0</strong></td>
<td><strong>4</strong></td>
<td><strong>100.0</strong></td>
<td></td>
</tr>
</tbody>
</table>

Source: Field Data, 2014

Half of the headteachers and 46.2% of the teachers had attained a Bachelor Education and 28.8% of teachers and 25.0% of headteachers had a diploma and a Masters respectively. About 5.8% of the teachers had a P1 level of professional qualifications. This implies that these teachers had qualified to be teaching in primary schools. The researcher sought from the teachers to know whether they also had qualifications to teach special education. The results are as shown in Table 4.4.
Table 4.4 Level of qualifications in special education

<table>
<thead>
<tr>
<th></th>
<th>Teachers</th>
<th></th>
<th>Headteachers</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
<td>Frequency</td>
<td>Percent</td>
</tr>
<tr>
<td>Certificate</td>
<td>3</td>
<td>5.8</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Diploma</td>
<td>10</td>
<td>19.2</td>
<td>1</td>
<td>25</td>
</tr>
<tr>
<td>Bed</td>
<td>29</td>
<td>55.8</td>
<td>2</td>
<td>50</td>
</tr>
<tr>
<td>Master</td>
<td>10</td>
<td>19.2</td>
<td>1</td>
<td>25</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>52</td>
<td>100.0</td>
<td>4</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Field Data, 2014

Majority of the teachers had attained a Bachelor of Education in Special Education while 19.2% of them had a diploma and a Master level of special education and only 5.8% of them had attained a certificate level of qualification in special education. On the other hand 50.0% of the headteachers had attained a Bachelor degree level of special education and 25.0% of the headteachers Diploma and Master of special education respectively. This implies that teachers who taught in special education primary schools had qualifications to teach in these schools. These skills learnt would enable them handle children with special needs better than teachers who had no skills. Hence making the programmes learnt by these children much successful.

4.3 Disaster management policies and guidelines followed when enrolling mentally handicapped pupils in special public schools

Learners with Specials needs require services of other professionals and members of the community apart from teachers. Such personnel include teacher aides, house mothers/fathers, sign language interpreters and readers etcetera. Services of these
professionals were lacking in the education system either due to lack of their training institution or money for their remuneration. Learners with special needs and disabilities in schools and institutions are sometimes marginalized and are not represented in positions of management and decision making processes. The study sought to know whether the school had been able to implement policies and guidelines from the Ministry of Education on safety measures. The results are as shown in Table 4.5.

Table 4.5 The school been able to implement policies and guidelines from the Ministry of Education on Safety measures

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>7</td>
</tr>
<tr>
<td>No</td>
<td>45</td>
</tr>
<tr>
<td>Total</td>
<td>52</td>
</tr>
</tbody>
</table>

Source: Field Data, 2014

Majority of the teachers (86.5%) disagreed that the school had not been able to implement policies and guidelines from the Ministry of Education on safety measure and only 13.5% of the teachers who indicated that their schools had been able to implement the policies and guidelines from the Ministry of Education. The headteachers were also asked to indicate whether they had implemented policies and guidelines from the Ministry of Education of Education on Safety measures. About 75% of the headteachers had not implemented the same and only 25% of the headteachers had implemented policies and guidelines from the Ministry of Education on safety measures.
The teachers gave reasons for those who had not implemented policies and guidelines on safety measures. The results from both the teachers and the headteachers indicated that the reasons for not implementing the policies and guidelines included; inadequate funds, lack of trainers of the policies and the school rely on the teaching from the parents. The headteacher and teachers in a school where the policies were implemented indicated that they had implemented on the policy of health and education policies which states compulsory education for all. The children were given orientation and mobility to familiarize them with the school environment and also there is someone watching over the children all the time they are in school. This implies that majority of the schools according to the teachers and the headteachers had not implemented safety measures because of lack of funds as required by the Ministry of Education. This warrants the Ministry in a follow up programme that would ensure that schools have kept to the safety guidelines. The Ministry of Education acknowledges that Children with special needs are more vulnerable to disasters and conflicts.

Unfortunately, the attitude of parents and other service providers to children with special needs makes them appear as second class human beings. This exposes them to neglect and immense suffering during emergencies, conflicts and disasters. Lack of specific training for handling people with special needs among essential services officers is a major constraint in providing preferential attention to these target groups in situations of disaster and conflict. There is need to sensitize fire fighters and other evacuees to give children and people with special need first priority in times of need (GoK, 2009).
4.3.2 Disaster preparedness policies regarding the mentally handicapped schools. According to the Ministry of Education (2008) the government has been conscious of the fact that capacities and skills of staff at all levels within Special Need Education (SNE) should be commensurate with the tasks they perform. This was made success by SNE teachers in the country being trained at Kenya Institute of Special Education (KISE), Kenyatta and Maseno universities. The study wished to establish the effectiveness of the disaster preparedness policies regarding mentally handicapped schools. The results are as shown in Table 4.6.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>75.0</td>
</tr>
<tr>
<td>No</td>
<td>25.0</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Field Data, 2014

Majority of the teachers (75.0%) and all the headteachers noted that the mentally handicapped policies were effective and 25.0% of them felt they were not effective. The ones who felt that it was not effective gave suggestions on what should be done to make them effective. These included increasing the manpower, more training for the teachers and other support staff, public sensitization, implementation should be encouraged in all schools and the policies needed to be enhanced.
4.4 Measures that the special schools for the mentally handicapped have taken to deal with disaster events

Pupils' protection mandates is the responsibilities and commitment of Ministry of Education to provide a safe and supportive learning environment, and prevent and respond to harm or risk of harm for all pupils. Harm in this context is limited to that caused by a school employee, another pupil, someone outside the school environment, and pupils self-harm (Berkman, 2008). This study sought to establish a number of factors such as pupils' involvement in fire drills. Fire drills are important for all the people staying indoors doing certain activities. Learning is also an activity that is either carried out in open space or indoors. Hence this study sought to know if pupils were involved in fire drills. The results are as shown in Table 4.7.

Table 4.7 Pupils involvement in fire drills

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>No</td>
<td>50</td>
</tr>
<tr>
<td>Total</td>
<td>52</td>
</tr>
</tbody>
</table>

Source: Field Data, 2014.

Majority of the teachers 96.2% indicated that they did not involve pupils in fire drills and only a small percent on 3.8% of them who indicated that they did involve pupils on fire drills. The findings agree with those of the headteachers who noted that they had not been involved in fire drills in their schools. This implies that little have been done to sensitize mentally handicapped children on their safety in-case of a fire. The findings from the teachers and the headteachers are contradicted by 84.9% of the pupils who indicated that
they had been taught how to escape in case of a fire by their parents and only 15.1% of
the pupils who did not have an idea on how to escape fire. The researcher also sought
from the teachers whether they had shown the pupils how to get out of the house in case
of fire. Majority of the teachers (96.2%) and all the headteachers indicated that the pupils
did not know how to get out of the building in case of a fire and only 3.8% of them who
have learnt how to get out of a building. The results are clear since most of the pupils
have limited mobility hence are more vulnerable to escape a fire. The results from the
teachers and headteachers agreed with those of Asher & Pollak, (2009); Peek & Stough,
(2010) who noted that pupils with limited mobility are vulnerable in the acute phase of a
disaster when evacuation might be necessary and Peek & Stough (2010) additionally
stated vulnerable in the recovery phase when accessibility accommodations are often the
last components of infrastructure to be restored.

Pupils’ awareness of dangers of fire

Pupils are supposed to know the danger fire can cause to them and to others, hence this
study sought to identify if the pupils had awareness on the dangers posed by the fire. The
results are as shown in Table 4.8.

Table 4.8 Are the pupils aware of the fire dangers

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>18</td>
<td>34.6</td>
</tr>
<tr>
<td>No</td>
<td>34</td>
<td>65.4</td>
</tr>
<tr>
<td>Total</td>
<td>52</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Field Data, 2014
Majority of the teachers (65.4%) indicated that pupils were not aware of the dangers of fire and 34.6% of them indicated that pupils were aware of the fire danger. Half of the headteachers said that pupils were aware of the danger of fire while the others noted that pupils were not aware of the fire danger. This implies that there was a contradiction between the teachers and the head teacher on lessons taught to pupils especially on dangers of fire. The teachers were asked to indicate the roles they had taught to safeguard the pupils from a building included ensuring that no fire was left unattended. The teachers responses were that the pupils were taught to ensure that no matches were carelessly lit, they were taught to keep away from the fire and they could run away from the fire and keep off from the area where the fire is burning and keep to the exist of the building. Others teachers had not taught their pupils on the dangers of fire. This implies that pupils who had some training had a lot of roles to play since they were supposed to take care of themselves and also to keep off the fire.

4.5 Disaster preparedness plan for the mentally handicapped schools

All schools must have emergency management plans and policies to address all pupils’ needs, including the most vulnerable with disabilities or special healthcare needs. Moreover, schools need appropriate curricula to disseminate information about disaster to their pupils and to prepare them for any likely emergency situation. The study sought to know whether the school had put in place disaster prevention measures. The results are as shown in Table 4.9.
Majority of the teachers (57.7%) indicated that their schools had put in place disaster prevention measures while 38.5% of them had noted that their school had not put in place disaster prevention measures. The result shows that there is need for the Ministry of Education to enforce the rules and regulations that they have set out for the schools such as putting in place all the disaster prevention measures and also to equip the teachers with the necessary skills to train pupils on disaster prevention measures where necessary. The study then wished to establish the measures put in place to prevent disaster. Majority of the teachers (57.7%) had put a fire extinguisher, while 28.8% of them had put in place house mothers and fathers to sleep in dormitories where these children sleep and 13.5% had not done much to prevent disaster in their schools. All the respondents indicated that their schools had not invested in CCTV camera to watch over the pupils in their class. The results correspond with the guidelines by the Ministry of Education, Science and Technology (2001) which required that head teachers should reside in schools; fire drills should be held at least twice every year; emergency doors should be created in dormitories and special rooms; safety instructions should be prominently displayed in laboratories and workshops.

Table 4.9 The school put in place disaster prevention measures

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>30</td>
<td>57.7</td>
</tr>
<tr>
<td>No</td>
<td>20</td>
<td>38.5</td>
</tr>
<tr>
<td>No Response</td>
<td>2</td>
<td>3.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>52</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Source: Field Data, 2014
The teachers were asked to indicate a plan for evacuating children in case of a fire. Most of the teachers indicated that they would hold and carry the one by one to safety especially those who have severe conditions. They noted that they would also involve the human labour that is available to put off the fire and assist the children, evacuate the children through the windows and doors and fire exit that were available.

4.5.2 Availability of Fire extinguisher

Pupils were asked to indicate whether they were aware of the existence of fire extinguisher. The results from the pupils are as shown in Table 4.10.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>91.8</td>
</tr>
<tr>
<td>No</td>
<td>8.2</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Field Data, 2014

Majority of the pupils (91.8%) said there was a fire extinguisher in their school while 8.2% of them noted that there was no fire extinguisher. The results were in agreement with those of the headteachers and teachers who note that there were fire extinguishers and in the case of those who had dormitories there are house mothers and fathers respectively. From the observation list, the researcher observed that there was fire extinguisher. The pupils’ response shows that parents may be playing the role of encouraging their children to look at their differently. The researcher also noted that there were no fire exits within the rooms other than the corridors.
4.5.3 Parent Involvement in teaching

The study wished to establish if the schools involved the parents in teaching their children on disaster prevention. The results from the teachers are as shown in Table 4.11.

Table 4.11 Parents involved in teaching their children on disaster prevention

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>11</td>
</tr>
<tr>
<td>No</td>
<td>41</td>
</tr>
<tr>
<td>Total</td>
<td>52</td>
</tr>
</tbody>
</table>

Source: Field Data, 2014

Majority of the teachers (78.8%) indicated that they did not involve parents to teaching their children on disaster prevention while 21.2% of them involved the parents to teach their children on disaster prevention. This implies that parents were not being involved in educating their children on such factors as the dangers of fire and just a few parents were involved in preparing their children on the eventuality of a fire breaking out in their premises. There is need to note that pupils are in school for a period of time and much time is spent at home therefore there is need for the parents to be involved in training their children on disaster preparedness. From the pupils response it is clear that parents helped in showing their children how to get out of the house in case of a fire. This was evident since some pupils indicated that they were taught how to get out of the house in case of a fire.
The teachers and the headteachers were asked to indicate whether the school had a safety code for all children. Majority of the teachers (75%) and all the headteachers indicated that their schools did not have a safety code for the pupils. This indicates that the school did not practice safe code at all. This implies that there is need for the Ministry to enforce a rule that would ensure schools have safety codes for all their pupils in case a disaster. This would ensure that all pupils are taken to safety and checked through their codes.

The teachers and headteachers agreed that it was important to introduce the safety code in schools. This therefore would ensure safety code and practicing is done with these children once in a while. A plan should also be introduced in all the school on how to involve the mentally handicapped pupils in safety practices such as use of fire extinguisher, how to get out safely from a house on fire and classroom.
CHAPTER FIVE
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction
This chapter contains the summary of the study, conclusions and recommendations. It also contains suggestions for further research.

5.2 Summary of the study
The purpose of the study was to establish disaster preparedness in public special primary schools for the mentally handicapped. The study was guided by the following objectives; to establish how disaster management policies and guidelines are followed when enrolling mentally handicapped pupils in special schools in Nairobi City County; to identify the measures the special schools for the mentally handicapped have taken to deal with disaster events in Nairobi City County; and to establish how children with disability cope during disaster in their schools. The study was guided by several theories which include Piaget developmental theory (1977), deviance theory by Thornburn and Marfo, (1994) and Albert Bandura Social learning theory. A descriptive research design was used. The study was carried out in Nairobi City County public primary schools that handle children who are mentally handicapped. The target population included four headteachers, 170 teachers and 734 pupils in the public special primary schools. Purposive sampling was used to select the headteachers. Simple random sampling was also used to select teachers and the pupils. The study used questionnaires, interview guides and observation schedules to collect the data. Test retest was used to determine the instrument validity. The correlation coefficient of the teachers' questionnaires was 0.7 while that of the headteachers questionnaire was 0.8 and the interview guide for the
pupils was 0.72. A permit was obtained from National Commission for Science and Innovation. Descriptive data analysis was used to summarize qualitative data, themes were also formed from quantitative data.

Disaster management policies and guidelines followed when enrolling mentally handicapped pupils in special public schools

The study revealed that 86.5% of the teachers and 75% of the head teachers had not implemented policies and guidelines from the Ministry of Education on safety measures. The reason given for lack of compliance were inadequate funds, lack of trainer and some schools rely on parents to help with funds for implementation of the policies.

Disaster preparedness policies regarding the mentally handicapped schools

The study also revealed that 75.0% of the teachers and all the headteachers felt that if the mentally handicapped policies were effective implemented then they would be effective. This can only take place where the teachers and support staff are sensitized and also trained to empower in the implementation of policies regarding and mentally handicapped schools.

Measures put in place by the school administration for mentally handicapped to deal with disaster events

The study established 96.2% of the teachers and all the headteachers indicating that pupils were not involved in fire drills. The contradiction comes in when 84.9% of the pupils say they had been taught how to escape in case of a fire. The study also revealed that 96.2% and all the headteachers indicating that the pupils did not know how to get out of the building in case of a fire. This implies that because of limited mobility pupils are
vulnerable to escape fire. There existed a fire extinguisher and fire exits in the respective school as indicated by all the teachers, headteachers and the pupils. The study also revealed that 65.4% of the teachers and the half of the headteachers indicated that pupils were not aware of the dangers of fire. The study established that the teachers plan for evacuating the mentally handicapped was through the doors, windows, and fire exit places where available.

**Coping mechanisms on disaster preparedness plan for the mentally handicapped pupils**

The study revealed that 57.7% of the teachers and half of the headteachers had indicated that their school had put in place disaster prevention measures. All the headteachers and 57.7% of the teachers and all the pupils indicated that there was a fire extinguisher and mothers and fathers of each house during sleeping time for those who had dormitories. The schools had not invested in CCTV camera to watch over the pupils hence encouraged the teachers to keep a keen eye on the pupils.

The study also revealed that 78.8% of the teachers and half of the headteachers noted that parents were not involved to teaching their children on disaster prevention although in some instances they do. The study revealed that all the teachers and all the headteachers agreed that there was no safety code in their schools.

5.3 Conclusions

The following conclusions were drawn.
Disaster prevention measure have been affected by inadequate funds, lack of enough trainers and school reliance on parents to help with funds to implement on policies
The policies would be effective if well implemented in public schools for mentally handicapped.

The study concludes that the four schools had not had fire drills involving the pupils. The teachers and headteachers noted that pupils did not know how to escape in case of fire. There was availability of fire extinguishers, fire exits although a highest percentage of the pupils did not have an idea of the dangers of fire and skills in how to use the equipment that were provided like the fire extinguisher.

Some of the disaster prevention measures put in place in some schools such as evacuation plan for most teachers which would be to carry the pupils outside the building through the doors, windows and fire exits were available and in some schools there was a fire extinguisher.

5.4 Recommendations

The following recommendations can be drawn from the study

There was need for the pupils to be taught or taken through fire drills in schools this would enable to keep away from the fire.

The schools should have an evacuation plan and should also be encouraged to put in place disaster prevention measures. All teachers should be equipped with disaster management skills to enable them assist pupils if disaster struck.
The government should avail funds and trained employees who would handle disaster management in a school and also carry out the fire drills with the pupils since this cannot just be done by anyone.

The government should have a follow up programme that would check of the implementation of disaster preparedness measure in place to enable special education be offered smoothly without problems.

School should develop a safety code that need to be practiced and used in case of danger.

5.5 Suggestions for further research

The following are the suggestions for further research.

Further research should be carried on the disaster management in cases of pupils with other disabilities in a school. There is great need to investigate the perception of parents on the disaster management of pupils who are mentally handicapped.
REFERENCES


Burke, M. J., (2010). Emergency plan for students with special needs for Marin county school district. Model emergency annex for students with special needs.


ETHICS 716,


http://jukwaa.proboards.com/thread/7308/10-asumbi-school-fire#ixzz2zbFyjjcC


APPENDIX I:  
QUESTIONNAIRE FOR THE TEACHERS AND HEADTEACHERS

I am post graduate students carrying out a research on disaster preparedness in public primary schools for mentally handicapped children in Nairobi County, Kenya. Your school has been selected for this research. Confidentiality is ensured on the information given.

Please tick (✓) the appropriate answers

**Part I: Demographic Data**

1. What is your gender? Male [ ] Female [ ]
2. What is your age? 25 and below [ ] 25-30 years [ ] 31-35 years [ ] 36-40 years [ ] 46-50 years [ ] 51-55 years [ ] 56-60 years [ ]
3. What is your qualifications? P1 [ ] P2 [ ] Diploma [ ] BEd [ ] Master [ ]
4. What is your level of qualifications in special education? Certificate [ ] Diploma [ ] BEd [ ] Master [ ]

**PART II**

1. Have the pupils been involved in fire drills? Yes [ ] No [ ]
2. Have the pupils been shown how to get out of the building in case of a fire or flood? Yes [ ] No [ ]
3. Are the pupils aware of the dangers of fire in a building? Yes [ ] No [ ]
4. What roles have they been taught to safe guard each other from a building fire?


b. How do you plan to evacuate the children in case of a fire?

.................................................................

.................................................................

5. Has the school put in place disaster prevention measures? Yes [ ] No [ ]
If yes indicate the measures put in place

.................................................................

.................................................................

6. Has the school invested in CCTV cameras to watch over the children in the class?
Yes [ ] No [ ]
If No how do you keep an eye on them?

.................................................................

.................................................................

7. Are parents involved in teaching their children about disaster?
Yes [ ] No [ ]

8. Does the school have a safety code for all children?
Yes [ ] No [ ]

9. Is the safety code within the school practiced
Yes [ ] No [ ]

10. What can be done to ensure that it is effectively used?

.................................................................

.................................................................

11. Has the school been able to implement policies and guidelines from the Ministry of Education on safety measures?
Yes [ ] No [ ]
12. If no what prevents the school from implementing the factors

13. What are disaster policies put in place to safeguard mentally handicapped children?

14. Has it been effective? Yes [ ] No [ ]

15. If no what should be done to help it become effective?

*Thank you for your cooperation*
APPENDIX II:
INTERVIEW GUIDE FOR PUPILS

1. When were you enrolled in school?

2. Have you been taught how to escape in case of a fire?

3. Does the school have a fire extinguisher?
   Yes [ ] No [ ]

4. Do you know how to use it to protect yourself from fire?
   Yes [ ] No [ ]

   b. How?

5. Who taught you how to escape fire? Teacher ( ) Parent ( ) Colleague ( )

6. Is there a fire exit in school?
   Yes [ ] No [ ]
APPENDIX III:
OBSERVATION GUIDE

Date: Place/school:

1. School structure
   Day [ ] Boarding [ ] Mixed Day [ ] Mixed Boarding [ ]

2. School Population: Total: [ ] Boys [ ] Girls [ ]

3. Teacher/Pupil ratio: class 1-4 [ ] class 5-8 [ ]

4. Condition of the school infrastructure
   Excellent [ ] Good [ ] Fair [ ] Poor [ ] Very Poor [ ]

5. Availability of a fire exit Yes [ ] No [ ]

6. Availability of fire extinguishers
   Yes [ ] No [ ]

7. Condition of the security within the school
   Excellent [ ] Good [ ] Fair [ ] Poor [ ] Very Poor [ ]
APPENDIX IV
RESEARCH AUTHORIZATION

NATIONAL COMMISSION FOR SCIENCE,
TECHNOLOGY AND INNOVATION

Telephone: +254-20-2713470,
2241349, 3125875, 22119230
Fax: +254-20-314245, 314249
Email: secretary@nacosti.gkee
Website: www.nacosti.gkee
When replying, please quote:
Ref. No.

NACOSTI/P/14/4941/3107

Peninah Ngina Kiliu
Kenyatta University
P.O. Box 43844-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on “Disaster preparedness in public primary schools for mentally handicapped children in Nairobi City County, Kenya,” I am pleased to inform you that you have been authorized to undertake research in Nairobi County for a period ending 4th December, 2014.

You are advised to report to the County Commissioner and the County Director of Education, Nairobi County before embarking on the research project.

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

DR. S. K. LANGAT, OGW
FOR: SECRETARY/CEO

Copy to:
The County Commissioner
The County Director of Education
Nairobi County.

APPENDIX V
RESEARCH PERMIT

CONDITIONS

1. You must report to the County Commissioner and the County Education Officer of the area before embarking on your research. Failure to do so will lead to the cancellation of your permit.
2. Government Officers will not be interviewed without prior appointment.
3. No questionnaires will be used unless it has been approved.
4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.
5. You are required to submit at least two (2) hard copies and one (1) soft copy of your final report.
6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice.

This is to certify that:
Miss Peniniah Munga Kiliu
of University, P.O. Box 406
Nairobi, has been permitted to conduct research in the County.

on the topic: DISASTER PREPARATION IN PUBLIC PRIMARY SCHOOLS FOR MENTALLY HANDICAPPED CHILDREN IN NAIVORY CITY COUNTY, KENYA.

For the period ending:
31st December, 2014.

Signature

Applicant's

Secretary
National Commission for Science, Technology and Innovation