EDUCATION FOR LEARNERS WITH HEARING IMPAIRMENT IN AN INCLUSIVE SETTING IN PRIMARY SCHOOLS: A CASE STUDY OF KAJIADO COUNTY, KENYA

RUITURURI DANIEL MBUGUA

17/X/14825/GMSN/PE

A DISSERTATION SUBMITTED TO THE GRADUATE SCHOOL IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR AWARD OF MASTER OF SPECIAL NEEDS EDUCATION OF KYAMBOGO UNIVERSITY

DECLARATION

I declare that this dissertation is my original work and has not been presented in any other University/Institution for consideration of any certification. This research report has been complemented by referenced sources duly acknowledged. Where text, data (including spoken words), graphics, pictures or tables have been borrowed from other sources, including the internet, these are specifically accredited and references cited using current APA system and in accordance with anti-plagiarism regulations.

Signature:	Date:	
------------	-------	--

RUITURURI DANIEL MBUGUA

17/X/14825/GMSN/PE

SUPERVISORS' APPROVAL

This dissertation has been submitted	d for appraisal with our approval as University Supervisors.
1.Name: DR. STACKUS OKWAPI	UT
Signature	Date
2.Name: DR. EPHRAIM LEMMY	NUWAGABA
Signature	Date:

DEDICATION

I dedicate my work to my beloved family, wife Agnes Wanjiku for her support while I was away, and perseverance in my absence.

ACKNOWLEDGEMENT

I am humbled to everybody who provided me with professional support to accomplish my thesis. Sincere appreciation goes to my sponsors (NORHED) through the regional coordinator Dr. Stackus, who made sure that the course was running smoothly without any interruptions in terms of finance. Dr. Stackus Okwaput and Dr Ephraim Lemmy Nuwagaba who patiently and whole heartedly guided me through during the write up of this thesis.

I express my gratitude to the lecturers of Kyambogo University specifically those in the area of Special Needs and Rehabilitation for their cooperation to undertake this Master's Degree program.

TABLE OF CONTENTS

DECLARATIONii
SUPERVISORS' APPROVALiii
DEDICATIONiv
ACKNOWLEDGEMENTv
TABLE OF CONTENTSvi
LIST OF TABLESx
LIST OF FIGURESxi
ABBREVIATIONS AND ACRONYMSxii
ABSTRACTxiii
CHAPTER ONE: INTRODUCTION1
1.0 Introduction
1.1 Background to the Study
1.2 Statement of the Problem
1.3 Purpose of the Study
1.4 Research Objectives
1.5 Research Questions
1.6 Scope of the Study
1.7 Significance of the Study9
1.8 Theoretical and conceptual framework

1.8.1 Theoretical Framework	9
1.8.2 Conceptual Framework	10
1.9 Operational Definition of Terms	13
CHAPTER TWO: LITERATURE REVIEW	15
2.0 Introduction	15
2.1 The concept of an Inclusive setting	15
2.2 Economic Barriers	17
2.3 Socio-Cultural Barriers.	20
2.4 School Related Barriers to Inclusion	21
2.5 Effects of the barriers on participation to education by LWHI in an inclusive setting	g 26
CHAPTER THREE: METHODOLOGY	29
3.0 Introduction	29
3.1 Research Design.	29
3.1 Research Design. 3.2 Study Area.	
	29
3.2 Study Area	29
3.2 Study Area	29 30
3.2 Study Area 3.3 Study Population	30 30 31
3.2 Study Area	29 30 31

3.7 Data Collection Procedure
3.8 Data Analysis Technique
3.9 Limitations
3.10 Ethical Issues
CHAPTER FOUR: PRESENTATION OF FINDINGS AND INTERPRETATION 35
4.0 Introduction
4.1Economic Barriers to Participation in education by Learners with hearing impairment 37
4.2 Socio-Cultural Barriers to participation in education by Learners with Hearing Impairment
40
4.3 School Related Barriers to Participation in Education by Learners with Hearing
Impairment
4.4 Effects of the Barriers to Participation in Education for Learners with Hearing Impairment
CHAPTER FIVE: DISCUSSION, CONCLUSION AND RECOMMENDATIONS 51
5.0 Introduction
5.1 Economic barriers hindering participation in education by learners with hearing
impairment
5.2 Socio-cultural barriers hindering participation in education by learners with hearing
impairments
5.3 Economic barriers hindering participation in education by learners with hearing
impairment53

5.4 Effects of the Barriers to Participation in Education by learners with he	aring impairment 54
5.5 Conclusions	56
5.6 Recommendations	57
5.6.1 Policy Implication	57
5.6.2 Suggestion for Further Research.	58
REFERENCES	59
APPENDICES	64
APPENDIX I: QUESSIONNAIRE	64
APPENDIX II: STUDENTS INTERVIEW SCHEDULE	73

LIST OF TABLES

Table 1: Response Rate	35
Table 2: Poorly Performed Subjects by HI Learners	36
Table 3: School-Related Barriers, Teacher Perspective	46
Table 4:School-Related Barriers, Learner Perspective	47

LIST OF FIGURES

Figure 1: Conceptual Framework	12
Figure 2: Household Poverty as a Barrier	38
Figure 3: High Cost of Equipment for H.I Learners as a Barrier	40
Figure 4: Attitudes as a Barrier to Participation to Education	42
Figure 5: Religion as Social-Cultural Barrier to Participation in Education	43
Figure 6: Parental Overprotection and Early Marriages	44
Figure 7: Causes of School Dropout	50

ABBREVIATIONS AND ACRONYMS

CBC Competency Based Curriculum

CDF Constituency Development Fund

DANIDA Danish International Development Agency

FPE Free Primary Education

HH Household

IE Inclusive setting

LWHI Learners with Hearing Impairment

SDG Sustainable Development Goal

SEN Special Educational Needs

SNE Special Needs Education

SPSS Statistical Package for Social Science

ABSTRACT

This study sought to examine the barriers faced by learners with hearing impairment in participating in education in an inclusive learning environment in Kajiado county. The study adopted an exploratory study design where 7 teachers, 2 head teachers and 8 learners with hearing impairment were purposively sampled. Data was collected using questionnaires and interview schedules. Quantitative data was analyzed using a Statistical Package for Social Sciences (SPSS 23) while qualitative data was analyzed using thematic approach. Continuous triangulation of both qualitative and quantitative was done to make holistic interpretation of the empirical data and conclusions drawn. The study explored three key categories of barriers to participation in education by learners with hearing impairment; economic, socio-cultural and school-related barriers. It was concluded based on empirical evidence that household poverty is the main economic barrier that hinders participation in education by learners with hearing impairment. All these barriers lead to school dropout by children with hearing impairment, lack of exposure and increased cases of inequality among school going children. Based on the findings of this study, it is recommended that; the curriculum for learners with hearing impairment should be reviewed by relevant education stakeholders. The government of Kenya should put in place efficient mechanisms to aid in the utilization of Community Development Funds (CDF), Free Primary Education (FPE) and create community sensitization programs about the learning needs for children with hearing impairment.

CHAPTER ONE: INTRODUCTION

1.0 Introduction

This chapter introduces the background to the study, the research problem, objectives, scope and the significance of the study. It also contains theoretical and conceptual framework showing the variables under the study which are briefly explained.

1.1 Background to the Study

Hearing impairment (HI) is considered a hidden disability because it is not visible unlike other types of disabilities such as visual impairment or physical impairment which are clearly identifiable. HI according to (IDEA, 2004) is a condition where an individual is impaired in processing linguistic information through hearing. Hearing ability is critical to speech and language development, communication and learning. Hearing impairment causes delays in the development of speech and language, and those delays then lead to learning challenges, often resulting in poor school performance (Adoyo, 2015). Children with hearing loss have trouble in school. Reading and Mathematics may be the hardest for them. One of the main effects of hearing impairment is on the individual's ability to communicate with others (Munyua, 2016). Children may not want to talk or play with other children in class. Such exclusion from communication can have negative significant effects on everyday life, causing feelings of loneliness, isolation, and frustration, particularly among older people with hearing loss (Kimotho, 2013).

The level of hearing impairment is measured by the amount of sound that can be heard using one's better ear and this is measured using decibels (dB). It is categorized into four, that is, mild hearing impairment where the minimum sound that can be heard is between 25 and 40 dB,

1

moderate hearing impairment where the minimum sound that can be heard is between 40 and 70 dB, severe hearing impairment where the minimum sound that can be heard is between 70 and 95 dB and profound hearing impairment where the minimum sound heard is 95 dB and over (WHO, 2012). Hearing loss can be caused by a number of factors including; heredity (genetics), ageing, loud sound exposure, diseases and infections, trauma, accidents, or ototoxic drugs (drugs and chemicals that are poisonous to auditory structures (Van and Dobie, 2004). According to WHO (2012), there are 120 million people worldwide with hearing impairment, and 78 million of those affected are in developing countries. In Sub Saharan Africa more than 1.2 million children aged between 5 and 14 years suffer from moderate to severe hearing loss in both ears and is considered to be mainly due to ear infections, lack of hygiene and lack of treatment (SAHI, 2011). The numbers of children with HI keep increasing and thus the need to create educational opportunities for them by making schools and institutions accessible to them (Adoyo, 2015).

In the post-colonial period, the Kenyan Government took education to full throttle as a way to satisfy the immediate needs of the country which was to have skilled human resource. However, in this effort, education for children with disabilities was not looked into until the late 1950s when two special needs units were opened in Aga Khan Schools in Mombasa and Nairobi (Oketch, 2009). Education for children with disabilities was started because education is a human right and has been and continues to be one of the services that most nations strive to provide for their citizens. Education is an important investment that a country can make and enhancing access to educational services is significant in the development of a nation (World Bank, 1993). Education positively affects socio-economic behavior of any population such as demographic characteristics, productivity, living standards and health. It also opens perpetuity of

possibilities for a society that would have been denied such as; full participation in civic affairs of the communities, building strong and nurturing families, giving a better chance that lead to a healthy and productive life.

In 1968, the government of Kenya published Sessional Paper No. 5 on Special Education which laid out a public policy framework for children with disabilities. A special education management structure was set up comprising of a special education unit at the Ministry of Education headquarters, an inspectorate (special unit) and a special education curriculum development unit at Kenya Institute of Education (KIE), currently Kenya Institute of curriculum development (KICD) to cater for children with disabilities. The main objective of the special education programme is to assist persons with disabilities to develop towards the realization of full participation of persons with disabilities persons in social life and development and equality (MOEST, 2003). All citizens regardless of disability should have access to education as it lays a firm foundation for sustainable development and progresses a serious step towards undoing the gender discrimination that hovers all other rights catalyzing freedom and democracy within the border and extending its reach as an agent of international peace and security (UNICEF, 2000). According to GoK (1988), the first rehabilitation Centre for handicapped children was opened in 1971 with the aims of correction, rehabilitation and prevention of impairments. After the development plan of 1984/1989, the government felt the need for integration and involvement of parents in the education of children with disabilities (KIE, 1985). The Committee of the Care and the Rehabilitation of persons with disabilities recommended that due to the high demand, schools should be established to train personnel. There was one physiotherapist appointed by the government and a physiotherapy school existed. As a result of these initiatives, there has been a remarkable positive shift in how hearing impairment is perceived. The government, parents of children with hearing impairment and society in general has come to terms with the fact that persons with hearing impairment have full rights to education, self-determination and everything that pertains to life. Nevertheless, education for persons with hearing impairment in Kenya is overwhelmed by a wide range of challenges since independence regardless of the education model; segregation, integration and currently inclusion.

The implementation and practice of special education programmes today are guided by the policies stated in the Sessional Paper No. 6 (GoK, 1988) and the Special Needs Education Policy of 2010 (GoK, 2010). The key policies in this sessional paper include the integration of children with disabilities into regular formal schools in order to enhance their participation in formal education, early identification and assessment of children with disabilities and sensitization of parents and communities about the needs of children with disabilities to enroll in special education. Some of the policies are; Persons with Disabilities Act, 2003 which recognizes that persons with disability face discrimination in various forms and that the government shall take steps to the maximum of its resources to achieve the realization of the rights of persons with disability as set out in the Act. Article 18 of the Persons with Disabilities Act (2003) states that no person or a learning institution shall deny admission to a person with disability and learning institutions shall take into account the special needs of PWDs.

The Special Needs Education policy 2009, addresses critical issues related to education for learners with disability. The policy states that the overall goal of education is to achieve Education for All (EFA) by 2015 in line with global and national commitments. The policy has a mission to create a conducive environment for learners with disabilities in order for them to have equal access to quality and relevant education. It was launched in 2010 but was not well disseminated nor was it implemented as resources were not allocated to it.

The Education plan 2013 – 2018, on the Education Act 2013 policy outlines the need to increase access, enhance retention, improve quality and relevance of education, strengthen early identification and assessment and ensure equal opportunities in the provision of education for CWDs. While this policy, focus on special institutions and special needs education, this does not bring out the implementation of inclusive setting in the Kenyan education system. Consequently, learners with hearing impairment may continue facing exclusion from participating in education even within inclusive settings.

The Government of Kenya is now committed to the provision of equal access to quality and relevant education and training opportunities to all Kenyans. Towards this goal, the government has ratified and domesticated various global policy frameworks in education. The government signed Article 26 of the Universal Declaration of Human Rights (1948), consequently recognizing and committing itself to the right of every child to access education. The Article recognizes the intrinsic human value of education underpinned by strong moral and legal foundations. Other international policy frameworks ratified and signed by the government include, (but are not limited to) the 1989 United Nations Convention on the Rights of the Child (CRC), the 1990 African Charter on the Rights and Welfare of the Child, Salamanca Statement (1994), the Framework for Action on Special Needs Education (1999), the Millennium Development Goals (MDGs) and Education for All (EFA) by 2015.

Numerous efforts have been put in place to provide education for children with hearing impairment in Kenya. The Quality Assurance Department of the MOEST is responsible for children with disability accessing the curriculum and their retention in school. Consequent to the above developments, the principle of integration was accepted. Negotiations between the Republic of Kenya and the Kingdom of Denmark through the technical support from Danish

International Development Agency (DANIDA), the Kenya Institute of Special Education (Okech, 1993) began and consequently, Educational Assessment Resource Services (EARS) in 1987 were set up. Further agreements were reached with DANIDA which resulted in the establishment of EARS at the Ministry and District level throughout Kenya to cater for and address the needs of children with hearing impairment. In furtherance of education for LWHI, the government White Paper on Education (1992) streamlined key policy issues among which inclusive setting was recommended as the best approach to accessing education.

The above good development notwithstanding, the family and society view Children with Hearing impairment (LWHI) as a burden in educational expenditures. This results in stigmatization, isolation and misconceptions about their communication and mental abilities thus limiting school attendance by LWHI. This has affected the enrolment rate of LWHIs estimated at three (3%) percent according to Vision 2030. Similarly, according to the Kenya housing and population census (2009), there are 647,689 males (3.4 %) and 682,623 females (3.5%) with a disability living in Kenya, thus giving a total of 1,330,312 or 3.5% of the total population. 0.5 % are people with hearing impairment. The same data source indicates that Kajiado county has a population of 3410 children with hearing impairment and only 9% attend school (Kenya National Survey for Persons with Disabilities, 2008). This shows a decline when compared with earlier findings of national schools mapping census which puts learners with hearing impairment enrolled in Kajiado county at 12% (National Schools Mapping Census planning unit [MOEST, 2016]). The above statistical differences are an indication that hearing impairment is an issue of contention in the county and warrants attention in order to improve for learners with hearing impairment to have increased access to education

1.2 Statement of the Problem

The Convention on Education for All (1990) advocates for the provision of education for all children including children with disabilities. In line with this, the government of Kenya has put in place the Education white paper (MOEST, 1999) and subsequently introduced Free Primary Education (FPE) in 2003. Following this development, it was expected that children with hearing impairment would meaningfully gain access and participation in education in inclusive settings. Regrettably, it has not been realized as planned. In Kajiado county only 543 children have been enrolled in school in inclusive setting accounting for less than 5% of the total school enrolment. Although various researchers such as (Kimotho, 2013; Munyua, 2016) have conducted studies on hearing impairment in Kenya, they do not focus on participation to education by the learners with hearing impairment in Kajiado county but they depict the challenge of participation from a national context.

In spite of the introduction of Free Primary Education embracing full access and participation to education by children with or without disabilities, a large number of LWHI do not participate in education in Kajiado county. In view of the above, there is a gap to be filled which necessitates carrying out research to establish the barriers faced by learners with hearing impairment in participating in education in the county.

1.3 Purpose of the Study

The purpose of the study is to examine the barriers faced by learners with hearing impairment in participating in education in an inclusive learning environment, Kajiado County, Kenya

1.4 Research Objectives

The research objectives of the study are to:

- 1. Investigate the economic factors that hinder children with hearing impairment from participating in education in inclusive environments in Kajiado County.
- 2. Examine the socio-cultural factors hindering participation to education for learners with hearing impairments.
- 3. Explore the school related barriers that hinders participation to education for learners with hearing impairment.
- 4. Examine the effects of the barriers to education of learners with hearing impairment in Kajiado county.

1.5 Research Questions

- 1. What economic factors hinder participation to education by learners with hearing impairment?
- 2. What socio-cultural barriers are hindering learners with hearing impairment from participating in education in an inclusive setting?
- 3. What school related barriers hinder learners with hearing impairment from participating in education in an inclusive setting?
- 4. How are the barriers affecting the education of learners with hearing impairment in inclusive settings in Kajiado County?

1.6 Scope of the Study

The study is about participation in education by learners with hearing impairment in inclusive settings in Kajiado county. The study focuses on the problems being faced by learners with

hearing impairment in participation in the learning process in inclusive setting which includes, economic factors like household poverty, cost of educational materials and lack of assistive aids and appliances, socio-cultural factors like the biblical influences, lack of acceptances and cruelty from peers, lack of interest among parents of LWHI, school related factors like curriculum and teaching methods, and inadequate instructional material. It further investigated the effects of barriers to participation in education by learners with hearing impairment in Kajido County, 2019.

1.7 Significance of the Study

The study may be of great benefit in the various ways; First, policymakers may use the findings to come up with ideas and action plans to meet the needs of learners with hearing impairment in inclusive settings. Secondly, curriculum developers may use the findings of this study as a basis for identifying teaching and learning materials that enhance participation to education for learners with hearing impairment. Thirdly, the study may also generate information that may be utilized in the current advocacy and lobbying activities by various stakeholders aimed at improving the learning conditions of learners with hearing impairment. Fourthly, the study may contribute to a better understanding of the factors that negatively influence participation to education by learners with hearing impairment.

1.8 Theoretical and conceptual framework

1.8.1 Theoretical Framework.

This study was based on the classical liberal theory of equal opportunities advanced by Sherman and Wood (1982). The theory expresses the view that there should be equal opportunities in education. This theory asserts that each individual is born with a given amount of capacity and

that educational systems should be designed with a view to removing barriers of any nature for example, barriers based on socio-economic factors, socio-cultural factors, geographical factors, school-based factors which prevent learners who have a learning disability to take advantage of their inborn talents since disability is not inability. The education offered to such groups of learners will accelerate them to social promotion since education is a great equalizer which enhances life chances of the children with special needs (Orodho,2009).

The theory demands that opportunities be made available for individuals to go through all levels of education (primary, secondary and tertiary) to which access will not be determined by the disability of the learners but on the basis of individual's capability. In this way, education would at least provide equality of economic opportunities where all classes, races and gender could benefit economically from excellent academic performance. The theory further states that social mobility will be promoted by equal opportunity for all citizens to education.

1.8.2 Conceptual Framework.

All educational services for LWHI should address the barriers that hinder access to education. This should be done bearing in mind that LWHI require efficient, effective and functional instruction directed at achieving better performance call for the application of social services that can appropriately meet needs in an inclusive setting. Thus, the framework explains the barriers and how they affect the learning outcomes of a student with hearing impairment. These barriers include; school-based barriers which may include lack of instructional materials, discriminatory attitudes from teachers, limited number of special needs education teachers, inappropriate curriculum and teaching styles, inadequate infrastructure and learners are not encouraged to participate. Social-cultural barriers are in the form of discrimination and isolation from peers, lack of participation in integrated social forums, negative attitudes from peers and administration

staff and lack of guidance and counselling. Economic barriers are in the form of the high cost of instructional materials, high level of educational cost and households' poverty. All the above barriers lead to a low or poor learning outcome for the student. High learning outcomes can, however, be achieved when teachers have an understanding of what hearing impairment is and encourage the HI learner to actively participate. It is equally motivating for a LWHI when instructional materials are adequate and the curriculum is appropriate, teachers are well conversant with sign language and the course content is relevant to facilitate learning and communication. A motivated and committed teacher conducts supervision of his teaching by finding out if the mode of instruction or delivery for example; teaching, use of visual aids, etc.is satisfactory to the HI student, and supervises the learning of the student by constantly asking the HI student questions to evaluate level of understanding and also by giving incentives. In addition, adequate and available resources and infrastructure creates an environment that is conducive for the HI student to learn.

An environment that is socially accepting in terms of peers who consider the hearing-impaired student as one of them and staff that treats the student without bias or discrimination may lead to high learning outcomes of students. Figure 1 shows the conceptual framework for the study.

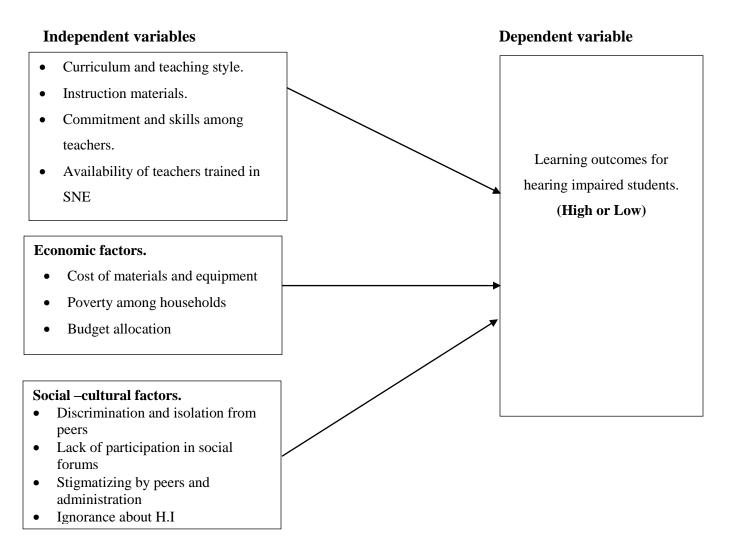


Figure 1: Conceptual Framework

Source (Author 2019)

1.9 Operational Definition of Terms

These are major concepts in the study whose meaning is elaborated further.

Participation: The term refers to the act of taking part/getting involved in education.

Access: The term refers to the ways in which educational institutions and policies strive to ensure that learners have equal and equitable opportunities to take full advantage of their education

Accessibility: This is the right or opportunity of reaching, obtaining and using a service and for purposes of this study, accessibility means to go to school, attain education and make use of existing facilities.

Barriers: Barriers are Institutional or social elements that stand in the way of an individual being able to participate in learning effectively.

Disability: According to World Health Organization, it is defined as: Any restriction or lack of ability to perform in a manner or within a range considered normal for a human being (WHO, 1996).

Education: Education is the process through which knowledge skills attitudes and values are imparted for the purpose of integrating the individual learner in a given society or changing the values and norms of the society.

Hard of Hearing: A hearing loss where an individual has some residual hearing and able to perceive and process spoken language through hearing.

Hearing Impairment: According to (IDEA, 2004) HI is a condition where an individual is impaired in processing linguistic information through hearing.

Inclusion: The process of adjusting the home or an institution so that all the individuals with hearing impairment are fully accommodated.

CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction

This section reviews literature on barriers faced by students with hearing impairment in inclusive environment in Kajiado county. The review is carried out using the following sub-topics: inclusive setting, economic barriers, socio cultural barriers, school-based barriers and their effects.

2.1 The concept of an Inclusive setting

According to UNESCO (2005), inclusive setting refers to a process of meeting the diversity of needs of all learners through increased curriculum content, approaches, structures and strategies, with a common vision which covers all children of the appropriate age range and a conviction that it is the responsibility of the regular system to educate all children. Lipsky and Gartner (2006:762) describe inclusive setting as placing students with disabilities of all ranges and types in general education classrooms with appropriate services, positive attitudes and supports provided primarily in that context. It is a process of reforming schools and attitudes, which ensures that every child receives quality and appropriate education within the regular schools.

Inclusion is more complex than mere physical placement of children with special needs in the regular classroom. Inclusion means fully including students with diverse abilities (both gifted and persons with disabilities) in all aspects of schooling that other students are able to access and enjoy. It involves regular institutions and classrooms genuinely adapting to and changing their practices to meet the needs of all students (Loreman &Deppler, 2001:13). Inclusive setting in education is based on the idea of social justice that advocates equal access to all educational opportunities for all students regardless of the presence of a disability. In recent years, much

debate has taken place concerning the viability of inclusion as a realistic educational option for all students, and this debate continues as the research base on inclusion continues to grow and inform arguments (Loreman, 2003).

This trend has been supported by the United Nations policies which affirm the rights of children: UNCRC (UN, 1989), the United Nations Standard Rules for the Equalization of Opportunities for Persons with Disabilities (UN, 1993) and the Salamanca Statement (UNESCO, 1994). Educational policies in developing countries have also responded to the social justice agenda in different ways. In Kenya, for instance, The Kenya Constitution, 2010 (GoK, 2010), the Persons with Disabilities Act, 2003 (GoK, 2003), Special Needs Education Policy, 2009 (GoK, 2009) and the Basic Education Act, 2013 (GoK, 2013) all work in attainment of inclusive setting for persons with disabilities child.

Inclusive setting is a notion born in the evolution of society's changing views of persons with disabilities. As educational systems began to accept students with disabilities, best placement concepts were debated (Friend et al., 1989). The history of special education, according to Smith et al., (1998) has evolved in three distinct phases, from relative isolation/segregation, to integration and mainstreaming, and finally to our current phase of inclusion. The segregated approach which placed learners with disabilities in special learning institutions for the purpose of meeting their educational needs was seen as a way of discrimination. Then integration and mainstreaming arose as some of the ideal solutions to exclusion. These approaches did not produce the expected wide-scale improvement as the academic achievement gap between the regular students and those with disabilities in the integration and mainstreaming setups continued to widen (Adoyo &Odeny, 2015).

In efforts to meet obligations towards the international and national policies for inclusion, persons with disabilities are now appointed in decision making organs and their voices are heard. Due to learners" diversities in regular classrooms, the Ministry of Education through the Kenya Institute of Curriculum Development and the Kenyan National Examination Council has been able to differentiate the curriculum and the national examinations, respectively, to take care of the needs of every individual learner with disability (Adoyo&Odeny, 2015).

Students with disabilities who are included in regular institutions tend to become adults who spend more time in leisure activities outside home, with others who are non-persons with disabilities and spend more time in community work than their counterparts in segregated institutions (Alper & Ryndak, 1992). In addition, Davern and Schnorr (1990) state that another benefit of inclusive setting is that it assists with the development of general knowledge for SWDs. According to Tufekcioglu (2000), one benefit of inclusive setting for HI students is to have a constant input of spoken language through interaction with hearing peers to acquire the language of a hearing society. The HI student would have access to a richer and wider curriculum to prepare for a competing world of work.

2.2 Economic Barriers

Persons with hearing impairment do not see themselves as broken or that they need to be fixed. The opposite is closer to the truth. People with hearing impairment see themselves as a subculture, a minority in society. They feel that Sign Language is their first language and English is their second language. This is quite a different view point that many hearing people may have when they see a person with hearing impairment in their community. Most people with hearing impairment do not feel the need to be "cured' from hearing impairment and they embrace their state of hearing impairment as their cultural identity (Sarkar & Pramanik, 2018).

Though education is salient in Kenyan policy, it is incapacitated further by economic and political factors as was captured during World Conference on Education for All (WCEFA) where the typical comment was "unless the external debt is solved and or as long as local and civil war and invasion continued, it is totally unrealistic to expect that the Education for All (EFA), target can be reached (Hacque Hallack 1996). This is well manifested by the external debt burden which stood at 4.5 billion before the debt relief initiative (Weekly Observer, May 10-16, 2017). This critical lack of resources for LWHI available for allocation to education for all in Kenya is an encumbrance provision of educational services but also makes "donor driven initiative rather than the recipient" initiative which represents the activities as they are planned by the stakeholders to be on effect.

To the effect globally for low-and lower-income countries the additional recurrent costs on education by year 2000 were estimated to be between eleven to sixteen billion US dollars over the above expenditure in 1990, that is to say an increase of 40-60 percent (Hallack 1996). In Kenya out of the total budget of 4 trillion Kenyan shillings (1 Billion USD), the education sector was allocated shillings 2 billion (200 Million USD) representing four percent of the total budget of recurrent expenditure (MOEST, 2016). In the view of these precedents and in the light of economic and final prospects of Kenya there is need to improve the feasibility for education through funding more intelligent approaches. This argument concedes with UNESCO (2001) who observes that for education for learners with hearing impairment to take root government must provide schools with additional resources to enable them accept persons with disabilities children.

According to Barton and Wamai (2017), general access to education in Kenya is affected by high education cost and household poverty, high incidences of poverty (USDC, 2004). This limits

LWHI from accessing services. Even with the introduction of universal primary education, households' poverty competes directly with disability and educational needs of learners with hearing impairment as parents find it hard with low household incomes to buy books and other scholastic materials for their children. This high cost of instructional materials of LWHI further makes the access to educational services a challenge as they compete unfavorably with those of normal children (Gundanyi, 2002), for example on average educational and instructional materials for a child with hearing impairment for primary school could include; hearing aid, knowledge of how to use sign language, dictionary for sign language, television and DVDs for him/her to watch the signs (USDC 2004). The Lesotho government however differ from Kenya's where the minimal additional resources have been identified for hearing impaired learners specific needs in order to promote sustainability (www.eenet.org.uk/ theory practice).

Farrant (1996) and Eenet (1998) advise that teaching or learning materials should be selected according to the specific needs of the learners. Failure to get such materials will make teachers resort to use black boards only which is not effective for learners with hearing impairment. Education is not only about good quality teachers and material, it is also about quality learners, children needs to be health and well nourished. (http.www.unicef.org/2003.htm). Under the roles and responsibilities of UPE the school shall cater for teaching and other aspects like meals at school are reserve of parents (MOEST 2008). However, the high level of poverty among some parents of learners with hearing impairment have denied many children access to education and also basic needs which is a big challenge to survival and completion rates of LWHI (Kinuthia 2017).

2.3 Socio-Cultural Barriers.

These are factors which are explained from the perspective of culture, tradition, sex, ethnicity and religious. A child with hearing impairment may not be able to access meaningful education if society is not organized to meet their needs as manifested by the negative attitudes that hamper their efforts to lead ordinary lives. For instance, the stereotyping and labelling of learners with hearing impairment not only affects their emotional and self-esteem but keeps them away from mainstream society. This stigmatization and lack of acceptance by their families and mainstream society may cast them out of any possible educational opportunities (Basic Needs Review, 2004). This is in agreement with Katz (1960; Pakanis &Greenawald, 1989; Shavit; 1989) as cited in EDCO (2003). They argue that attitudes fulfill various psychological functions. Among these are the instrumental function of helping punishments, the ego defensive function of protecting our self-esteem and helping us avoid personality conflicts and anxiety. This was further observed by Munyua, (2016) who concludes that the social identity and the desire to foster smooth relations with friends is dependent on psychological wellbeing of in individual.

In addition, the Religious influence among the Christian Community and its treatment of disability particularly in the Old Testament further stigmatize the PWDs. A quotation from Leviticus 21:16–20 is perhaps the best distilled example of the thread of uncleanliness and inherited sin" that runs throughout the Bible in its segregation towards the PWDs. The Old Testament believers and some non-Christians today still hold similar sentiments against persons with disabilities. Traditionally and culturally, African society held negative attitudes and beliefs towards disability and the CWDs. Often disability is associated with witchcraft and promiscuity during pregnancy and punishment by ancestral spirits (Addison, 1986).

Intra-house relations may also affect access to education by LWHI. Parents with low education levels tend to have less interest in education and maybe reluctant to invest in the education of their children (Munyua, 2016). LWHI even at family level are neglected and rejected by their families whereby they are rarely sent to school. For instance, the UNESCO (2012) Education for All Global Monitoring Report [GMR] (pp. 124-126) states that "around 250 million children either fail to make it to grade 4 or do not reach the minimum level of learning." Some researcher have argued that lack of learning among children may be directly attributed to parental negligence (https://en.unesco.org/gem-report/least-250-million-children-primary-school-age-arefailing-learn-basics).

2.4 School Related Barriers to Inclusion

Many African countries such as Zambia, South Africa and Nigeria just to mention a few, have embraced inclusive education and evidently committed themselves to bringing about disability inclusion at every level of education (Eron & Emong, 2017). Countries such as Uganda have shown commitment to inclusion through establishing of legal and non-legal frameworks on education and the establishment of educational infrastructure aimed at mainstreaming disability. For instance, a department of special needs education at the Ministry of Education, Science, Technology and Sports, a special needs education section at the Uganda National Examinations Board, a department at the National Curriculum Development Centre, a section at the Education Standards Agency, representation of persons with disabilities at the National Council for Higher Education Board, Public Universities Councils and training of teachers for special needs education. The bulk of these infrastructures are visible in promoting inclusive education at primary and secondary levels of education (Mitchell et al., 2017).

Though learners with hearing impairment are enrolled in school, very few complete the cycle of education and if they complete, they tend to have performed poorly. This is attributed to the curricular that do not serve the needs of persons with disabilities. In Uganda for instance USDC (2003) and Okech (1993) report that the current curriculum and examination system is not flexible and doesn't cater for SNE as the assessment of LWHI has not been standardized. According to Scrimshaw (1998) and Kelly (1999) a curriculum is intended to provide a relevant education and should usually be based on ideology of the developer on the beneficiaries. Unfortunately, this is not the scenario in Kenya.

UNESCO (2000) argues that teacher training for LWHI needs special expertise in developing systematic ways that can enable trainers account for special education that they are giving their pupils and that good teaching practice would become more widely accepted. On contrary, in Kenya out of 300,000 teachers on government payroll only 20,000 have been trained to support children with hearing impairment (Ching, 2015). The number of specialized teachers might explain the current low enrolment of LWHI (MOEST, 2010). This does not compare favorably with other African countries where preparation of SNE teachers dated far back as 1974 and 1988 in Nigeria and Zimbabwe. Similarly, countries like Jordan, Yemen and Lao People's Democratic Republic, training in educating LWHI was incorporated in the training curriculum for all teachers.

More still, the negative attitudes to LWHI of both teachers and peer has affected their retention in school. Amongst the most common attitudes are; hearing-impaired people are incapable, aggressive, in need of charity, and of low intelligence. The use of offensive signs and stereotypical views of persons with disabilities such as twisted body results to twisted minds, and representation of disability as horrific partly explains the low retention (Keynes, 1998). The use

of abusive language dehumanizes and reduces them to objectives (Devlinger, 1998). Ainscow (1998) says that the use of label to describe individual pupils and summarize the nature of their disability makes learning a nightmare.

Gregory et al (1998) stated that students who find themselves not acceptable to their peers or in unsatisfactory relationship with their teachers, life in school becomes a punishment experience for them, as without friends many of the activities they undertake are meaningless. People without friends are an exceptional group, their health and welfare are constantly at risk. For example, Singal (2016) observes that in India the National Resource Centre for Inclusion (NRCI) successfully developed a mode of desecration which enables all children regardless of whether they have disabilities or not.

The absence of instructional materials like, DVDs and TVs, text books, sports equipment and other teaching aids to suit the special learning needs of learners with hearing impairment may affect the enrollment of such children. Despite the current distribution of school materials by the MOEST, requirements for LWHI have not been adequately supplied yet (Adoyo 2015). Learners with hearing impairment participation in education is realistic if matching infrastructure and material are in place. Availability of well-prepared teachers to accommodate LWHI in their classroom activities is a must. For example, Lesotho adopted a policy of an intensive three weeks training workshop for nearly all the teachers in schools. The teachers would then go to neighboring community and work through local chiefs and persuade parents to allow LWHI attend school (http. www.eenet.or.uk).

Furthermore, valued support was provided by trained itinerant special needs inspectors and by local county inspector. Although present primary education targets LWHI as one of the priority groups, there is no matching infrastructure for them to have full access to education (Muiti

2016). There is acute shortage of teachers and in addition, they generally lack enough training on how to accommodate LWHI in school activities. Moreover, the class sizes are too big. Current statistics from the Ministry of Education Science and Technology indicates that there are 3, 275 primary level teacher's country wide for special education implying a pupil teacher ratio of 50: 1 compared to the recommended ideal of 3:1 Kristeen (1997). Clarke and Shore (1998) found that although education is a right for all, learners with hearing impairment are not fully getting access to it. However, the situation is different in Liberia where the government produced a teacher curriculum and material for teaching giving basic information on disability education for both pre and in-service training (Khateri et al 1995).

Furthermore, in the development of the curriculum and examination system in most African countries, inadequate attention is paid to SNE. Assessment for LWHI has not yet been standardized where instructional materials are concerned, yet their capabilities differ from those of mainstream school children (Goodley, 2014). The Ministry of Education Science and Technology (2010), notes that the assessment is often unfair and does not assess these children according to their capabilities. This concurs with the arguments of (Johness, 1998) that teaching and learning process becomes a success if the equipment helps to understand abstraction, differentiate, motivate and repeat in many different ways.

Moreover, much as the LWHI and their families would love to access educational services, it has generally been found out that schools were still not within the reach of LWHI (Okech, 1993). Others believed that transport to and from the service point was still a challenge especially in rural areas. A similar challenge is echoed in India where the lack of disability friendly services and accessible buildings is seen as greater problem than social prejudice and parental attitudes (http.india.together.org 2012). This is further complicated by the minority of LWHI having

assistive aids. (USDC 2011) However, the situation is different in Ghana where residential institutions are still upheld for the LWHI; such provisions make it easy for learners with hearing impairment to reach their service points. (Wambugu 2008)

The above mentioned, add to problem of retention of LWHI to schools as the parents become overburdened with every time escort to and from school. The community members who offer assistance to LWHI subject them to child labor and other form of harassment during their course to school (USDC 2009). This isolates them in their small households and denies them the chances of participating and being full members of society.

However, the Community Based Rehabilitation (CRB) programmes in some South and East Africa countries like Tanzania, Swaziland, Lesotho, South Africa, and Mozambique with the support from Save the Children, UK assistance have been fairly addressed. Assistance given to these countries assessment centers ranges from lack of assessment offices to audiology clinics (Kristenten, 1998).

Education of children irrespective of ability is a right. Unfortunately, world over for children with disability this has not been satisfied. It is only a few lucky ones who get this opportunity. Meanwhile, Kenya like many countries, has risen to respond to the challenges and needs of LWHI by giving priority among the children to benefit from Universal Primary Education (UPE). It is imperative to carry out this research to fill in the gap in the socio-cultural, economic challenges like how the participation in education to LWHI has changed and has been tackled over time, the school-based challenges like absence of instruction materials, limited number of trained teachers that are not clearly streamlined.

2.5 Effects of the barriers on participation to education by LWHI in an inclusive setting

People with disabilities often face barriers in participating in learning processes that affects their performance at inclusive schools. (Gundanyi 2002) Few activity venues are fully adapted to ensure participation to education of all LWHI. Although more venues are beginning to have adaptations made, this is a slow process and levels of accessibility vary widely. As many people with HI will have experienced access problems in the past, they are often also reluctant to join new organizations, fearing the stigma and awkwardness of not being able to access the activities. "These inclusive schools must recognize and respond to the diverse needs of their students, accommodating both different styles of learning and ensuring quality education to all through appropriate curriculum, organizational arrangements, teaching strategies, resource use and partnerships with their communities" (UNESCO, 1994, p.11-12).

According to Barton and Wamai (2017), participation in education in inclusive school is affected by high educational costs and high incidences of poverty. This limits LWHI from accessing services and participation even with the introduction of universal primary education. High poverty in the households competes directly with educational needs of learners with hearing impairment as parents with low household incomes find it hard to purchase books and other learning materials. This leads to school dropout, lack of exposure for learners with hearing impairment and increases incidences of inequality among learners.

Nayak, (2008) advises that attitudes of administrators, parents, teachers and students have effects to education access for LWHI. Many parents fear allowing children with HI into the classroom with their normal child. Teachers and administrators fear their time will be monopolized by the students with special needs and keep them from providing appropriate education to other students. Typically, developing children sometimes fear the unknown of children who are unlike

themselves. Attitudes against disability are major barriers to persons with disabilities full access to education and participation in the inclusive schools. From pity, awkwardness and fear, to low expectations about what HI people can contribute, stereotypical and negative attitudes hold people back.

The study on "Attitudes of parents and teachers towards inclusive setting" done by Nayak, (2008) examined the attitudes of both parents and teachers towards inclusive setting. Results of the study reported that teachers look forward to teaching in an inclusive environment yet they are least prepared to face the challenges that come along with this model of teaching. They also showed significant difference in the opinions of teachers of normal schools. As with society in general, the negative attitudes and stereotypes are often caused by a lack of knowledge and understanding. The attitudes and abilities of general education teachers and para-educators in particular can be major limitations in inclusive setting.

Training teachers and para-educators to understand and work with children with disabilities is often inadequate, or it may be fragmented and uncoordinated. If educators have negative attitudes towards students with special needs or have low expectations of them, children will unlikely receive a satisfactory, inclusive setting. Lloyd (2006) observes that there is a failure to recognize the complex and controversial nature of inclusion; no attempt is made to address the exclusiveness of the curriculum, assessment procedures, and practices of mainstream provision and that the strategy is founded on notions of normalization, compensation and deficit approaches to Special Educational Needs (SEN). They further argued that there is a need to recognize that as long as policy is founded on the idea that inclusion into the mainstream of schooling, as it is currently conceived, and achievement measured against a set of norm related

standards is the route to good education children with SEN will continue to be disadvantaged and to receive an inferior educational opportunity.

There are walls between schools and children before they get enrolled, they face walls with curriculum inside the classrooms and finally 'they face more walls when they have to take examinations which determine how successful they will be in life' (Jha, 2002).

CHAPTER THREE: METHODOLOGY

3.0 Introduction

This chapter presents the techniques and methods followed in the study, how the data was processed and analyzed which lead to the findings that is reported in the next chapter.

3.1 Research Design.

An exploratory study design was used, as it allowed the researcher to gain insight into the problems by eliciting people's views on the phenomenon and how they interpreted it since this was relatively a new area with limited research studies. Both qualitative and quantitative approaches were used. Quantitative approach is desired in gaining rigorous evidence using actual numbers from the field while qualitative approach is desirable in capturing respondent's attributes such as emotions and feeling (Mugenda &Mugenda, 2003). The focus of the study was to explore participation in education by learners with hearing impairment in Kajiado county, Kenya.

3.2 Study Area

The study was conducted in Kajiado County which is located in the Rift valley region of Kenya. The county was purposively selected for the study because of its unique characteristics among the 47 counties of Kenya. First, this is the largest County in Kenya bordering the capital city of Kenya (Nairobi) in the North, Nakuru to the west, Machakos County to the east and goes all the way to border Tanzania in the South, with both urban and rural characteristics. Secondly, a sizeable proportion of Kajiado County is Arid and Semi-Arid (ASAL) meaning that among the main economic activities in the region in pastoral farming. The population and census report of Kenya (2009) identified Kajiado, among four other counties in Kenya that have the highest

prevalence of young children with visual and hearing impairment. Furthermore, another study by Kenya National Bureau of Statistics (KNBS, 2012) reported that pastoral communities face higher chances of exclusion in access to schools and quality healthcare. Finally, this county is accessible to the researcher. According to Singleton (1993), the ideal setting for an educational study should be easily accessible to the researcher. This is an important consideration given the limited time and finances at the researcher's disposal.

3.3 Study Population

Information was gathered from children with hearing impairment, head teachers and teachers from inclusive primary schools in Kajiado County, Kenya. In the inquiry about participation in education for learners with hearing impairment, parties within the school setting are clearly the people with information. It was desirable to get self-reporting barriers to participation in education by learners with hearing impairment. The challenges and support system for these learners was best reported by head teachers as management representatives and classroom teachers who are the facilitators of learning in an inclusive setting.

3.4 The Sample

Sampling is necessary because in educational survey studies, it is neither desirable nor possible to cover the entire population (Kothari 2012). The sample size hence looked into desirability and feasibility issues of concern such as available time, manpower, transport and financial resources. Purposive sampling was used to identify schools, teachers and children with hearing impairment. Once a school was included in the sample, it intuitively implied inclusion of the head teacher. A list of primary schools was obtained from Kajiado County Director of Education. From this list, it was found that Kajiado county has a total of 401 public primary schools of which 9 are special

schools, 2 are model inclusive schools while the rest are regular schools. This study purposively selected the 2 inclusive schools because these are the established centers of excellence in inclusive education in the region. This is a non-probability sampling which according to Merriam (2009), is the most appropriate sampling strategy for qualitative researches. In total 17 respondents were identified of whom 2 are head teachers,7 teachers, and 8 children with hearing impairment.

3.5 Methods of Data Collection

The study used questionnaires for teachers and head teachers and interviews for learners with hearing impairment. These methods enabled collection of qualitative and quantitative data which was ideal in capturing in-depth information about participation in education by learners with hearing impairment; barriers and effects.

3.6 Research Instruments

The research instruments used in this study were questionnaires and interview schedules. The questions were constructed using simple and straightforward sentences to minimize any possible ambiguity. A data collection dry-run using the questionnaires and interview schedules was done to help identify questions that are not clearly structured for the purpose of improving the reliability and validity. Three teachers and three learners with hearing impairment participated in the dry-run, which helped in restructuring of some questions before the actual data collection. Questions on socio-economic barriers were further simplified and separated from questions on cultural barriers to improve the reliability and validity of the data collected.

3.6.1 Questionnaires

Semi-structured questionnaires for teachers and head teachers were designed to include both closed ended and open-ended questions. Closed-ended questions sought to collect quantitative data such as enrolment of learners, while open-ended questions were meant to collect qualitative information such as emotional expression of teachers with regard to participation in education by learners with hearing impairment. Teachers and head teachers were given questionnaires to read and fill on their own and submit after completion. Before respondents would start filling the questionnaire, the data collector and the teacher/head teacher identified, would read the questionnaire together in an attempt to have a clear understanding of the questions. Although this approach was time consuming, it was important to minimize non-responses and improve the quality of data.

3.6.2 Interviews Schedule

Interviews are most effective in research for the purpose of explaining, and exploring research subjects' opinions, experiences, behavior or phenomenon (Roy et al., 2015). Interviews guides for children with hearing impairment (LWHI) were prepared using a set of short and clear questions. These questions were arranged in a systematic way to capture what learners perceived as barriers, their effects, social life and academic performance. LWHI were interviewed to obtain their perceptions and opinions on their educational access in inclusive setting. A total of eight students with hearing impairment were interviewed, four in each of the selected schools. Each learner was interviewed independent of each other. During the interview, the researcher read a question at a time and translated it to KSL for the learner. The learner would then respond in KSL and the interviewer take note by writing down the responses of the learner.

3.7 Data Collection Procedure

After the approval of research proposal and research tools, a letter from Kyambogo University was obtained and presented to Kajiado county education office. The county education officer then gave authority to visit sampled schools. Subsequently, the researcher discussed in detail about his investigation with heads of the respective schools and sought permission from them for collecting the necessary data. In the first phase, good rapport with the teachers of concerned schools was established to do the assignment carefully. According to Guetterman, Fetters & Creswell, (2015), questionnaires are used to gather data for statistical analysis while interviews are used to gather in-depth qualitative data in mixed method analysis approaches. Teachers and head teachers were informed about the purpose of the study, and given questionnaires to fill on their own and submit. On the other hand, learners with hearing impairment were engaged in an interview where questions were read and translated for them in Kenyan Sign Language (KSL), learners would respond using KSL and the researcher would record their responses in writing. Before assigning the task, instructions of each test to be used in the study were made clear. In order to give responses to the questions freely, honestly and sincerely, they were made aware that there are no right or wrong answers to those questions as it was only an exercise for research purposes and their responses would be kept strictly confidential.

3.8 Data Analysis Technique

Data analysis refers to the process of examining, and displaying data by an aim of discovering useful evidence, suggesting conclusion and subsidiary decision making (Koomy, 2009). Quantitative data was analyzed using basic statistical methods such as mean and frequencies with the help of Statistical Package for Social Sciences (SPSS) version 23 and presented into tables and figures using descriptive statistics. Qualitative data was analyzed using thematic

approach proposed by Braun and Clarke (2006). This approach involves the following stages: familiarization with the data; initial coding generation; searching for themes based on initial coding; review of the themes; theme definition and labelling; and report writing. Continuous triangulation of both qualitative and quantitative datasets was done before compiling this report.

3.9 Limitations

The study is small-scale research on a wide topic. It was conducted only on one county out of 47 counties within Kenya and only two inclusive primary schools were involved in this study, thus some useful participants in the study might be left out thus, the information might not be comprehensive enough. There might also be a lack of generalizable findings because non-probability sampling was used. Getting enough time for interviews with educators was a challenge since they could only squeeze the interview in between their teaching periods.

3.10 Ethical Issues

The researcher obtained informed consent from parents and school authorities to interview their children and also interview the children in presence of adult care takers. Informed consent and the 'principle of respect for persons' were observed as proposed by Marshal &Rossman (2010, p.142). The researcher explained to the people in the study area the objectives of the study, explaining the reasons why the particular respondents were chosen, the benefits, discomforts and harms of the study, and requested to also ask questions in relation to the study. The researcher designed the questions in such a manner that did not violate the rights of informants and avoided sensitive questions such as age, being a step child or by avoiding records that may contain personal data. They were also assured of confidentiality on information.

CHAPTER FOUR: PRESENTATION OF FINDINGS AND INTERPRETATION

4.0 Introduction

This chapter presents an analysis of the research findings on the barriers to participation in education by learners with hearing impairment. The chapter presents the findings and their interpretation in the context of the reviewed literature on the research problem. The subsequent chapter will then draw conclusions and recommendations based on the presentation of findings in this chapter. The study focuses on the barriers faced by learners with hearing impairment in participating in the learning process in an inclusive setting. It further examined the effects of barriers to participation in education by learners with hearing impairment in Kajiado County. In this study, there were three types of respondents of whom 2 are head teachers,7 teachers, and 8 children with hearing impairment as detailed in Table 1.

Table 1: Response Rate

Category of Respondent	Number	Percent
Head Teachers	2	11.8%
Teachers	7	41.2%
Learners with HI	8	47.1%
Total	17	100.0%

Majority of teachers had attained their first degree and had varying experience in teaching learners with hearing impairment in inclusive setting. For learners with hearing impairment, majority were aged 12 years and above and were in upper primary. Learners were asked to state the subjects in which they recorded poor performance. Table 2 below shows the subjects learners with hearing impairment experienced perennial failure.

Table 2: Poorly Performed Subjects by HI Learners

	Frequency	Percent
English	3	37.5%
Maths	2	25.0%
Social Studies	3	37.5%
Total	8	100.0%

From Table 2 above, it is clear that all the 8 learners who participated in the study experience at least a challenge of poor performance in various subjects. Other subjects in which learners with hearing impairment perform poorly include Kenyan Sign Language (KSL) and Science. The study explored the possible educational barriers underpinning such poor academic outcomes. On students' own perspective, inadequate books and lack of special needs education (SNE) teachers were among the main reasons why they fail in those specific subjects. One of the learners had this to say;

"...we have few books in our school, we cannot learn well ..."

Other learners from the other inclusive primary school in Kajiado county said this concerning their teacher.

Learner 1: ".... our teacher does not understand how to talk to me. He only talks and cannot use Kenyan Sign Language well. This makes me fail exam..."

Learner 2 (Deaf): ".... TEACHER OUR UNDERSTAND TALK TO ME NOTHING. TIME
TEACH ALWAYS TALK FORGET SIGN..."

Other minor reasons learners with hearing impairment cited as being cause of their poor performance includes; irrelevant curriculum, poor teaching style and examination modes that are not adapted to meet the needs of learners with hearing impairment. On examination one of the deaf learners had this to say when complaining about examinations that are set in English as opposed to Kenyan Sign Language (KSL).

".... EXAM DIFFICULT, ME UNDERSTAND ZEROBECAUSE I ONLY KNOW KSL NOT ENGLISH...."

4.1Economic Barriers to Participation in education by Learners with hearing impairment

This study established two major categories of economic barriers that hinder participation in education by LWHI. These are barriers related to the cost of providing education as presented in the following sub-sections.

a) Household Poverty

This study revealed that household poverty was the main barrier to participation in education by learners with hearing impairment. As shown in Figure , 75% of learners and 66.7% of teachers reported that household poverty is a barrier to participation in education by learners with hearing impairment.

HH as a Barrier to Participation in Education

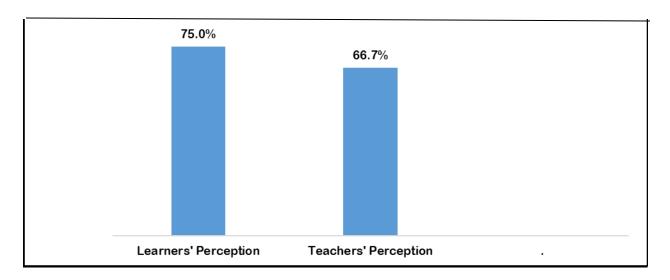


Figure 2: Household Poverty as a Barrier

Household poverty was observed in this study to be the cause to many other subsidiary barriers. For instance, all learners reported that household poverty was a barrier to their participation to education. They also reported lack of school fees and 83% of them reported that they lack transport to school due to various reasons such as long distances. One learner in class 7 had this to say about the state of their home;

".... we eat only once at my home because my mother cannot get more food. I also have torn uniform and people laugh at me at school and I feel bad. I hate school..."

During interviews with learners with hearing impairment, it was revealed that due to high poverty levels in the household for children with hearing impairment, parents are unable to pay school fees causing absenteeism and irregular school attendance. One learner in class 6 also had this to say;

"...my parents work in farm and only get small money for food. He cannot get other money to pay in school. Many times, I stay at home..."

Another significant proportion of LWHI reported that since their parents are not able to carter for their transport to school, they walk long distances to and from school which affects their levels of concentration in class. During one of the interviews, one of the learners had this to say;

"...Our school is far away and we walk and get tired at school then we sleep in class when the teacher is teaching..."

b) Cost of Educational Resources

The second economic barrier to participation in education by LWHI after household poverty is high cost of education resources such as instructional materials and equipment. Learners with hearing impairment may require additional services, equipment and personnel and hearing aids among others. It was found that 78% of teachers and head teachers interviewed reported that high cost of school equipment and services for LWHI is a serious barrier to participation in education. In developing African countries such as Kenya, this increases the cost of education which limits LWHI from participating in education even with the introduction of universal primary education. Figure below presents the findings from teachers who hold this opinion.

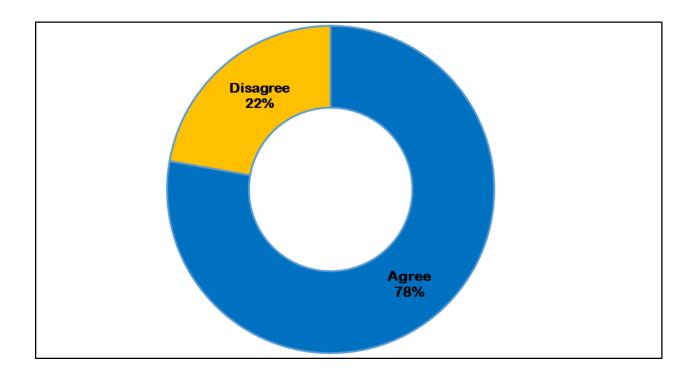


Figure 3: High Cost of Equipment for H.I Learners as a Barrier

In the Kenyan context, the issue of household poverty coupled with non-responsive government policies on the educational needs of children with disabilities, especially those who are hearing impaired, makes access to education for this category of learners really complicated and almost unattainable.

4.2 Socio-Cultural Barriers to participation in education by Learners with Hearing Impairment

These are educational barriers resulting from misunderstanding of children with hearing impairment or the concept of hearing loss. This misunderstanding can be quite diverse but they are all related to cultural, traditional gender roles, ethnicity and religious contexts of the community where the child is born and grown. This study established a number of social and cultural issues which are the barriers to participation in education by learners with hearing

impairment. The issues identified revolve around negative attitudes, discrimination, isolation, early marriages, religion and parental overprotection of children with hearing impairment.

a) Negative Attitudes and Practices Towards Children with HI

In the interviews with learners with hearing impairment and questionnaire responses from teachers, it was observed that isolation, stigma, discrimination and negative attitudes towards learners with hearing impairment were prevalent social barriers to participation in education by learners with hearing impairment. One teacher had this to say;

"...Teachers who don't commit themselves to their work affect learners in that they are not attended to in all areas that they desire. Some of these teachers' dislike learners who cannot hear..."

Another teacher from the other inclusive school said this;

"...in this community of ours, there is a lot of stigma towards both teachers and learners with hearing impairment. Both are looked upon as low or non-achievers in anything...."

Teacher and peer attitudes can affect participation of learners with hearing impairment in inclusive setting. Figure below presents a summary of teacher and learner's responses on attitude.

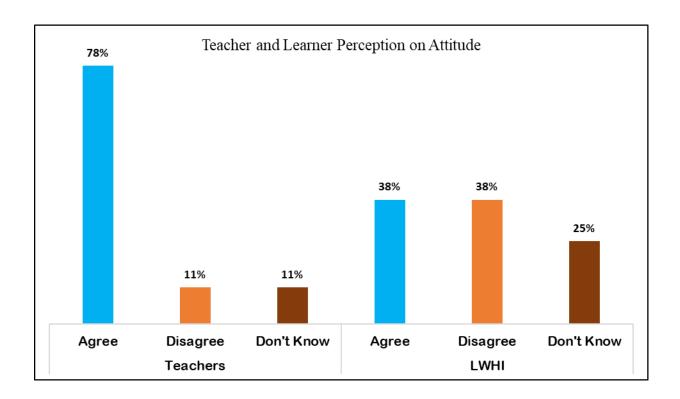


Figure 4: Attitudes as a Barrier to Participation to Education

This was observed more significantly among teachers (78%) compared to learners with hearing impairment (38%).

b) Religion

The question of whether religion is one of the social-cultural barriers affecting participation in education by learners with hearing impairment was directed to teachers and head teachers. As detailed on Figure, it appears that majority of teachers at 56% do not think religion is a barrier as opposed to 44% who seemed to suggest that religion is a barrier.

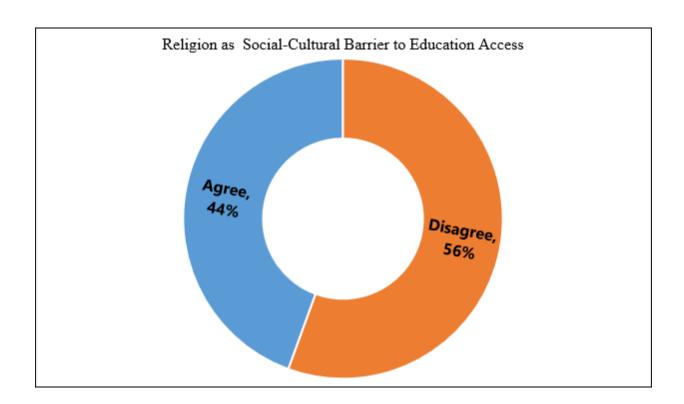


Figure 5: Religion as Social-Cultural Barrier to Participation in Education

Figure 5 above shows the percentage of teachers and head teachers who agree or disagreed that religion is social cultural barrier to participation in education by learners with hearing impairment. Taking into account the margin of error, however, one could argue that religion may affect education access for learners with hearing impairment on a 50-50 basis.

It is important to note that the term 'religion' as used in the Kenyan context is amorphous to the extent that it may also include minor denominations and other religious cultic groups and/or organizations. Some of these denominations propagate traditional and stereotypical beliefs about disability, thus increasing stigma and discrimination of children with hearing impairment.

c) Child Overprotection and Early Marriages

Parental overprotection has commonly been implicated in the development and maintenance of childhood anxiety disorders (Davern &Schnorr, 1990). This study revealed that parental

overprotection of their children with hearing impairment can be a barrier to participation in education. Additionally, it was found that some female children with hearing impairment are forced into early marriages, thus failing to participate fully in education. Figure shows teachers' perception of parental overprotection and early marriages as a barrier to participation.

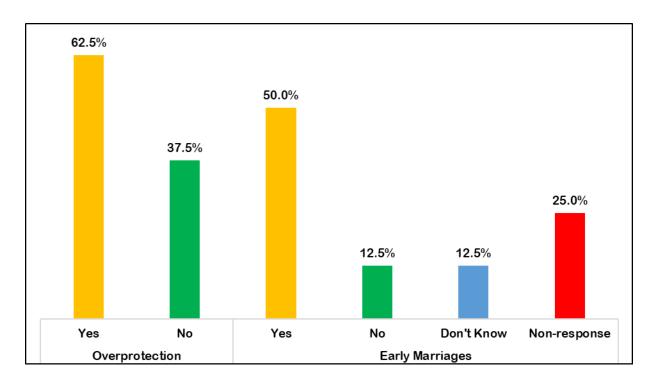


Figure 6: Parental Overprotection and Early Marriages

As detailed in Figure 6, 62.5% and 50% of learners with hearing impairment reported that overprotection by parents and early marriages were barriers to participation in education. Teachers reported that parents with children with hearing impairment retain them at home for fear of the unknown, when they release them to school. One of the teachers reported this;

"...some parents are very protective of their children who are deaf. In fact, they are skeptical and cannot release them to come to school. This makes the child [to] lack education and [to become] very unsocial..."

While previous studies have not brought the issue of parental overprotection and early marriages as social-cultural barriers to participation by learners with hearing impairment, this study seems to suggest that from learners' perspective, these two may be serious barriers to participation in education by learners with hearing impairment in Kajiado County, Kenya.

Further, the study reveals that some parents could do anything to restrict the movement and interaction of their children with hearing impairment, including hiding them in houses. A head teacher in one of the inclusive primary schools said this;

"...I know of a parent who kept his daughter locked up in the home and could not allow her to go [to] school. This parent believed that letting the child go from home exposes her to more risk including being susceptible to road accidents and abuse from boys..."

The study also showed that in Kajiado county, there are still high levels of disability related stigma and discrimination. It was reported that some parents hide their children with hearing impairment in houses because they feel ashamed of them, thus fear and dislike publicity of the disability of their children with hearing impairment.

4.3 School Related Barriers to Participation in Education by Learners with Hearing Impairment

The study revealed a number of school related barriers that hinder participation in education by learners with hearing impairment.

Table3.below details teachers' and head teachers' responses on school related barriers to participation in education by learners with hearing impairment in inclusive settings.

Table 3: School-Related Barriers, Teacher Perspective

BARRIER	PROPORTION
Limited number of SNE teachers	77.8%
Lack of well streamed lined methods	77.8%
Lack of guidance and counselling	77.8%
Lack of knowledge on existing disability policies	66.7%
Curriculum that is not relevant to the needs of LWHI	66.7%
Lack of instructional materials	55.6%
Inappropriate teaching methods/strategies	55.6%
Absence of teachers trained in SNE in school	44.4%
Lack of commitment among teachers	33.3%

From the teachers' and head teachers' perspective, 78% of teachers identified the limited number of special needs education teachers, lack of well streamlined methods and lack of guidance and counselling in schools as the main school related barriers to participation in education by learners with hearing impairment.

Issues of lack of knowledge on the existing disability policies and irrelevancies of the curriculum to the needs of those with hearing impairment was cited by 67% of teachers as being barriers to participation in education. Lack of instructional materials and inappropriate teaching strategies were cited by 56% of teachers as school related barriers. While this study reveals the same issues of irrelevance in the curriculum, it is possible to adapt the existing curriculum to suit learners with hearing impairment given that Kenya is in early stages of implementing the Competency Based Curriculum (CBC).

Absence and unavailability of special needs education teachers were cited by 44% of teachers as school-related barriers while only 33% of teachers reported that lack of commitment among teachers is a barrier to participation in education by learners with hearing impairment. Table 4 below details the response rate of teachers for the school-related barriers to participation in education by learners with hearing impairment.

Table 4:School-Related Barriers, Learner Perspective

BARRIER	PROPOSITION
Lack of participation in integrated social forum	62.5%
Inadequate learning materials	50.0%
Lack of guidance and counselling	50.0%
Negative attitudes from peers and administration	37.5%

There was a lot of similarities between learners' and teachers' perspective of school related barriers to education of learners with hearing impairment, however, there were few differences noted. For instance, some learners, up to 38% were not sure if there exists school related barriers to participation in education compared to only 11% of teachers. When asked about school related barriers, one of the learners said this;

".... I am not sure if the school has a problem. The problem is the way our teachers talk to me and other children who hate me..."

The study found that a significant number of learners (63%) reported that lack of participation in integrated social forum was the main school related barrier to participation in education. Further, 50% of LWHI reported that inadequate learning materials and lack of guidance and counselling

were school related barriers to participation in education. Negative attitudes from peers without disabilities and school administration was cited by the least number of learners with hearing impairment (38%) as being a barrier to participation in education.

4.4 Effects of the Barriers to Participation in Education for Learners with Hearing Impairment

The study sought to establish effects of barriers presented in the previous sub-section. Teachers, head teachers and learners with hearing impairment were asked to state what they believed are some of the effects caused by the barriers to participation in education by learners with hearing impairment.

One of the main effects of household poverty and lack of transport to school as revealed by the study is high rate of drop out. In interviews with learners with hearing impairment, 63% of them reported that their friends dropped out of school due to lack of school fees and being unable to cover long distances to and from school. One of the learners in class 6 had this to say;

"...my friend Jane was sent home for fees when were in class 5 and she has not come back to school. I see her wearing home clothes looking after animals..."

Another effect of these barriers to participation in education is lack of exposure. Some teachers reported that education begins at home. When parents hide their children because of hearing impairment, these children lack support and withdraw from communities and friends. When this happens, there is little or no diagnosis, counselling, acceptance, material and technological support that could have played a key role in helping the child with hearing impairment overcome their disability. When children with hearing impairment fail to access and participate in quality

education due to economic, socio-cultural or school related barriers, disability-related stigma and discrimination will continue in society. The study revealed that negative attitudes towards persons with disabilities including those with hearing impairment is due to the belief that they are dependent on others and cannot do anything meaningful on their own. While education would have given them an opportunity to become better people in society, these intervening barriers cause them to stay back and thus the notion of overdependence will remain in society. The findings are summarized in Figure .

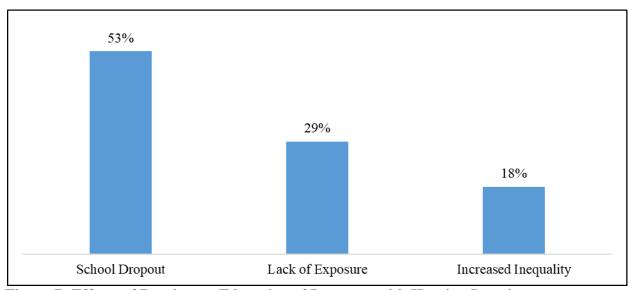


Figure 7: Effects of Barriers to Education of Learners with Hearing Impairment

Since school dropout was cited by more than 50 percent of respondents as being a major effect of barriers to participation in education, the study sought to find out some of the causes of dropout. Figure presents the major causes of school dropout for learners with hearing impairment. Note that lack of school fees and lack of transport which are the main causes of dropout are also educational barriers closely related to household poverty.

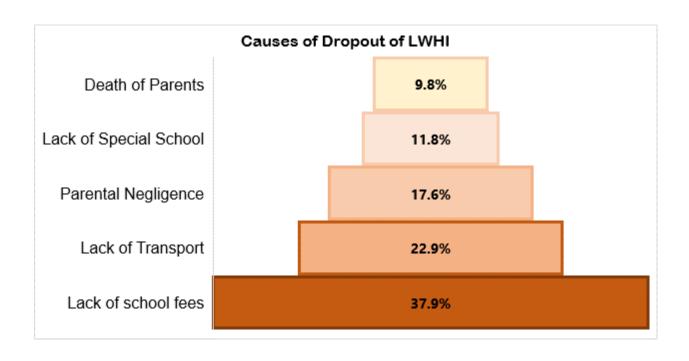


Figure 7: Causes of School Dropout

CHAPTER FIVE: DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter presents a summary of findings and interpretation presented in chapter four in line with the objectives of the study. The conclusions and recommendations brought out are based on the empirical evidence and framed in the context of the reviewed literature on the education participation of learners with hearing impairment. This study sought to examine the barriers faced by learners with hearing impairment in participating in education in an inclusive learning setting in Kajiado county, the effects of these barriers and propose solutions to mitigate these barriers. The objective of the study is to help a learner with hearing impairment to participate in quality education in inclusive setting since Kenya is implementing a competence-based curriculum (CBC).

5.1 Economic barriers hindering participation in education by learners with hearing impairment.

These are barriers related to the financial cost of participating in education. Evidence found in the study from the teachers' and head teachers' questionnaire responses and learners with hearing impairment interviews revealed that household poverty was the leading economic barrier to education participation of learners with hearing impairment. The study revealed that when there is high poverty at household level, parents find it difficult to finance education especially for their children with disabilities. The findings on household poverty in this study is similar to the findings in the study by Kinuthia (2017) who observes that the high level of poverty among some parents of learners with hearing impairment has denied many children access to education and also basic needs which is a big challenge to survival and completion rates of LWHI.

According to teachers and learners' responses in Kajiado county, disability competes with other basic needs such as provision of food and shelter. Given that schools are widely located in this county, many children are forced to walk to and from school. Those with disabilities may in most cases require transport to school, however, due to high levels of poverty in households, it is not possible to finance for transport of children to school and thus there is high dropout rate of learners with hearing impairment. It was also found that due to high poverty levels, parents are not able to buy learning materials for their children as well as pay fees. These findings resonate well with the study by Barton and Wamai (2017), who observes that participation in education in inclusive schools is affected by high cost of education and frequent incidences of household poverty.

5.2 Socio-cultural barriers hindering participation in education by learners with hearing impairments.

Socio-cultural barriers to participation in education by learners with hearing impairment are barriers that relate to people's culture and their religious beliefs. Some of socio-cultural barriers that the study revealed to be hindering participation in education by learners with hearing impairment include negative attitudes and practices against children with hearing impairment. Previous researches such as Munyua, (2016) also concluded that the social identity and the desire to foster smooth relations with friends is dependent on psychological wellbeing of in individual. Additionally, the data shows that negative attitudes in society against persons with disabilities are rooted in the belief that they are over-dependent on others. It was also found that religion may affect participation in education by learners with hearing impairment. It is important to note that the term 'religion' as used in this dissertation includes minor denominations and cultic groups within Kajiado county. It was found that some religious groups in which parents of

children with hearing impairment belong to may be on the forefront of socio-cultural barriers. Other socio-cultural barriers which are unique in this study were parental overprotection of their children with hearing impairment and early marriages. These two were unique findings that previous studies had not uncovered before. However, Addison, (1986) found that often, disability is associated with witchcraft and promiscuity during pregnancy and punishment by ancestral spirits.

5.3 Economic barriers hindering participation in education by learners with hearing impairment.

The school-related barriers to participation in education from teachers' perspective and learner perspective include lack of well stream lined teaching methods, lack of guidance and counselling, lack of knowledge on the existing disability policies and non-responsive curriculum to the needs of learners with hearing impairment and limited number of special needs education trained teachers. The Ministry of Education of Kenya also published a report (MOEST, 2010) that indicated that low enrollment of learners with hearing impairment in inclusive schools is attributed to low number of teachers trained in special needs education (less than 6%).

Regarding the cost of instructional materials, previous studies have found similar findings. For instance, Gundanyi (2002) found that high cost of instructional materials of LWHI makes the access to educational services a challenge as they compete unfavorably with those of normal children. Additionally, these findings are similar to Adoyo (2015) who observes that absence of instructional materials like, DVDs and TVs, text books, sports equipment and other teaching aids to suit the special learning needs of learners with hearing impairment may affect the enrollment of such children.

In addition, other school related barriers were identified as; lack of commitment among teachers, inappropriate teaching strategies and lack of instructional materials. From the learners' perspective it was found that lack of participation from integrated social forum is the main school related barrier to education by learners with hearing impairment. Lack of teaching and learning materials and lack of guidance and counseling were also cited by learners as key schoolrelated barriers to participation in education. Other school-related barriers according to the learners interviewed include negative attitudes from peers and school administration. UNESCO made similar conclusions in (2000) where it was observed that teacher training for LWHI needs special expertise in developing systematic ways that can enable them to account for special education they are giving their pupils and that good teaching practice will become more widely accepted. The issues of curriculum as a barrier to participation in education by learners with hearing impairment has been brought up in previous studies (USDC, 2003; Okech, 1993; Scrimshaw, 1998; Kelly, 1999). Some of these studies touched on various aspects of the curriculum designs, implementation and assessment such as during examination. Most of those past studies recommended a fresh design for curriculum for those with disabilities as opposed to attempting to adapt the already existing curriculum to suit learners with disabilities such as those with hearing impairment.

5.4 Effects of the Barriers to Participation in Education by learners with hearing impairment

The study examined the effects of the barriers to education of learners with hearing impairment. It was found from the study that one of the main effects is dropout from school due to lack of school fees and being unable to walk long distances, yet such learners require additional support. School dropout was particularly expressed by teachers, head teachers and learners with hearing

impairment. The above findings align with the conclusion made by Barton and Wamai (2017), that participation in education in inclusive school is affected by high education cost and household poverty. This limits LWHI from participating even with the introduction of universal primary education. Household poverty competes directly with disability and educational needs of learners with hearing impairment as parents find it hard to purchase books and other learning materials for their children thus leading to school dropout for learners with hearing impairment. Another cause of dropout from the study was discrimination and negative attitudes towards learners with hearing impairment by teachers and some parents. Clearly this finding is in line with the conclusion made by Nayak, (2008) that attitudes of administrators, parents, teachers and students have effects to participation in education by LWHI.

The study revealed that lack of exposure is another effect of the barriers to participation in education by LWHI. Some teachers reported that education begins at home and when parents hide their children because of hearing impairment these children lack support and may withdraw from communities and friends. This finding aligns with the study by Kinuthia (2017) who observes that parents hide their children with hearing impairment at home thus hindering their interaction with other people. The Ministry of Education published a report that indicated low enrollment of learners with hearing impairment in inclusive schools meaning that many of them are at home thus not exposed to the social world (MOEST, 2010).

Increased inequality in society was another effect of the barriers to participation in education by LWHI. Many learners interviewed stated that they are discriminated against and some teachers don't understand their needs thus leaving them on their own. A study by Nayak (2008) confirms that where there is discrimination of LWHI by parents, teachers and administrators there may be a gap in participating in education because children have been treated as lesser beings. Teachers

of the learners with hearing impairment in particular reported that when there is negative attitude towards learners who cannot hear in class, they may feel 'out of place' and choose to drop out of school. Exclusion has been found to cause similar negative effects in society especially for those with disabilities. For instance, the study by Lloyd (2006) observes that failure to recognize the complex and controversial nature of inclusion is founded on notions of normalization, compensation and deficit approaches to SEN and has negative impact to learners with hearing impairment.

5.5 Conclusions

Based on the empirical evidence presented in line with the objectives of the study and existing literature on educational barriers for learners with hearing impairment, several conclusions can be drawn. Household poverty is the main economic barrier that hinders participation in education by learners with hearing impairment in Kajiado county. This is because, as presented in the study, poor households are unable to finance education and buy educational materials for their children and carter for transport. Negative attitudes and practices against children with hearing impairment were the main social barriers to participation in education. Religion, parental overprotection and early marriages are also important socio-cultural barriers to participation in education. The perception of teachers and learners with hearing impairment on school-related barriers to participation in education varied significantly. While teachers believed that lack of trained special needs education and lack of stream lined teaching methods are the main school-related barriers, learners believed that lack of participation in integrated forum is the main school-related barriers to participation in education. The main effect of barriers to participation in education by LWHI revealed by the study is high rate of drop out; this is due to household

poverty and lack of transport to school. It was also found that lack of exposure and increased inequality are other effects of barriers to participation in education by LWHI.

5.6 Recommendations

The study makes the following recommendations based on the findings of this study and the literature reviewed in line with educational barriers for learners with hearing impairment.

5.6.1 Policy Implication

- 1. The Ministry of Education should consider reviewing the curriculum for learners with hearing impairment. This is due to the evidence that the current curriculum is non-responsive to the needs of learners with hearing impairment. For instance, affirmative action to be put in place to have Kenyan Sign Language (KSL) as an optional language for secondary schools just like foreign languages; German and Chinese
- 2. Since there is evidence of high household poverty in Kajiado County, there is need for government to ensure efficient utilization of CDF and FPE money in the best way to benefit children with disabilities
- 3. The study revealed that lack of guidance and counselling is a major school-related barrier to participation in education from both teachers and learners' perspectives. The Ministry of Education should therefore consider establishing functional guidance and counselling services that focus on learners with disability, just like their non-disabled peers as a way of enhancing inclusiveness within inclusive environment.
- 4. There is need to sensitize the community, teachers, school administration and peers without disabilities about disability etiquette. This is due to the evidence from the study that negative attitudes and practices against children and learners with hearing

impairment was both a social-cultural and school-related barrier to participation in education by learners with hearing impairment.

5.6.2 Suggestion for Further Research.

1. There is need to conduct further research in order to determine with certainty how parental overprotection and early marriages are social-cultural barriers hinder participation in education by learners with hearing impairment.

REFERENCES

- Addison, L. A., (1986). Education and the physician's office laboratory. JAMA, 255(11), 1464-1467.
- Adoyo, P. O., & Odeny, M. L. (2015). Emergent Inclusive Setting Practice in Kenya, Challenges and Suggestions. *International Journal*.
- Ainscow, M. (1998). Inclusive setting ten years after Salamanca: Setting the agenda. *European Journal of Psychology of Education*, 21(3), 231-238.
- Alper, S., &Ryndak, D. L. (1992). Educating students with severe handicaps in regular classes. *The Elementary School Journal*, 92(3), 373-387.
- Artiles, A. J., Harris-Murri, N., & Rostenberg, D. (2006). Inclusion as social justice: Critical notes on discourses, assumptions, and the road ahead. *Theory into practice*, 45(3), 260-268.
- Barton, M. W., &Wamai, P.N., (2017). Effects of Orphanhood on Girl-child's Access and Retention in Secondary School Education: *A Case of Rongo District, Kenya*.
- Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*. 3 (2). Pp.pp. 77-101.
- Ching, T. Y. (2015). Is Early Intervention Effective in Improving Spoken Language Outcomes of Children with Congenital Hearing Loss? *American journal of audiology*, 24(3), 345-348.
- Clarke, L.G., & Shore, M.T. (1998). What are the potential impacts of high-stakes testing on literacy education in Australia? *Literacy learning: The Middle Years*, 19(2), 9.

- Davern, R.P., &Schnorr L. (1990). Inclusive setting Project: A Building-Based Approach to

 Developing Classroom and School Models That Include Students with Severe

 Handicaps. Final Report.
- Eenet S.M., (1998). Learning About Inclusive Setting: The role of EENET in promoting international dialogue. Making special education inclusive, 51-62.
- Eron, L., &Emong, P. (2017). Tackling Education of Girl Child with Disability in Urban Settings of Uganda. *In Second International Handbook of Urban Education (pp. 51-65)*. Springer, Cham.
- Farrant, J., (1996). Strategic planning in African universities. *New Papers on Higher Education*, (2).
- Goodley, D., (2014). Dis/ability and austerity: Beyond work and Slow Death. *Disability & Society*, 29(6), 980-984.
- Gregory, T.E., Berger, A. N., &Udell, G. F. (1998). The economics of small business finance:

 The roles of private equity and debt markets in the financial growth cycle. Journal of banking & finance, 22(6-8), 613-673.
- Guetterman, T. C., Fetters, M. D., & Creswell, J. W. (2015). Integrating Quantitative and Qualitative Results in Health Science Mixed Methods research through joint displays. *The Annals of Family Medicine*, 13(6), 554-561.
- Kimotho, V., &Gatonga, P. (2013). Why are IPTp coverage targets so elusive in sub-Saharan Africa? A systematic review of health system barriers. *Malaria journal*, 12(1), 353.

- Kinuthia, S. D. (2017). Factors Affecting Acquisition of Adaptive Behavior Skills among Learners with Intellectual Disabilities in Selected Primary Special Schools and Units in Thika Subcounty, Kiambu County, Kenya (Doctoral dissertation, Kenyatta University).
- Kothari, D. P. (2012, March). Power system optimization. In 2012 2nd National Conference on Computational Intelligence and Signal Processing (CISP) (pp. 18-21). IEEE.
- Kristenten, P., (1998). Cycling to school and cardiovascular risk factors: a longitudinal study.

 Journal of physical activity and health, 8(8), 1025-1033.
- Loreman, T., Deppeler, J., & Harvey, D. (2005). Inclusive Setting: A practical guide to supporting diversity in the classroom. Psychology Press.
- Marshal, C. &Rossman, G.B. (2010) Designing a qualitative research. (5th Ed) London: Sage.
- Merriam, P., Maki, R. G., & Morgan, J. (2009). Multicenter phase II trial of sunitinib in the treatment of nongastrointestinal stromal tumor sarcomas. *Journal of Clinical Oncology*, 27(19), 3154.
- Mitchell, V. J., Mubarak, M. I., Ward, K., & Dorman, M. H. (2017). Lessons Learned: Providing Professional Development to Support Students with Special Needs in Sub-Saharan Africa, Uganda. *Journal of Universality of Global Education Issues*, 4.
- Mugenda, G., & Mugenda, M. (2003). Research Methods: Quantitative & Qualitative Approaches. Nairobi: ACTS Press.
- Muiti G., R., (2016). Multi-level governance. In Handbook on theories of governance. Edward Elgar Publishing.
- Munyua, P. M., &Njenga, M. K. (2016). Predictive factors and risk mapping for Rift Valley fever epidemics in Kenya. *PLoS One*, *11*(1), e0144570.

- Oketch, M., Lucas, A. M., McEwan, P. J., &Ngware, M. (2014). Improving Early-Grade Literacy In East Africa: Experimental Evidence From Kenya And Uganda. *Journal of Policy Analysis and Management*, 33(4), 950-976.
- Pakanis, B., &Greenawald, P. (1989). Raising school effects while ignoring culture? Local conditions and the influence of classroom tools, rules, and pedagogy. Review of educational research, 64(1), 119-157.
- Roy, K., Zvonkovic, A., Goldberg, A., Sharp, E., &LaRossa, R. (2015). Sampling richness and qualitative integrity: Challenges for research with families. Journal of Marriage and Family, 77(1), 243-260.
- Sarkar, D., & Pramanik, D. (2018). Comparative Study of Teaching Learning Processes between Normal and Hearing-Impaired Learners. Educational Quest, 9(3), 209-211.
- Scrimshaw, N. S. (1998). Malnutrition, brain development, learning, and behavior. *Nutrition Research*, 18(2), 351-379.
- Sherman, J. M. & Wood, R. E. (1982). Phagocytosis of Pseudomonas aeruginosa by polymorphonuclear leukocytes and monocytes: effect of cystic fibrosis serum. *Infection and immunity*, 38(2), 802-805.
- Singal, N. (2016). Schooling Children with Disabilities: Parental Perceptions and Experiences.

 International Journal of Educational Development, 50, 33-40.
- Singleton, J. W. (1993). Mesalamine capsules for the treatment of active Crohn's disease: results of a 16-week trial. *Gastroenterology*, 104(5), 1293-1301.

- Smith E. W., Carroll, A., Forlin, C., &Jobling, A. (1998). The impact of teacher training in special education on the attitudes of Australian preservice general educators towards people with disabilities. *Teacher education quarterly*, 30(3), 65-79.
- UNESCO. (2005). UNESCO 'declares' universals on bioethics and human rights-many unexpected universal truths unearthed by UN body. *Developing World Bioethics*, 5(3), iii-vi.
- World Bank. (1993). *Investing in Health*. New York World Bank.
- World Health Organization, World Health Organization. Department of Child, Adolescent Health, & UNICEF. (2000). Management of the child with a serious infection or severe malnutrition: guidelines for care at the first-referral level in developing countries. World Health Organization.
- World Health Organization. (2012). World health statistics 2012: Monitoring Health for Millennium Development Goals. *World Health Organization*.

APPENDICES

APPENDIX I: QUESSIONNAIRE

(For head teachers and teachers)

Dear Sir/Madam,

I am using these questions to collect data on barriers faced by LWHI in accessing and participating in education in Kajiado county. All the answers you give are very important. Please write them clearly, honesty and accurately. The information you will give will be used for research only.

Part A: Demographic data.

- (i) Gender Male Female
- (ii) Highest level of education

Certificate. Diploma, Bachelors, Masters, PhD

(iii) How long have you taught learners with hearing impairment in an inclusive school?

1-2 yrs. 2-3 yrs. 4-5 yrs. 5-6 yrs.

Any other specify....

Part B.

Section A: Perception of hearing impairment

1.	What is your understanding of hearing impairment?

2. I	Below are the different grad	les of hear	ring impa	irment, ti	ck those that	t you are	familia
V	with						
	grades of hearing impairm	ent Ticl	ζ.				
	a) slight/ mild						
	b) moderate						
	c) severe						
	d) profound						
3. I	n your view, do children	with heari	ng impai	rment par	rticipate in e	education	as the
r	normal counterparts from the	teachers a	and peers?	•			
	Yes	No			Don't kno	w	
live re	easons for your answer						
• • • • • •		• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •	••••••		•••••	• • • • • • •
• • • • • •				•••••			•••••
4. I	Please indicate whether you	agree, di	sagree or	don t kr	ow whether	the factor	rs liste
ł	pelow are barriers to partici	pation in	education	n by leari	ners with hea	aring imp	airmen
						0 1	
_	your responses are limited to	Agree, D	isagree of	Don t kn	ow		
	Factor			Agree	Disagree	Don't k	now
	a) Negative attitudes	and p	oractices				
	against LWHI						
-	b) Lack of commitment	among t	eachers.				
	,						

c) Poverty among households of LWHI	
d) Isolation and negative attitudes	
towards LWHI	
e) Limited no. of SNE teachers	
f) High costs of instructional material	
and equipment	
g) Lack of well streamed lined methods	
h) Lack of knowledge on existing	
disability policies	
i) Curriculum that is not relevant to the	
needs of LWHI	
j) Religious influence	
k) Absence of teachers trained in SNE	
l) In availability of teachers trained in	
SNE	
m) Lack of instructional materials	
n) Costly LWHI school equipment's	
o) Lack of guidance and counselling.	
p) Inappropriate teaching methods/	
strategies	
q) Others (please mention)	

5.	How do the above mentioned barriers affects participation to education by learners with
	hearing impairments?
•••	
6.	What do you suggest to be the measures for barriers that you have agreed in question no
	4? (tick as many as possible)

Measure		Tick	
a. Sensitiz	ation and awareness raising		
•	ement of physical structures like s for better lighting.		
•	ng various stakeholders on improvement curriculum to be relevant for LWHI		
d. Special	consideration for LWHI		
•	erment of education committees at the evel for efficient monitoring		
f. Ensuring	g that FPE funds are utilized to benefit		

	Yes		No	Don'	t know	
	partici	pation in education by	learners hearing impairmen	nt?		
0.		·			201) 11440	a pone, or
8	Does	the Ministry of Educ	ation Science and Techno	logy(MC	DEST) have	a policy of
••••	•••••			• • • • • • • • •		••••••
				• • • • • • • • • • • • • • • • • • • •		
				•••••		
	improv	ve participation in educ	cation by LWHI (write as m	nany as m	nany as appl	icable?)
7.	Which	other measures have	you personally /departmen	t/institut	ion employ	ed (if any) to
L						
-	j.	Others (Specify)			-	
		LWHI				
_	i.	Initiatives through	affirmative action to the	:		
_	h.	Developing poverty i	reduction strategies			
=	g.	Revision of curriculus	m		_	
		LWHI				

c) If yes state the policy /ies

9. Has the Ministry of Education had plans /programmes that have promoted the education of children with hearing impairment in any of the following ways? Tick as many as applicable;

Measure	Yes	No	Don't know
a) Formation of parent support groups and			
involvement in income generating			
activities			
b) Research on disability related issues			
c) Sensitization of caregivers /parents and			
peers			
d) Training of teachers /sponsorship of			
teachers in SNE			
e) Offered support to parents support			
groups			
f) Provision of scholastic materials, aids			
and appliances			
g) Construction of both LWHI focused			
schools and resource centers			
h) Ensuring that physical infrastructure are			
disability friendly			
i) Others(please specify)			

participating	in education?	
• • • • • • • • • • • • • • • • • • • •		
	· E	(EDE) 11 1 C.C. INVIIIO
n your view	is Free Primary Education	(FPE) really benefiting LWHI?
Yes	No	Don't know
reasons for y	Vour answer	
reasons for y	your answer	
e reasons for y	our answer	
reasons for y	your answer	
reasons for y	your answer	
		ı face while heading and teaching LWHI?
		ı face while heading and teaching LWHI?
	challenges (if any) that you	
	challenges (if any) that you	ı face while heading and teaching LWHI?

	13. What do you think can be done to improve the following?
	a) Enrolment of LWHI
	b) Retention of LWHI
c)	Completion of LWHI?
	14. Which policies/ laws, if any that enforce participation to education by LWHI are you familiar with (tick as many as mentioned).
	Law /Act
	a) The constitution of the Republic of Kenya 2010
	b) The Government White paper on Education 1992
	c) The National Plan of Action for Children (NPAC) 2000
	d) The Child Statute 1996
	e) The United Nations Convention on the Rights of the Child 1989
	f) The African Charter on the Rights and Welfare of the Child 1993
	g) The Kenya Institute of Special Education (KISE) Act
	h) The Universities and other Tertiary Institutions Act 2000
	i) The Free primary Education (FPE) Policy 1997
	15. Others (specify)

15. Are these policies/ laws being implemented? Please mention particular sections of the
law you think are being followed
16. List the main effect of barriers to participation in education by learners with hearing
impairment
a
b
c
d
17. In your view which other policies/ laws should be put in place, concerning enabling
participation in education by LWHI?

Thank you.

APPENDIX II: STUDENTS INTERVIEW SCHEDULE

(For children with hearing impairment)

The questions are not meant to be a test. So marks will not be awarded to your responses. You are kindly requested to read carefully before responding to the choices.

1.	How old are you?
	a. 7-8
	b. 9-11
	c. 12-
2.	Which class are you?
3.	Which subjects do you perform poorly?
	A) English B) Math C) KSL D) Social studies, others (specify)
4.	Why do you perform poorly in those subjects?
	a. Books are inadequate
	b. Limited no. of SNE teachers
	c. Lack of commitment among teachers

	d.	Irrelevant curriculum and teaching styles
	e.	Absence of disability friendly structure
	f.	Mode of examination not well adapted
5.	Do yo	ou think the following are barrier to participation in education? (yes, no and don't
	know)	
	a.	Households poverty lack of basic needs such as clothes, food, pen etc.
	b.	Inadequate learning materials
	c.	Lack of school fees
	d.	Lack of transport and long distance to school
	e.	Discrimination and isolation from peers
	f.	Overprotection of HI child
	g.	Lack of participation in integrated social forums
	h.	Negative attitudes from peer and administration
	i.	Lack of guidance and counselling
	j.	Early marriages and pregnancy among girls
6.	How a	re the above mentioned barriers affects you in while participating in education?
	•••••	

7. Which of these intervention measures do you propose to be in place for you to participate fully in education? (Yes, No, Don't know)

Measure		Yes	No	Don't
				know
a.	Sensitization and awareness raising			
b.	Improvement of physical structures like			
	windows for proper lighting			
c.	Lobbying various stakeholders on improvement			
	of the curriculum to be relevant for LWHI			
d.	Special consideration for LWHI			
e.	Empowerment of education committees at the			
	county level for efficient monitoring			
f.	Ensuring that FPE funds are utilized to benefit			
	LWHI			
g.	Revision of curriculum			
h.	Poverty reduction strategies being implemented			
	all development			
i.	initiatives through affirmative action to the			
	LWHI			
j.	creation of guidance and counselling			
	department			

8.	Which are the measures that your school /administration has employed if any to improve				
	participation to education by HI?				
9.	How do your teachers address your learning needs?				
10.	Please mention some of these specific needs that have not been addressed adequately in				
	your school.				
11.	Do you know any children with hearing impairment that have dropped out of school?				
• • • •					
If y	ves, why do you think they dropped out?				
12.	What do you think could be the reason why some children have not dropped out of				
1	school?				

Thank you