

**EFFECTS OF HEARING IMPAIRMENT ON ACADEMIC PERFORMANCE IN  
PRIMARY SCHOOLS IN SABATIA EAST ZONE SABATIA  
DIVISION – KENYA**

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**BED/15185/62/DF**

**A RESEARCH REPORT SUBMITTED IN PARTIAL FULFILMENT OF THE  
REQUIREMENT FOR THE AWARD OF THE DEGREE OF BACHELORS  
IN SPECIAL NEEDS EDUCATION OF KAMPALA  
INTERNATIONALUNIVERSITY**

**NOVEMBER 2009**

### DECLARATION

I Edith K. I Chaminya do hereby declare that this research report is entirely my own original work, except where acknowledged and that it has not been submitted before to any other University or institution of higher learning for award of degree.

Signed .....  .....

Date..... 12/4/09 .....

### SUPERVISOR'S

This research report has been submitted for examination with my approval as the candidate's research supervisor.

Signed .....  .....

Name..... Sekund Ertas..... Date..... 12<sup>th</sup>/04/2009 .....

Signed.....

## DEDICATION

I dedicate this work to my daughter who has sacrificed most of her time doing home chores making my work easier.

## **ACKNOWLEDGEMENT**

My gratitude goes to the Area Education Officer Sabatia Division who gave me permission to do my research. My thanks also goes to zonal inspector (QUASO) of Sabatia east zone who was concerned about the schools I was carrying out the research.

I wish to acknowledge the contribution of teachers of Sabatia east who assisted me in answering the questionnaires about their schools.

Special thanks goes to all the head teachers of all the primary schools in which I carried out the research.

Finally, I appreciate the tireless efforts of the secretary who typed my work.

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## ABSTRACT

The effects of hearing impairment on academic performance in primary schools in Sabatia East is the key issue that the researcher made a proposal to investigate the problem, set objectives and made literature review that acted as her source of reference.

The researcher identified the methods of carrying out the research in terms of subjects to be involved which she resolved to be regular primary teachers. The approach used was quantitative and qualitative and the procedure used in sampling was the simple random approach.

The researcher prepared a questionnaire of sixteen questions which he used to gather information from the respondents. He delivered the questionnaires by herself, briefed the respondents before they filled the forms and handed over to her.

The data collected from the twenty five questionnaires was presented, analysed and discussions made per each question set out. The researcher tabulated the information on a frequency table to answer the set out objective questions.

From the data the researcher concluded that there are many challenges facing the learners with learning impairment in regular primary schools in Sabatia East zone that omission to be addressed and a solution made.

The researcher made a recommendation on the way forward to learners of hearing impairment in catering for them in an inclusive setting to better their learning.



## **LIST OF ACRO – NAMES AND ABBREVIATIONS**

A.E.O- Area Education Officer

K.C.P.E - Kenya Certificate of Primary Education

S.N.E – Special Needs Education

W.H.O – World Health Organisation

Q.U.A.S.O – Quality Assurance Officer

K.I.U – Kampala International University

K.I.S.E – Kenya Institute of Special Needs

G.O.K – Government Of Kenya

MOEST – Ministry of Education Science and Technology

UNISE – Uganda Certificate of Secondary Education

KCSE – Kenya Certificate of Secondary Education

M.O.H – Ministry Of Health

EARC – Education Assessment Resource Center

## **CHAPTER ONE**

### **EFFECTS OF HEARING IMPAIRMENT ON ACADEMIC PERFORMANCE IN PRIMARY SCHOOLS IN SABATIA EAST ZONE SABATIA DIVISION – KENYA**

#### **1.0 Introduction**

##### **1.1 Background information**

Education, a key to behaviour modification on mankind globally, has become necessary to all. Kenya has made many steps a head to better its education standards and at the same time make it accessible to all Kenyans.

Kenya is a signatory to the International Conference like Jomtien declaration education for all in 1990 which stated that all children including children with hearing impairment have a right to education regardless of the individual differences . Kenya has also established National policies for inclusive education, for example, the Kamunge report of 1988 which clarified that pupils be integrated in the main stream regardless of their differences. All this aimed at ensuring education is accessible to all people.

Despite all the effort by the government its policies have not been implemented fully mostly on learners with special needs like the hearing impairment as stated in the Dakar framework for action (2000). It is a group that has been sidelined and neglected for many years due to the fact that they cannot be able to hear properly what has been said by cupping the ear in an effort to hear the speaker. According to M.W. Ngugi (2002) this has resulted in learners with hearing impairment making it hard to hear well with a noisy surrounding have poor verbal communication skills between the child and the teacher and peers and inability to follow school routine since he/she may not hear the bell.

They are isolated and not acceptable by others due to the lack of communication. There is also inefficient communication between the child and family especially parents and siblings which may limit the child opportunities to acquire knowledge and skills usually acquired by children through interaction with parents' siblings and community.

All these are obstacles and barriers that need to be overcome in order to make education for all. It is with this view that the researcher has felt it right to carry out an investigation on problems of hearing impairment on academic performance in primary schools in Sabatia East zone, Sabatia division – Kenya.

### **1.2 Statement of the problem**

The increasing number of learners with hearing problems in primary schools in Sabatia division is greatly alarming. Chekombero special school for the deaf is the only school in the division with small number of teachers who handle children with disabilities and they cannot address this fact effectively. Worse still, the lack of knowledge and skills by the caretakers and teachers who handle the learners throughout the day.

Statistics show that learners with hearing impairments have continuously performed poorly in the Kenya Certificate of Primary Education (KCPE) and even in the Kenya Certificate of Secondary Education (KCSE). According to S. Mwaura (2002) the learners who have a hearing problem makes them fail to acquire spoken language, has speech flow problems, causes them to have poor articulation of sounds, particularly the omission of consonants sounds, don't participate in oral activities and with-draws from the rest of the learners, lack of equipment to cater for the hearing impairment learners in primary schools in Sabatia East zone, Sabatia Division. This creates an issue that the researcher wished to investigate on a problem of academic performance of hearing impairment learners in primary schools in Sabatia division Vihiga district. The effect of hearing impairment on academic performance, if well established and addressed, will help to alleviate the problem facing hearing impairment learners and enable them to participate fully in free primary education hence the goal of education for all will be achieved by the year 2015 as one of the Dakar recommendations.

### **1.3 Purpose of the study**

To investigate the effect of hearing impairment on academic performance in primary schools in Sabatia East Zone Sabatia division so as to put in place the strategies to overcome this problem.

#### **1.4 Objectives of the study**

1. To establish the number of pupils who have hearing impairment in primary schools of Sabatia East zone.
2. To find out the level of performance of learners with hearing impairments in primary schools of Sabatia East zone
3. To identify possible causes of hearing impairment in primary schools in Sabatia East zone.
4. To find out the learning strategies the teachers are using to assist the learners with hearing impairment in primary schools in Sabatia East zone.
5. To identify adaptive equipment that are available in primary schools in Sabatia East zone for pupils with hearing impairment

#### **1.5 Research questions**

1. What is the number of learners with hearing impairment in primary schools in Sabatia East zone?
2. What are the effects of hearing impairment on academic performance of learners with hearing impairments in primary schools in Sabatia East zone.
3. What are the possible causes of learning impairments in primary schools in Sabatia East zone.
4. What learning strategies are used by the teachers to assist learners with hearing impairment in primary schools in East Sabatia East zone?
5. What are the adaptive equipments that are available to assist learners with hearing impairment in primary schools in Sabatia East Zone?

#### **1.6 Scope**

The zone is Sabatia East in Sabatia division and in Vihiga District. The zone borders Hamisi District in East and Kakamega South to the North.

The zone has 21 schools. It has four streams such as Lusala, Kivuye, Eaimed and Galagoli. The zone has four hills namely Ilala, Wakubala and Wasuva. Those hills have granite

stones that are used for construction. The streams have sand deposits used in construction industry.

The area receives reliable rainfall due to its position in lake Victoria basin and near to Nandi hills.

The main food crops are maize, bananas, cassava, sweet potatoes, beans and cowpeas. French beans gives farmers good income. The cash crops such as tea, coffee do well in the area. The staple food is maize meal (ugali)

The presence of mudete tea factory has improved road network and living standards of farmers.

The zone has five collecting centers of tea namely Keseve, Bugina, Chamakanya, Chavogere and Busweta. The rural access roads link the area to major towns such as Kisumu – Kakamege and Eldoret – Kisumu- Nairobi road.

The farm products are easily taken to Kisumu, Kakamega, Eldoret, Nakuru and Nairobi using the road transport.

The modes of transport in the area includes boda boda , bicycle transport, bus, motorcycles and matafu (taxi cars)

The area is linked with landline of the Kenya Telecom, Kenya Post office at Chamakanga and mobile phone have become the most used means of communication in the area.

Those who use written messages use the post office services at Chamakanga office.

### **1.7 Significance of the study**

The implementation of this research recommendation on learners with hearing impairment in primary schools in Sabatia East Sabatia Division will assist the caretaker, teachers and pupils handling and socializing with learners with hearing impairment develop positive

attitude towards them. It will also create a good and welcoming environment for these ignored learners to learn happily.

The learners with hearing impairment will improve and excel in academic performance because the teachers will make use of technical and teaching aids provide the child with all details of the lesson in written form, use of visual aids is a must for teaching the children with hearing impairment. The child should be allowed to sit near the teacher and where there is a good source of light and teachers should utilize peers to assist the child with class routine such as sharing notes.

The parents will assist their children by being advised by specialist to have their children fitted with suitable and effective hearing aids, take them to appropriate referrals for medical check ups and treatment and encourage the child to observe general basic ear hygiene. This will be a beneficial to a school because it helps on suitable school placement, provide good and well spaced classrooms, enough lighting.

The document will create awareness among the members of the society to stop possible causes of hearing impairments hence reduce the number of learners with this problem accept the child as a member of the society.

The government will be able to plan to support learners with hearing impairment in terms of provisional of supportive device eg hearing aid, skilled manpower in the field of hearing impairment. This will improve the quality of education to make it achieve its policies of reducing child labour, street children and early marriages.

The (G.O.K.) Government through the (MOEST) initiates the programme of training distance learning teachers and short courses and other personnel working with learners with special needs in education.

The researcher document can lure or attract the donor organization that can step in finding the resources needed by the learners.

It's researcher sincere hope that other researchers will find this document very suitable for references on studies related to the same problem.

### **1.8 LIMITATION AND DELIMITATIONS**

The researcher incurred financial problems for transportation costs, stationary and subsistence examples as he had no supportive funds from well wishers or any funding organization.

Poor infrastructures, that is transport and communication caused a problem to the researcher especially the heavy rains that occurred in the region made the researcher in accessible to some areas or schools which are quite interior of Sabatia East Zone.

In every community there are customs and tradition that govern their way of life. Some of these cultural beliefs opposed the researcher in carrying out his research. Example is the learners with hearing impairment are believed to be bad omen or cursed, so they need not to be discussed.

Time management was a problem, the researcher was expected to be in class carrying out normal teaching duties, making schemes of work, lessons plan, remedial and co-curricular activities and at the same time running up and down collecting information from schools.

The researcher was not accessible to another researcher documents report because it is not easy to get or be found.

Negative attitudes by the subjects created a hard time to the researcher in convincing the participate to give the true information about learners with hearing impairment.

### **DELIMITATION**

Since the researcher has been teaching in the zone for last decade at the same time a speaker of the dominant language, found it easy not only interacting with the respondents but also collecting the true data from the population sampled out. The researcher found it simple in identifying and allocating the primary schools in Sabatia and allocating the primary schools in Sabatia Division as she is a native of the region.

The researcher being a student of special needs education was well placed to obtain a true data using the skills, knowledge and social interaction techniques learnt.

Due to availability of related relevant literature from chekombero special school in the region, Kenya Institute of special Education distance, learners, modules, magazines, Kenya institute of special education diploma graduates, special education journals and educational assessment resource centre personnel the researcher was able to carry out the study effectively.

The good security in the area made the researcher work easier.

## **1.9 OPERATIONAL DEFINITION OF TERMS OR KEY CONCEPTS**

Hearing impairment – is a general term indicating a hearing disability that may vary form in severity from mild to profound.

Deaf – term used to describe the most severely hearing impairment. In this group are children with severe to profound hearing loss.

Conductive hearing impairment – it is the damage or infections is either in the outer ear or middle parts of the ear.

Sensori – neural impairment – it is the damage in the inner ear.

Mixed hearing impairment – it means both the middle ear and inner ear affected at the same time.

Profound hearing loss – is the most extreme hearing loss.

Severe hearing loss – is when a child may have difficulty hearing in all situation.



Moderate hearing loss – is when a child can understand conversation only if it is very loud and when the room is quiet.

Mild hearing loss – is when the child can follow normal conversation if there is no noise in the room but will need to sit near to and face the speaker.

Pre-lingual deafness – this is deafness present birth or occurring before the child develops speech or language.

Post-lingual deafness – this is deafness which occurs after the child has developed speech or language mainly after the age of three.

Hard of hearing – refers to persons whose hearing loss is moderate.

## **CHAPTER TWO**

### **2.0 LITERATURE REVIEW**

#### **2.1 DEFINITION OF HEARING IMPAIRMENT.**

According to Stephen Mwaura and S.Wanyera (2002), the definition of hearing impairment is general term indicating a hearing disability that may vary in severity from mild to profound. However its only a small percentage of all people with hearing impairment that are unable to hear any sound.

#### **2.2 THE TYPES OF HEARING IMPAIRMENT (H.I)**

According to S. Mwaura and S.Wanyera (2002), there are three types of hearing impairment according to the part of the ear affected. These are conductive hearing impairment, sensor-neural hearing impairment and mixed hearing impairment.

Conductive hearing impairment is the damage or an infection either in the outer or middle parts of the ear. This result in mild and moderate hearing loss. The learners with this type of hearing loss have residual hearing left and can hear and understand spoken language with the help of suitable hearing aids.

Sensor-neural impairment is another type of hearing impairment with most damages in the inner ear. This results in severe and profound hearing loss with little residual hearing left. Children with this type of hearing problem usually do not acquire and use spoken language. they can however use hearing aids to be aware of environmental sounds.

Mixed hearing impairment is a combination of conductive and sensor-neural hearing impairment. This means that both the inner and outer ear are affected at the same time.

#### **Classification according to severity of hearing loss.**

According to S. Wanyera and S. Mwaura (2002), hearing impairment can also be classified according to the degree of severity of the hearing problem, some may have a slight hearing problem while others may be severe. They are grouped into four major categories depending on the slighness or severity of the problem. The major categories are; children

with moderate hearing loss, those with mild hearing loss, children with severe hearing loss, and those with profound hearing loss.

According to Mwaura (2002), children with mild hearing loss follow mild normal conversations if there is no noise but will need to sit near to and face the speaker. Weak voices are also difficult to understand for those with this kind of hearing problem.

A child with moderate hearing loss understands a conversation only if it is loud. A learner will only follow the conversation in a very quiet room and the learner should face the speaker. The learner only hears sounds that are very close and miss a considerable amount of speech going around him or her.

Children with severe hearing impairment may have difficulty in hearing in all situations. Learners may be unable to follow normal conversations however quiet the room is. He or she is unable to develop language and speech in a natural way.

S. Mwaura (2002) children with profound hearing loss is the most extreme hearing loss. A child with this type of problem may not hear very loud or any speech at all. Such a learner relies mainly on visual cues instead of hearing as the main method of communication.

#### **Classification according to age of onset.**

S. mwaura (2002), says there are two types of hearing impairment according to age of onset. These are pre-lingual deafness which is present at birth or occurs before the child develops speech and language. Post-lingual deafness however occurs after the child has developed speech and language at the age of three years. These children have problems with the sense of hearing, he or she hears at a level below that of a person considered to have normal hearing.

Functionally, there are two main types of children with hearing impairment such as those who are hard hearing and those who are deaf. Hard hearing children are those who have enough useful left(residual hearing) and hearing ability can enable to hear speech and acquire spoken language and in order for them to hear, speech and sound must be made

loud for them. While those who are deaf are those whose hearing loss is severe and cannot hear and understand any speech even if the sound was made louder for them through a hearing aid. A hearing aid may only assist him or her be aware of some environment sounds such as moving vehicles and birds singing.

### **2.3 CAUSES OF HEARING IMPAIRMENT**

According to S mwaura (2002) the causes of hearing impairment occurs in three stages: pre-natal stage, peri-natal stage, and post natal stage.

During the pre-natal stage , the hearing impairment are caused by hereditary, poor nutrition, venereal diseases and HIV/AIDS infections in the mothers during pregnancy, exposure to x-rays, misuse of narcotic drugs, cigarettes and alcohol by the mother during pregnancy, incompatibility of mother-child blood type, congenital malformation of ear and ear canal and accidents affecting the expectant mother.

Peri-natal stage the hearing impairment is caused by prolonged delivery/labor resulting to oxygen deficiency to the baby's brain and head injuries, premature birth, low birth weight, lack of oxygen to the baby during birth, neonatal jaundice, misuse of delivery venereal diseases an mother and accidents that affect the baby.

Post-natal stage may occur anytime after birth. Some of the causes may include diseases such as meningitis, malaria, measles, mumps otitis media and misuse of drugs. Accidents such as head injuries causing brain damages, brain tumors, trauma long and frequent exposure to loud noise, exposure to poisonous agents and chemicals, excessive noise blockage of external auditory canal and old age.

According to P.Kimani (2003) the causes of hearing impairment are hereditary infections, blockage of external auditory canal, atresia, tumors, trauma, drugs, excessive noise and old age.

He explains further that otitis media is an infection of the middle ear caused by an inflammation in the middle ear. The commonest causes for these are; common cold, measles or fever which blocks the Eustachian tube, a clear fluid accumulates within the middle ear causing temporary hearing. The clear fluid turns into puss and tries to come out

causing a bulge in the ear drum eventually it gets a perforation thus affecting the hearing completely.

## **2.4 CHALLENGES HINDERING IMPAIRED LEARNERS IN PRIMARY SCHOOLS.**

According to Mwaura,(2002), a learner with hearing impairment faces very many difficulties as far as learning is concerned. This includes inability to hear well in a classroom with noisy surrounding. He has poor verbal communication skills. The learner lacks acceptance and social isolation because of lack of communication. Ineffective communication between the learner and the family members and this limits the child's opportunities to acquire knowledge and skills usually acquired through the interaction between the se children and their family members. The learner is also unable to follow the school routine for example not being able to hear the school bell ring.

### **Indicates of hearing impairment**

According to S. Mwaura (2002) the indicators of a child who is deaf are as follows the learners usually falls to acquire spoken language, must b taught how to listen and speak and has speech flow problems, that is speech lacks the normal rhythm, stress and intonation herself understood.

## **2.5 CHARACTERISTICS OF LEARNERS WITH HEARING IMPAIRMENT**

According to Mwaura (2002) the learners portray the problems of having difficulties in group discussion especially in noisy surrounding. He asks for pardon or repeating what has been said, he has frequent ear infections, he/she has poor articulations of sounds, she/he is having difficulties in hearing and saying high frequency speech sounds such as /s/sh/t/k/ch.

Misunderstands others since he/she cannot comprehend all that is said to him/her. He is not able to monitor his/her voice and hence speaking loudly or softly, he has difficulties in understand directions and in group discussions. He avoids to participate in oral activities,

cups the ear in directions of sound, learners has frequent substitutions and omissions of sounds of speech, he stares at speaker's face, he appears confused or not responding to instructions, he has poor vocabulary in relation to age and culture, he withdraws from the rest of the learners.

## **2.6 SUPPORT SERVICES PROVIDED TO HEARING IMPAIRMENT**

According to Mwaura (2002) the world Health organizations (WHO) approximated 10% of all children are handicapped. Once in every thousand children has some kind of Hearing impairment. It is therefore estimated that Kenya has about 3,000,000 cases of persons with hearing problem. These children are taught using total communication and advised on school placement encouraging the child to observe general ear hygiene and the family and the family and community to learn the communication techniques used by the child for effective communication.

The intervention strategies involves the advise on suitable school placement and advise to parents to seek medical help, utilize peers to assist the child with class routine such as sharing notes, provide the child with all details of the lesson in written form. The child's academic performance can be improved with proper classroom management and use of technical and teaching aids, use of visual aids is a must for teaching children with hearing impairment.

Advise the parents to have the child fitted with a suitable and effective hearing aid if advised by a specialist give the child preferential seating in classrooms by allowing him or her to sit near the teacher and where there is a good source of light. Face the child when talking to him/her, talk slowly and clearly in a good tone without mouthing words counseling the school community to accept the child. There should be appropriate referrals to the health centres for medical check ups and treatment, encourage the learner to observe general basic ear hygiene.

Apart from the above services a teacher can use a differentiated curriculum to cater for these learners.

## **2.7 BENEFITS OF HEARING IMPAIRED LEARNERS IN REGULAR PRIMARY SCHOOL.**

According to Randiki (2003) inclusive education is slowly taking roots in Kenya. Kenya has adapted a systematic approach in formulating policy and implementing inclusive education. Advantage of hearing impaired learners being in inclusive education. Advantage of Hearing impaired learners being in inclusive setting will make learners accessed to education programmes of their choice in their local communities, parents will be able to see cases of dissemination or infringements. Parents will have a say the programmes offered to their children. Parents will have their children admitted to schools of their choice.

In justification of the above, it is true the learners of hearing impairment will be accessible to resource materials which can assist in enhancing their academic standards. The education is affordable by many parents who could be unable to educate their children. The parents are able to monitor the academic progress of his child effectively. Learners are able to learn effectively as they are assisted by the other regular learners through social interaction.

According to M.W Ngugi (2002) the learner will work with others and support them as the member of the same community, by giving them moral support and provision of materials. The learner will learn using the improvise and available community resources including the local artisans and locally available material as much as possible.

## **2.8 EDUCATIONAL RESOURCES ADAPTED FOR LEARNERS WITH HEARING IMPAIRMENT.**

According to Hluhu B. (2003) hearing impaired learners need total communication where by all venues of communication are used such as speech, body language and gestures. The body language used whereby one uses any part of the body to give message such as nod your head or shrug your shoulders.

Gestures are used whereby the movement is made with arms and hands that are used and understood in your culture or community in which you live e.g. beckon or point with a finger. Speech should be used to increase communication and help a learner with hearing problems by training him/her to lip-read. To encourage lip-reading the teacher must speak to the child naturally without exaggerating lip movement, speak slowly and clearly, keep the face at the level of the child, stand where there is enough light, keep a closer distance with the child and ensure that you always talk when facing the learner.

Pantomime is used, whereby the sequence of events that can be described through the use for gestures, body language and mimicry without speech to communicate a message e.g. the teacher may demonstrate to learners a process of preparing during table or washing clothes without using words.

Graphic symbols such as writing by using open and paper to write a few words and sentences. In drawing you can use open and paper to describe the concept and description quite easily.

Visual aids should be used more frequently when teaching learners with hearing impairment. This includes the use of charts, drawings, blackboard and real objects.

Mimicry is used whereby facial expressions convey meaning. Sign language is used which requires body movements, facial expression and sign formations to convey meaning.

Hearing Aids should be used by the learners of hearing impaired to hear and be able to communicate. This includes behind the ear, hearing aid, in the ear hearing aid, spectacle hearing aid, body worn or pocket hearing aids, bone conduction hearing aid, group hearing aid, loop induction hearing aid, radio hearing aid, television adaptor and telephone with an amplified headset.

Eye contact is also used as an effective means of communication particularly with learners with hearing impairment. It also ensures additional information through the sense of sight because the learner lip reads and interprets facial expressions.



Peer tutoring is used in class where by the hearing child can't be paired with hearing impaired learner to assist in some of the problems.

## **2.9 LEARNING STRATEGIES FOR THE ACADEMIC PERFORMANCE OF LEARNERS OF HEARING IMPAIRED.**

According to Otiato C.A. (2002) hearing impaired learners can be trained in the auditory discrimination by noting the differences among the specific sounds heard. The learner should have the skills such as awareness of the environment sounds. Note differences in specific sounds and discriminate the sounds in order to do auditory discrimination. Awareness and attention to environmental sounds is the first development level of learning through sense of hearing. Environmental sounds is used to stimulate the auditory sense e.g. people voices, sounds of moving vehicles, birds humming, screening insects, music and animal sounds. Once the learners identify environmental sounds. Responses to specific sounds may be seen in the way the learner behaves and may be expressed in smiling. Turning the head towards the sources of sound and listening intently and silently. Attempting to imitate verbally and offering a hand to be lifted.

According to C. Otiato (2002) in an inclusive classroom, learner with hearing problems may have problems in responding to specific sounds as they may not hear them so signing and mimicry may be added.

Sound can be discriminated based on difference in volume or pitch. The most effective activity in teaching sound discrimination is to present the learners with different sounds if possible on a tape and have them to tell the difference by naming the sound. The activities that can be used to discriminate sound include listening to sounds made by animals by naming the animals, objects by aiming the object such as ring of a bell and phone, moving vehicles such as a car, lorry, tractor, motor-bike, aero planes.

According to C. Otiato (2002) (page 23-24) the learner should have the skills such as sound recognition and association, interpreting verbal instruction and listening in order to understand what is heard or said in auditory perception. In sound recognition and

association the child learns to attach meaning to words such as subjects have names, sound have specific words associated with them, learners' actions have words to describe them. Sound recognition and association helps develop vocabulary and language. The learner should be given opportunity to interpret the sound through words or signing for those with speech problems and play word games to help strengthen sound association in the learner's memory.

According to Otiato (2002) interpreting verbal instruction the learner is able to understand what is heard or said and that depends on auditory perception. At this level of Auditory sense, the learner should be able to respond and carry out activities according to instruction given to them. Interpreting what is heard stimulates the child's search for meaning in spoken language. Interpreting verbal instructions calls for verbal interactions between you and the learner. Learners who cannot interpret verbal instructions may have learning problems in speaking, listening, reading and writing. Interpreting verbal instructions is a skill which can be improved through practice. The activities which enhance interpreting verbal instructions in learners are giving learners directions to carry out an activity such as "put the green book on the table" showing up various pictures and asking the learners to remove the picture, you describe, giving a riddle and letting the child provide the answer, letting the learners produce the item following written or verbal instructions.

According to Otiato (2002) listening is paramount in the learning process. Listening is a skill that should be taught particularly to learners with special needs like hearing problems. The skill involves attending keenly to auditory input, locating the sources of the sound and interpreting meaningfully what is heard. The activities that facilitate listening skills are asking the learner to identify the sounds produced, saying words and asking the child to write them, giving action words (verbs) and asking the learner to perform them (walk, sit and eat), reading a short story and asking questions on it or asking the learner to retell it.

According to C. Otiato (2002) (page 26) Auditory memory is the ability to store and recall what one has heard. It is important to store auditory experience and be able to retrieve and relate them when desired. The skills that involve auditory memory are remembering sounds you have heard, discriminate the sounds heard, relate sounds to meaning and

remember letter sounds and blend them into words. The activities memory are having learners recite poems, songs or rhymes learnt, dictating sentences for learners to repeat or write and asking learners to listen to a favourite T.V. or Radio programme and later retell it.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.1 RESEARCH APPROACH**

The researcher used the Quantitative approach which enabled her to interpret data in a numerical way to explore traits and situations. It assisted together to analyze, interpret the data and enabled the researcher to develop the frequency table easily.

Qualitative approach was also used by the researcher to describe the meaning and how people make sense of their lives, experience and structure of the world. The events and situations was also tackled. The researcher went to people physically, at site or school and he collected information on what people said and their feelings about issues and situations. The researcher did the observation and record their behaviour of people.

#### **3.2 RESEARCH DESIGN**

The researcher used a strategy known as survey to collect information in a standardized form from groups of people. This is mainly done by researcher by selecting of samples of individuals form known populations and he employs questionnaires to collect the data. This method was used by the researcher to find out problems that cannot be easily observed such as attitudes, behaviour, beliefs on challenges affecting the learners of hearing impaired in sabatia East zone in Sabatia Division.

#### **3.3 POPULATION**

The researcher covered two hundred teachers from twenty five regular primary schools in sabatia East zone, sabatia division. The researcher used twenty five teachers to represent two hundred teachers from thirty schools.

### **3.4 TARGET POPULATION**

The researcher used twenty five schools in sabatia East Zone. The researcher targeted twenty five out of thirty schools. In this schools. In this schools the teachers were targeted since they are dealing directly with the learners. The researcher gathered the information from twenty five regular primary schools in sabatia East Zone.

### **3.5 SAMPLE POPULATION**

The researcher used a sample of 25 teachers from twenty five regular primary schools in sabatia East Zone, the small group of 25 teachers represent the larger group of 200 hundred teachers. The total number of two hundred teachers through sampling the researcher used 25 teachers.

### **3.6 SAMPLING PROCEDURES**

The researchers used Random Sampling procedure as a cluster sampling. The Researcher listed down the names of 25 schools in Sabatia East Zone in Sabatia Division.

Through simple Random sampling the Researcher picked 10 schools and list down the names of the primary schools in Sabatia East Zone. The sampling procedures was appropriate as it identified teachers form twenty five regular primary schools right from the zone level to base to the school level.

### **3.7 TOOLS INSTRUMENT**

The researcher used questionnaires because it is most widely used instrument. The questionnaires saved time, and simplified data collection tool as it only needed to be filled in the blank spaces. It comprises a number of written questions which have to be answered also in written clear and straight forward.

### **3.8 ADMINISTRATION OF TOOLS/INSTRUMENTS.**

The Questionnaire was taken to respondents by the researcher personally. The researcher explained to the respondents the content of the questionnaire. The respondents answered them and there after handed them back to the researcher.

### **3.9 DATA ANALYSIS**

The researcher used frequently tables to tabulate the data collected. The researcher used the frequency distribution to calculate the percentage of each category. The researcher arranged data according to the order of the research Questions or objectives The researcher organized the collected raw data into tables in form of frequency. In a table, a frequency distribution was arranged showing the number of times an event occurred in data collected. When a researcher constructed a frequency table, he/she listed categories in first column, made a tally for each appearance of the categories in the second column, in the third column he summarized the tallies for each category.

## CHAPTER FOUR

### PRESENTATION AND ANALYSIS OF DATA

#### 4.1 INTRODUCTION

As mentioned earlier in chapter three, the study was carried out by the use of questionnaire which was hand delivered to the respondents. A total of twenty-five questionnaires were sent out. Simple random sampling was used as it was convenient to the researcher. All the twenty five questionnaires were returned

#### 4.2 DATA TABULATION AND ANALYSIS OF GENERAL INFORMATION

**Table 1:Gender**

Category	frequency	Percentage
Male	5	20%
Female	20	80%
<b>Total</b>	<b>25</b>	<b>100%</b>

The table indicates that female teachers were more in the answering of the questionnaires 80% than the male 20%

**Table 2: age of the respondents**

Category	Frequency	percentage
25-30 yrs	2	8%
30yrs-40yrs	8	32%
40yrs and above	15	60%
<b>Total</b>	<b>25</b>	<b>100%</b>

The above data shows the majority of the respondents who answered the questionnaire were in the age brackets of 41 years and above

It took 60% followed by the age bracket of 30 years and below covered 8%

The table shows that teachers above 41 years were more sensitive in identifying the learners with hearing impairment difficulties

**Table 3: The marital status of the respondents**

Category	Frequency	Percentage
Single	3	12%
Married	22	88%
Others	-	-
<b>Total</b>	<b>25</b>	<b>100%</b>

The above table show that most of the respondents were married covering 88%. The 12% remaining percentage covers the teachers who are not married

This indicates to us that most of the teachers handling the learners with hearing impairment are married people who are actually parents

**Table 4: Academic qualification of the respondents**

Category	Frequency	Percentage
K.C.P.E	-	-
K.C.S.E (O. Level)	23	92%
A-LEVEL	2	8%
BED/ARTS	-	-
<b>TOTAL</b>	<b>25</b>	<b>100%</b>

The data tabulation above shows that most of the respondents academic qualification lie in the Kenya certificate of secondary Education (O level) it covers 92%. The research had only 8% respondents with A-level certificate. There was no respondent with Kenya certificate of primary Education. The same Bachelor of Education in Arts degree



**Table 5:: Professional qualifications**

Category	Frequency	Percentage
p-2	3	12%
p-1	16	64%
ATS	4	16%
Diploma	2	8%
University Degree	-	-
<b>Total</b>	<b>25</b>	<b>100%</b>

The frequency table above shows that p1 teachers are most followed by ATS,P2 and lastly diploma holders handling these learners with hearing impairment in regular primary schools p1-64% ATS-16% P2-12% and diploma 8%

The table shows that the majority of the teachers handling the hearing impairment learners in regular primary schools are p1 teachers

**Table 6:Teaching Experience**

Category	Frequency	Percentage
1-5 yrs	2	8%
6-10 yrs	6	24%
16-20 yrs	10	40%
21 and above	7	28%
<b>TOTAL</b>	<b>25</b>	<b>100%</b>

The total shows that the most experienced lie between 16-20 yrs, followed by 21 and above, 6-10yrs, 1-5 yrs

This indicates that the teachers who have taught for more than 16yrs are the most experienced teachers handling the learners of hearing impaired in regular primary schools

**Table 7: Enrolment data in regular primary schools**

Category	Frequency	Percentages
Boys	4,850	41.5%
Girls	6,850	58.5%
<b>Total</b>	<b>11,700</b>	<b>100%</b>

The table shows that the enrolment of girls is more by 58.5% compared to 41.5 of the boys  
Data tabulation and analysis of part B of the questionnaire

**Table 8:Data showing the presence /absence of hearing impairment learners in regular primary schools in sabatia East zone**

Category	Frequency	Percentages
Yes	25	100%
No	-	-
<b>Total</b>	<b>25</b>	<b>100%</b>

The table above indicates that 100%of the respondents agreed that there are hearing impaired learners in regular primary schools in sabatia division, we had none who denied. From the above information the researcher concludes that at least in every regular primary school in Sabatia East zone there is hearing impaired learners

**Table 9: Tabulated frequency data on enrolment of learners with hearing impairment in regular primary schools in sabatia East zone**

Category of hearing Impairment per school	Frequency	Percentage
1	3	12%
2	12	48%
3	6	24%
4	4	16%
5	-	-
<b>Total</b>	<b>25</b>	<b>100%</b>

The Table shows that 12% of the respondents accept that at least there is one child with hearing impairment in their schools. 48% of the respondents agree that there is at least two hearing impairment learners in their regular schools. 24% respondents gave three in number and 16% of the respondents agreed that four children with hearing impairment are found in their schools. There was none who had five

From the above facts, there is evidence that there are hearing impairment in regular primary schools in sabatia East

**Table 10:: possible causes of hearing impairment in regular primary schools**

Category	Frequency	Percentage
Accidents	4	16%
Heredity	6	24%
Diseases	10	40%
Malnutrition	5	20%
Toxins (poisons)	-	-
<b>Total</b>	<b>25</b>	<b>100%</b>

From the table, accidents cause 16% of hearing impairment in learners, hereditary cause 24% Diseases makes 40% and malnutrition 20%

These facts proves that many causes of hearing impairment in regular primary schools in sabatia East zone are caused by Diseases, malnutrition

**Table 11: Attitudes of regular primary teachers towards hearing impaired learners**

Category	Frequency	Percentage
Positive attitude	8	32%
Negative attitude	17	68%
<b>Total</b>	<b>25</b>	<b>100%</b>

The data shows that there are more teachers who are with negative attitudes 68% towards learners with hearing impairment in regular primary schools compared to those with positive 32%. This indicates to us that there is at least help being offered to those learners of hearing impaired in regular primary schools

**Table 12: Academic performance of hearing impairment learners in regular primary schools**

Category	Frequency	Percentage
Poor	8	32%
Average	16	24%
Good	1	4%
Excellent	-	-
<b>TOTAL</b>	<b>25</b>	<b>100%</b>

The table indicates that most of the hearing impaired learners perform averagely in academic 64%. Poor takes 32%

Those in the category of good are covering 4%. There is none in bracket of excellent

**Table 13: Problems that teacher encounter when handling hearing impairment learners in regular primary school**

Category	Frequency	Percentage
Lack of adaptive learning resources	12	48%
Lack of MOH field workers	1	4%
Lack of skills	7	28%
Rigged curriculum	4	16%
Parents ignorance	1	4%
<b>TOTAL</b>	<b>25</b>	<b>100%</b>

From the above data, lack of adaptive resources to cater for hearing impaired learners is the most dominant problems affecting teachers in regular primary schools. It takes 48% followed by lack of skills to handle the hearing impaired learners 28%. This is due to lack of special trained teachers to handle these learners. Rigged curriculum covers 16% lack of enough M.O.H field workers and parents ignorance takes 4%. The teachers get it hard to network with them to assist the hearing impaired learners.

From the above facts, it shows that teachers encounter many problems in the process of handling these learners and they end up giving up their struggle to assist the hearing impaired learners in regular primary schools.

**Table 14: problems that learners with hearing impairment encounters in regular primary schools**

Category	Frequency	percentages
Difficulties in group discussion	5	20%
Misunderstand others since they cannot comprehend all that is said	4	16%
Slow in completion of class work	5	20%
Activity participation	1	4%
Peer interaction	2	8%
He asks for pardon or repeating	2	8%
Fail to acquire spoken language	6	24%
<b>Total</b>	<b>25</b>	<b>100%</b>

From the above facts, Hearing impairment learners have very many problems fail to acquire the spoken language takes leading 24% followed by difficulties in group discussion 20%,slow completing a given task takes 20%.misunderstanding others since he/she cannot comprehend all that is said 16%, He asks for pardon or repeating and peer interaction 8% and activity participation 1%

**Table 15: Availability of adaptive learning resources for learning resources for learners with hearing impairment in regular primary schools**

Category	Frequency	percentages
Yes	-	-
No	25	100%
<b>Total</b>	<b>25</b>	<b>100%</b>

The data indicates that there are no (100%) adaptive learning resources for learners with hearing impairment in regular primary schools

**Table 16: Data showing special trained/untrained teachers who handle learners with hearing impairment in regular primary schools.**

Category	Frequency	percentages
Special trained teachers	0	0
trained teachers	25	100%
<b>Total</b>	<b>25</b>	<b>100%</b>

The table above indicates that there are no special trained teachers in regular primary schools who handle these learners with hearing impairment. Special trained teachers to handle hearing impairment learners' takes 0% while untrained cover 100%

**Table 17: Table of frequency showing how learners with hearing impairment are catered for in regular primary schools.**

Category	Frequency	percentages
Integrated	0	0
Inclusive	25	100%
Unit(special)	0	0
<b>Total</b>	<b>25</b>	<b>100%</b>

From the above tabulated facts, hearing impairment learners are catered for, in an inclusive setting, taking 100%. This makes them to mix with each other freely and normally

**Table 18: Strategies that have been put in regular primary schools by the teachers to ensure that hearing impairment learners are comfortable and complete favorably with other average learners**

Category	Frequency	percentages
Sitting arrangement	14	56%
Individual textbooks	8	32%%
Given more time to complete a task	3	12%
<b>Total</b>	<b>25</b>	<b>100%</b>

The data tells us that most teachers use the seating arrangement as away of assisting learners with hearing impairment it covers 56%. The teachers also use individual textbooks per the learner as away of catering for these learners with hearing impairment 32%, few teachers 12% give more time to hearing impaired learners to finish up a given task.