

**MANAGING HEARING IMPAIRMENT AMONG CHILDREN AT  
FAMILY LEVEL IN OLOK SUB-COUNTY, PALLISA DISTRICT**

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## **DECLARATION**

I, Ademun Deborah Omonuk, hereby declare that this research report is my authentic work and has never been submitted to any institution of higher learning by any student for any academic award.

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Date:.....

ADEMUN DEBORAH OMONUK

**APPROVAL**

This is to confirm that this research report has been written under our supervision following the guidelines of research of Kyambogo University it's hereby submitted ready for submission.

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Co-supervisor

## **DEDICATION**

I wish to dedicate this report to my beloved family and all friends who stood by me during this study period, for all their endeavors and pieces of advice given that have led to this career. I also dedicate this report to my dear parents for taking up the responsibility of nurturing me.

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May the good lord reward you all!

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## LIST OF ACRONYMS

CWHI	:	Children with Hearing Impairment
D/HH	:	Deaf or Hard of Hearing
dB	:	Decibels
ENTs	:	Ear Nose and Throat Specialist
HI	:	Hearing Impairment
NCHAM	:	National Center for Hearing Assessment and Management
NIDCD	:	National Institute on Deafness and Other Communication Disorders
UNICEF	:	United Nations International Children’s Emergency Fund
WHA	:	World Health Assembly
WHO	:	World Health Organization

## ABSTRACT

The study investigated how hearing impairment among children is being managed at family level in rural communities including Olok sub-county, Pallisa district. It was guided by three objectives: To establish the awareness of how hearing impairment is commonly caused among children at family level in Olok sub-county, to examine how hearing impairment affects the language and communication development of children at family level in Olok sub-county, and to explore the strategies used in managing hearing impairment among children at family level in Olok sub-county. A qualitative research design was adopted for the study involving nine (N=9) participants who included both parents and children with hearing impairment. Purposive sampling was used to identify the participants from whom data was collected using a semi structured interview guide. Findings indicated that families were aware of the causes of hearing loss in their children and were able to mention them. They identified diseases and accidents among others. Slow language development, communication challenges, negative community and neighbors' attitudes towards children with hearing impairment were the major effects. Other effects noted were financial limitations, busy schedules and ignorance among parents on how to manage and communicate with children with hearing impairment. The findings identified the following strategies for managing hearing impairment among children: training parents in sign language, provision of hearing aids and constant medical checkup. The study recommended for parents to always seek for medical attention of their children from qualified health personnel in health facilities, sensitize their children to avoid playing in dangerous places that can cause accidents for them, train and empower parents on skills for early assessment, avoid putting on very high volumes when using ear phones, and establish a section at the health centers with staff having knowledge on assessment and intervention of hearing problems in children. In addition, parents should solicit for fund to buy for their children assistive listening devices, organize themselves into associations such as Village Savings and Loan Associations (VSLA) for financial support, training in Ugandan sign language for parents and children, taking children to the nearby health facility for medical examination in case of any sign of HI, and provision of hearing aids to pupils with hearing impairment in inclusive primary schools in rural communities at a free cost.

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.0 Introduction**

The major emphasis of this study was to investigate how hearing impairment among children is being managed at family level in Olok sub-county, Pallisa district. This chapter presents the background of the study, statement of the problem, purpose of the study, objectives of the study, research questions, scope, significance of the study and theoretical frame work.

#### **1.1 Background of the study**

The term Hearing impairment refers to hearing losses which varies in levels from hard of hearing to complete deafness (UNICEF 2017). According to Heward (2019), hearing impairment is a generic term indicating hearing loss that may vary in occurrence from slight to intense. They further grouped people with hearing impairment as: hard of hearing and deaf.

Hearing impairment emerges as health distress worldwide (WHO, 2020). It is the most common birth anomaly among people in the world (NIDCD, 2019). WHO (2020) estimates that about 466 million people (6.1%) are having hearing loss where by 432 million are grownups and 34 million (7%) are minors. This has affected many families more so children at early stages. The NIDCD (2019) further states that roughly 37.5 million people aged 18 and above, have hearing loss and approximately 15 out of every 100 persons whereas more 26 million



people stand prone to dangerous noise levels on a regular basis hence increasing the risk of hearing impairment among individuals.

Hearing impairment stands at about 18million (8.6%) among children of which 60% of these are from developing countries in sub-Saharan Africa (WHO, 2020) where Uganda falls in the racket. Uganda being a developing country, hearing impairment intervention calls for extensive attention in order to improve on the livelihoods of such children with their families. Childhood hearing loss leads to condensed capability in communicating, poor language attainment leading to failure in understanding language echoes, financial and education hindrance and societal separation (Wiranadha & Hartayanti, 2020). In Uganda, there is sparse information on the general statistics of hearing loss amongst children in the country. Zohrabi (2015) indicates that, the occurrence of disabling hearing loss in Uganda stands at 10.2% in children. The available results show the occurrences in Mbarara which stands at about 3.1% and Masindi at about 10.2% respectively (Nakku et al., 2015).

Gardiner, Laing and Wonkam (2019) assert that hearing impairment among children is a surprising condition to many parents across the world and sometimes parents think that the child with hearing impairment is just being stubborn when they do not respond to instructions. Nurturing deaf or hard of hearing children (D/HH), therefore brings distinct persistent challenges putting parents into a greater risk for higher stress levels. Coping to different challenges showed by childhood hearing loss is usually enhanced by their individual and societal coping resources accessible for managing the condition. This implies that the impairment affects both the family and the child. The concern of managing trauma seems

vital in that the affected children are distressed together with their parents in different areas leading to elevated dangers in poor mental health consequences, undesirable care giving behavior, and possible difficulties in executing behavioral change. Rochelle and Walensky (2019) contended that when unmanaged, hearing impairment may impact many aspects in life of an individual negatively. For example, it may affect the communication and linguistic development together with perception. Thus, this results into stigma and social isolation in individuals.

Hearing impairment impacts on society and economy. Unmanaged hearing impairment account for an estimated global cost of US\$ 980 billion, Health sector costs inclusive and exclusive of the hearing devices costs, scholastic funding and communal expenses (WHO, 2017). Middle-income and low-income countries attribute to 57% says WHO in which Uganda falls. Basing on the impact of hearing impairment, it is therefore, important to manage it at family level as a strategy for early intervention. Prevention of hearing impairment is vital through the lifetime course before and during birth and at the latter age in life (WHO, 2017).

Although childhood hearing loss has other severe effects due to its ability to interfere with linguistic attainment and development, this isn't common in adult onset hearing loss. In the middle and low- income countries like Uganda, hearing impairment is greatly higher than in high-income countries, signifying a universal need aimed at attending to hearing loss hence justification for this study (WHO 2016). Uganda being a member state to world health organization has the obligation to implement word WHA48.9 resolved on avenues of curbing hearing impairment. To achieve this, Uganda has to develop a robust data on hearing loss

in the country. This largely contributes to low awareness of the problem among people in the country. Lack of awareness implies that there will be many cases of hearing loss untreated. This has an intense effect on families, affected individuals together with communities (Wong et al., 2019). The utmost observable consequence of childhood hearing loss is on communication. Minors with hearing impairment fail to develop spoken language except when interventions are provided in time (WHO, 2016).

Monasta et al. (2018) point out that early detection and effective management of ear infections can greatly lessen the consequential hearing impairment among children and reduce impediments associated to it. Hearing loss in individuals can be lessened through early identification following timely suitable interventions, particularly as new ways out and in the presence of technology are in place. For example, there is a possibility of screening for hearing loss as early as at birth. The advancement on the production of hearing aids and availability of cochlear implants immensely have enhanced potential results in individuals either born deaf or later acquired the hearing loss in life. Proper use of assistive devices (like hearing aids and cochlear implants), assistive technologies (like wireless Frequency modulation systems, sign language translation and captioning) and social support can enhance accessibility to communication, equalized opportunities and education (Monasta et al., 2018).

The Family which accepts the child's disability, adjusts and supports the child contributes substantially to the well-being, language development, emotional support and social being of the child (Cole & Flexer, (2017). Acceptance of such a child by a parent is a psychological variable indicating positive results for

individuals. Blackledge and Hayes (2015) defined acceptance as one's ability to take an offer without avoiding experiences. When parents of children with auditory deficit accept the condition, it creates positive impact that leads to positive results in the family. These will include new priorities in family perceptions like; accepting the child's hearing loss, being friendly as a family, and attaining a new sense of belonging. Equally, it's likely that a child's hearing loss can absolutely be improved.

In Uganda there are formal and informal social support systems that remain very key in facilitating families, which can be applied in working with children with hearing impairment to cope with the different challenges associated with upbringing of these children. Informal support systems are cultural and religious networks that work together to ensure that a family is strong enough and functioning together. Formal supports are provisions mainly from professional sources in organizations, like intervention centers, schools, or other social services Amor.DJ (2019). A number of services like ear, nose and throat specialists (ENTs), pediatricians, audiologists, speech pathologists, and occupational therapists from professionals reach families of children with hearing loss. On the other hand, informal social support deals with one's relationships with others at home or community (Rodrigo, Martin, Maiquez, & Rodriguez, 2017). While the informal support system exists in Olok Sub County, Pallisa district, the formal system may not be well established and structured. It's on this basis that the study is designed to investigate the level of awareness of information related to causes and preventive measures of hearing impairment among their children at family level and how families manage the occurrence of hearing impairment among children at family level.

## **1.2 Statement of the problem**

Hearing impairment can be prevented if early intervention is done at family level (Prasad, 2019; & Frankie, 2017). Parents are responsible for managing the hearing loss among their children before joining school. However, WHO (2017) expressed concern at the largely expanding scourge of preventable hearing loss world over. It calls for member countries to prepare national plans for the prevention and control of major causes of avoidable hearing loss, and for early detection in babies, toddlers, and children, as well as in the elderly, within the framework of primary health care.

Despite early intervention, schools still record high enrolment of learners with hearing impairment. Most parents take their children to school but take limited responsibility to ensure that the child receives social and educational support needed. This may imply that parents seem not to understand interventions needed to manage hearing impairment at family level. This study therefore, sought to ascertain such ways through which hearing impairment is being managed at family level in Olok sub-county, Pallisa district.

## **1.3 Purpose of the study**

The study investigated how hearing impairment among children is being managed at family level in Olok sub-county, Pallisa district.

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

The objectives of the study were to:

1. Establish the awareness of how hearing impairment is commonly caused among children at family level in Olok sub-county.
2. Examine how hearing impairment affects the language and communication development of children at family level in Olok sub-county.
3. Explore the strategies used in managing hearing impairment among children at family level in Olok sub-county.

#### **1.5 Research questions**

The following research questions guided the study;

1. How is hearing impairment caused among children at family level in Olok sub-county?
2. How does hearing impairment affect the language and communication development of children in Olok sub-county?
3. What are the strategies used in managing hearing impairment among children at family level in Olok sub-county?

#### **1.6 Scope of the study**

The study was carried out in Olok Sub-County, Pallisa District which is found in Eastern part of Uganda. The sub-county has five (05) inclusive government aided schools and each school had children with hearing impairment. In total there were

ten (10) children with hearing loss in all the schools. The focus of the study was about how hearing impairment among children is being managed at family level in Olok sub-county, Pallisa district. While the study focused on family level, the children who were involved in the study were drawn from school as access points. No other impairment was studied. The study took 10 months for final submission.

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

The study will be beneficial to numerous stake holders in the following ways;

1. The study will provide greater information to parents about how to manage hearing impairment among children at family level.
2. It contributes to information that will help to create change of attitude among parents and other community members towards children with hearing impairment.
3. The study will also contribute information that will help parents, peers, siblings; close relatives collaborate to help the child with hearing impairment.
4. This study will further inform policy makers on how to contribute to and appropriate guidelines that protect and promote welfare of children with hearing impairment at family level in rural communities.
5. The study will act as an important information source for other researchers intending to conduct studies in a related field.

## **1.8 Theoretical framework**

The study was grounded on the critical disability theory. Critical disability theory attends to devalued persons and is necessary as it attempts to transform the situations under which persons with hearing impairment live through critical and intersectional analysis (Schalk, 2017). The theory discusses various multidisciplinary models. The aim of the theory is to analyze disability in different models like; political phenomenon, cultural, social, religious and historical (Joanna, 2017). Utilization of Critical disability theory aims at capturing a wider range of ideas regarding understanding disability in this case hearing impairment. The approach encompasses on examining not only physical or intellectual impairments but also common customs describing specific attributes as impairments and social conditions leading to stigmatization in specific people. Critical disability theory is embedded on account of outdated thought towards impairment, which help in oppressing individuals with disabilities and interfere with the rights for persons with disabilities. This model argues that “disability is not inability (Hall, 2019). This theory is related to the study in a way that it is crucial to understand the situation in which persons with hearing impairment live, causal factors of the condition and its effects. This helps in finding appropriate ways of managing the condition. This theory therefore, will be used to guide the study in conformity with the hearing loss children’s needs at family level in Olok Sub-County, Pallisa District.



## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

Having presented the background information to the study, the next focus is on the presentation of the literature review related to the common findings in line with the research objectives as stated below:

- (i) To establish the awareness of how hearing impairment is commonly caused among children at family level in Olok sub-county.
- (ii) To examine how hearing impairment affects the language and communication development of children at family level in Olok sub-county.
- (iii) To explore the strategies used in managing hearing impairment among children at family level in Olok sub-county.

#### **2.1 Causes of hearing impairment among children at family level**

The term "hearing impairment" is often used to refer to persons having varying degrees of hearing loss, varying from mild to profound and resulting from different causes as; genetic defects, the ageing process, injury and diseases. Acquired hearing loss occurs after birth while congenital hearing loss occurs after birth. No matter the classification, hearing loss arises from many causes. According to Safdar Ali et al.,(2022) infections like otitis media with effusion may be the commonest ear infections and causing hearing impairment among children which affects functionality in their lives.

Kozin et al. (2021) identified traumatic brain injury as frequent causes of hearing impairment in the history of children who have suffered accidents leading to acquired long term disability. Besides children deprived of oxygen due to sickle cell anemia are usually characterized by vaso-occlusion which leads to impaired blood flow and supply to several organs which highly affects the cochlear and causing hearing loss in individuals (Jibril et al., 2021). The cochlea may also be affected by war or factory noise that is dangerous to the ears. According to Pienkowski (2021) any kind of noise pollution in the environment and high levels of noise sound are capable of automatically and permanently damaging the ears. Piňosová et al. (2018) also confirmed that long term exposure to noise pollution and risks associated to acoustic noise exposure at work place can easily result into hearing impairment.

Wilunda et al. (2018) identifies that smoking before and during pregnancy makes the unborn babies stand at elevated risks of developing hearing impairment. Still to that, Starkey (2018) says that maternal smoking during pregnancy carries negative effects on the fetal growth affecting the proper development of the cochlea in babies making them stand more chances of developing hearing impairment in future. According to Doug (2018), a number of children are usually born with congenital hearing loss roughly a half of these cases, are hereditary thus was passed on by the parents. He further cited that genetic factors can cause congenital hearing loss to off springs which might show up at birth and at later stage of growth these include autosomal recessive hearing loss being the highest kind of hearing loss, amounting to approximately 70% of cases of genetic hearing loss. Parents may neither have the hearing impairment meaning the recessive gene is passed on the child by the parents. This usually makes Parents to get

shocked on seeing their child born with this kind of auditory deficit since the majority of them are not certain of having the recessive gene.

Another genetic factor causing congenital hearing loss is autosomal dominant hearing loss which amounts to roughly 15% of genetic hearing losses (Korver et al., 2017). Parents pass the autosomal dominant gene to the offspring. They neither have the hearing loss, but rather have other signs and symptoms of a genetic condition. Temma (2021) further confirms that hearing loss is a well-known consequence in children with traumatic brain injury resulting from falls, motor vehicle accidents and hit by objects. Anderson (2015) supports the findings by saying that, acquired hearing impairment also affects children later in life as they grow.

Similarly, to the above, Zipp (2019) observed that a few children experience on and off hearing loss, thus fluctuating or temporal transient hearing loss. Although this might not be lasting, it's dangerous towards speech and language acquisition and development. Transient hearing loss results from otitis media, which is highly recognized for the infection in the middle ear. In every four children one has at least had an attack of otitis media by three years of age. The infection usually affects the Eustachian tube in children due to its position during early growth of the child. During development, the Eustachian tube which permits equalization of air pressure amidst the nasopharynx as well as the middle ear remains more horizontal and smaller and as such, it makes it very prone to fluid blockage or large adenoids in the esophagus (Elaine et al 2018). This implies that transient hearing loss can result from ear drum infections due to excess fluids that block the proper functioning of the ossicles but it is temporal and can resolve on its

own. In addition, increasing damage of ossicles, eardrum or auditory nerve can be caused by frequent untreated middle ear infections resulting into permanent, sensor neural ear damages.

Hearing impairment may at times have temporal causes. On passing the traditional hearing tests, children might continue having challenges in listening and understanding speech, mostly in noisy surroundings. These might call for repetition of words, besides struggling to distinguish related sounding words (Joy Victory 2022). This implies that sound is effectively perceived by the ears, but then the brain has a struggle in interpreting the sound correctly. Similarly, Chen et al. (2021) point out that, the nervous system or brain disorder as well as toxic drug use in the cause of pregnancy by mothers can possibly cause hearing impairment in children. The ototoxic medicines possibly inflict harm to the auditory hearing system in a fetus. He also noted that mothers with infections during pregnancy for instance cytomegalovirus, maternal diabetes, herpes simplex or German measles, toxoplasmosis and smoking behavior increase the risk of their babies developing hearing impairment.

Parchment Hill (2020) asserts that; congenital hearing loss may result from non-genetic factors like Rubella cytomegalovirus, herpes toxoplasmosis, other serious infections, birth complication and anoxia; or a blood transfusion for some reason. He further observed that babies with premature births with underweight requiring life-sustaining drugs for breathing are at elevated risk of acquiring hearing loss.

## **2.2 Effects of hearing impairment among children at family level**

Hearing impairment effects may vary among children at family level. It ranges between language and communication, social interaction, relations to economic and cultural stresses. Language and communication are key aspects in human social interaction and relations. Hearing impairment means there is some limit in acquisition, reception and expression aspects of language and thus impeding participation. Language and communication is important for social interaction and forms the basis for learning among Children with Hearing Impairment. Mayo et al. (2021) similarly found out that muffled speech is associated with individuals with hearing impairment and which may affect the child's speech and pronunciation of words in their growth and developments and may affect the child's daily activities in the society. They observed that children with hearing loss have difficulties in activities involving listening and localizing sound in noisy places and have a wide range in auditory difficulties as compared to those with the hearing ability. They further register challenges in speech recognition in a noisy environment and activities requiring perception of sound and its movement from different direction.

Choudhry et al. (2021) point out that low academic achievement is characterized by children with hearing impairment as compared to those with hearing ability as they hurdle in communicating and understanding speech sound. Hence, this makes them lag behind their class work and resulting into poor academic performance and may continue having problems in developmental growth, especially the auditory system, as supported by Cordella (2021) children with auditory deficit have difficulty in locating sounds or voices leading to trouble in

identifying different sounds in the environment surrounding them. NIDCD (2019) describes hearing impairment as one which manifests at four levels. The first level is mild hearing loss where sound is perceived between 25 and 29 decibels (dB). These find hardships in understanding words being said by other people, particularly when in a noisy background.

Moderate hearing loss being the second level where individuals only perceive sounds between 40 and 69 decibels (dB) In this case, one finds it hard to follow a conversation alone if a hearing aid is not used. Severe hearing loss is the third level where the individual perceives sounds beyond 70 to 89 decibels (dB) only. Communication in a severely deaf person is possible either through lip-reading or use sign language. The fourth level is profound hearing impairment where individuals can't perceive sound below 90dB. Some individuals with profound hearing loss can't detect any sound at all, at any decibel level. Writing, reading print, lip-reading and sign language as means for communication was used during expression (NIDCD, 2019).

Purnami et al. (2018) said that hearing loss causes developmental delay of receptive and expressive communication skills (speech and language) in children. Learning problems and reduced academic achievement are due to language deficit that result to communication difficulties leading to social isolation and poor self-regard and it may also have an impact on vocational choices. Goldin-Meadow and Yang (2017) also confirmed that children with hearing loss and born of hearing parents find challenges in communicating to their parents and family members as there is no understanding of the commonly spoken language and neither have they been exposed to sign language these usually use gestures as a

means of communication to express themselves. This helps to call for the need of training in a common language that could be used by both the children with hearing loss and their parents and also the rest of the family members. Equally, according to Coelho et al (2015), hearing impairment can impair voice production which easily affects one's pronunciation of words causing speech limitation with specific deviations in communications this presents negative impact on individuals' education and social life.

A child with hearing loss may develop negative feelings about himself or herself hence affecting his or her emotional development, learning and participation in activities of daily living (Patil & Pujar, 2019). This implies that children with hearing loss may develop low self-esteem which may necessitate offering guidance and counseling to equip them with coping strategies. This might also be hampered by the child's limitation in receptive and expressive aspects of language resulting from hearing impairment. Abdul (2019) adds that a child with hearing loss may have trouble when being guided by their parents and care givers in school homework most especially in reading and mathematics. They may neither grasp words faster as those with normal hearing. They may find it easy to understand concrete words like dog, run, and green among others. However, there is also struggle in understanding abstract words such as before, equal to, and shy. These children perhaps find difficulty in using words like the, an, are, and a.

Abdul (2019) further observed that having difficulty in understanding different meaning of words is common in children with hearing impairment citing an example of the word '*bat*' which means a flying animal or playing equipment for baseball. Understanding and use of sentences by children with hearing

impairment may be challenging for example they may comprehend and apply shorter sentences than children with normal hearing. They also have difficulties in more complex sentences.

They may fail to use clauses in sentence construction. Example of a clause is "When I get home, I will eat dinner." They may hardly use reported speech. For instance, "The ball was thrown by John." They may seldomly hear word endings, such as *-s* or *-ed*. Difficulties are also evident in understanding and application of plural words, like *cats*. They may find difficulties in using past tense, like *walked*. Possessives, like *Mary's* might be hard to hear or use.

Wolters and Isarin (2016) was cited having trouble in making friends as another effect of hearing impairment among children. This is true as interaction with peers becomes difficult due to lack or reduced ability to hear and understand sounds and words. It therefore, limits sharing of ideas between children with hearing impairment and their ordinary counter parts hence making it difficult to maintain friendship. Similarly, Julia Morinaj (2019) noted that Children with hearing loss may struggle with phonetics. Their speech is not clear as well. They hardly use silent sounds that are hard to hear such as *s, sh, f, t, or k*. They might not hear their own voices while speaking. These children might sound too loud or too soft. This affects their speech and language development resulting to isolation from their social groups.

George (2023) observed that, the primary effect of hearing impairment is loss of communication. This often arose due to delayed language acquisition resulting from the related defects of the impairment once language acquisition is not achieved in the child at the appropriate time; this affects the child's



communication and hence deteriorating their educational achievement and success. This can also be hampered by the child's limitation in receptive and expressive aspects of language resulting from hearing impairment.

Stevenson and Kreppner (2015) expressed that; hearing and understanding sounds and words is missed out by a child with hearing impairment that may result into delayed speech and language skills. He further observed that without proper development of speech and language, children stand high risks of experiencing learning difficulties in schools which eventually affects their academic achievement. This implies that without communication, a child's participation is limited in various aspects of life. However, it's important to consider the stress parents under go to raise children with hearing impairment. Some of these challenges are greater risks of poor parent mental health, undesirable care giving behaviors and possible difficulties in implementing behavioral change (Kennedy, 2018).

Raising children with hearing loss therefore, puts parents at high levels of parenting stress due to long-term challenges presented by the condition. The only saving factors for families to cope with diverse challenges resulting from childhood hearing loss are availability of resources for managing the condition and attitude of the family members. This implies that a child's hearing impairment implicates the child, as well as the family (Jackson & Turnbull, 2019).

### **2.3 Strategies of managing hearing impairment among children at family level**

Managing Hearing Impairment among children can help to minimize its effects on a child at an early stage. According to Jordan et al. (2021), hearing impairment can impend on quality of life of individuals which affects their self-esteem. One can improve on all aspects of life as they are introduced to the use of hearing aids as this may improve on their communication and expression in the society. Communication is a unifying factor between individuals. As observed by Jones (2022) lack of communication can affect the progress in Education and upbringing of children with hearing loss. He further emphasizes that providing diagnosis to children with hearing impairment early enough is vital as this could help in proper interventions and trainings in different areas so as to improve on performance in their lives and proper management at home. It is vital to improve on the environment to suite communication needs for Children with Hearing Loss such children have difficulty locating and differentiating voices and sound in noisy places. Raina (2021) argues that noise free environment should be reorganized while communicating with individuals of hearing loss.

Similarly, Frank (2018) emphasizes on the need to protect one's hearing most especially among children during activities and events that involve loud sound like nightclubs, gigs or sports events by distancing them away from sources of loud noise like loudspeakers. Adults as well need to rest from sound of high intensity every 15 minutes and considering to wear earplugs that regulate the volume of music. This is supported by Rochelle Walensky (2019) that early ear testing for children could help in early intervention planning to manage the

hearing problems. He further observed that if hearing loss in children is untreated, it can cause permanent ear damage and as such, the earlier the hearing loss discovery, the better and sooner the management. Hearing impairment in infants may present the following signs before 4 months they do not respond towards any sound intensity and at one year they still haven't spoken any word they are not discomforted by loud sound.

In the same way as indicated above, Saunders and Amor (2019) reported that parents should distance children from sound of high intensity to minimize hearing loss from loud noise. They only respond back on seeing you. These children answer far less or do not reply at all once nobody is in their sight or call out their name. They only seem to be conscious of certain sounds. However, hearing impairment signs are more visible in older children. For example, the child may lag behind in oral communication than the age mates. They always ask for "pardon" and may have unclear utterances and talk in a louder tone. Based on the advice, Yetman (2020) encourages parents and their children to be careful as they listen to music, adding that listening to loud music through earphones and headphones greatly endanger one's hearing. Children and adults are both affected by loud noise and increasingly being a major hearing impairment cause. He further emphasized that exposure to loud noise of over 85dB generally affects ones hearing thus leading to a hearing loss among individuals.

Closely related to the above, it can be concluded that to avoid damaging the hearing ability therefore, there is need to use sound-regulating earphones or headphones, listening to music at a volume of less than 60% maximum (Yetman, 2020). Families therefore need to use devices which can be automated to regulate

sound in the earphones or headphones. For example, if there is music to be played for duration of more than 60 minutes, a break of a minimum of 5 minutes every hour is vital in preventing hearing loss. Even lowering the volume silently makes a big difference to one's risk of exposure to hearing damage.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.0 Introduction**

The main aspects in this chapter included but not limited to the research design, target population, sample and sampling techniques, methods for data collection, procedure for data collection, data presentation and analysis and ethical considerations.

#### **3.1 Research Design**

Bryman (2016) asserts that research design is an overall plan with detailed outline of how an investigation was conducted. In this study therefore, qualitative approach was used. Creswell (2017) defined qualitative research approach as an organized subjective approach used to delineate life experiences and situations to generate their meaning taking into account how data was collected, study instruments to be used and how data was presented and analyzed. This means that constructivism paradigm was used based on a case study research design. Constructivism paradigm research was employed where knowledge is provided by participants during the study (Creswell 2017). In light of this paradigm, Creswell further states that researchers ought to realize the difficult world of lived experience from the point of view of individuals who lived in it.

#### **3.2 Target Population**

This refers to a large group of individuals or objects perceived to be a major focus of the scientific query Kemmis and Wilkinson (2018). The population of the

study involved parents of Children with Hearing Impairment who were studying in five inclusive schools in Olok Sub-County. These were selected because of their direct engagement in the management of their children with hearing impairment. In all the five inclusive schools considered, there were 25 parents in total as presented in details in the table below:

**Table 1:**

*Population of parents of children with hearing impairment*

<b>School</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>Total</b>
No. of parents	4	7	3	6	5	<b>25</b>

**Source:** Primary data

### 3.3 Sample and sampling techniques

#### 3.3.1 Study sample

Webster (2017) defines a sample as a lesser part of the target population used in the study with the aim to generalise the findings. The study sample for the above target population was nine (09) parents of children with hearing impairment. Details are given in Table 2 below:

**Table 2:**

*Sampled parents of children with hearing impairment*

<b>School</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>Total</b>
Population of parents.	4	7	3	6	5	<b>25</b>
Parents sampled	1	2	2	3	1	<b>9</b>

**Source:** Primary data

### **3.3.2 Sampling technique**

Taherdoost (2016) referred a sampling technique to the way(s) by which members of the sample are chosen. Purposive sampling technique was used to select the participants for this study. Rai and Thapa (2015) defined purposive sampling as a non-probability sample selection where decisions regarding individuals to be involved in the sample are taken by the researcher basing on his or her own judgment. To identify the parents of children with hearing impairment in the five inclusive schools considered in Olok Sub-County, the researcher visited the schools and requested for their telephone numbers from the head teachers. Thereafter, the parents were then contacted for more information regarding how they would be included in the study. In this regard, the researcher found out from the parents the time they had taken while taking care of their children with hearing impairments at home and in school. Therefore, basing on the information provided, the researcher considered only parents with longer experience in handling children with hearing impairment (over 6 years). Hence, the numbers of parents from each school emerged as presented in Table 2 above whereby, schools: “A” had only 01, “B” had 02, “C” also had 02, “D” had 03, and “E” had 01, totaling up to 09 participants. The researcher chose purposive sampling technique because it helps one to select participants who are more knowledgeable and therefore, able to provide detailed information about the study field. The technique is also time-saving and it lowers the costs of carrying out research and yet, its outcomes are typically more accurate than those attained with any alternative form of sampling.

### **3.4 Study instruments**

Study instruments are various procedures of collecting data from intended respondents (Creswell 2018). Des Moines University (2022) states that research instruments are measurement tools developed to collect data about the phenomenon under study (for example, questionnaires or scales). The researcher used semi-structured interview for data collection in this study. According to Webster (2017), interviews means a procedure designed or conversation were questions are asked and answers are given in order for the interviewer to determine relevant information to inform a study.

The researcher used semi-structured interviews. Tegan (2022) defined semi structured interviews as a data collection method involving one on one interaction within a programmed period of time. Robert and Kelly (2021) point out that semi structured interviews are purely conversations were a researcher is aware of the expected outcomes about their experience and a feeling they have on whatever they are interested in. Alison (2020) further confirmed that semi structured interview is a meeting where the investigator doesn't stickily follow listed formalized questions but relatively allows open ended questions and allows discussions with the examinee. The researcher knew the local language of the area and was able to get some responses from participants in local language spoken in the area of study. Its enhanced validity reliability and allays bias. This was selected basing on the reasons below:

They enabled the researcher to probe deeper to get detailed information from the participants. They also allowed the participants to be asked the same questions in a flexible way.



They made possible discussions to diverge from the interview guide to include other relevant issues to the study.

Semi-structured interviews also allowed questions to be prepared in advance which gave room for piloting the study instrument or tool.

### **3.5 Procedure for data collection**

The study used a single source of data collection. Data was collected using an interview. Prior to that; an introductory letter was collected from the Faculty of Special Needs Education, Kyambogo University to introduce the researcher to the area of study.

The introductory letter was taken to the district education office to seek clearance to carry out research within the school setting. Another copy was given to the CDO to help link the researcher to the parents with in the community.

The researcher conducted a pilot study by selecting purposively a few respondents from a nearby sub county to check on the study tools validity and reliability. A total of 9 Parents of Children with auditory deficit participated in the study. As a result from a pilot study the following actions were taken:

The researcher had to check whether the respondents understand the terminology used in the interview guide for data collection.

To pre-test data collection tools to identify any possible weakness in the interview guide.

Participants were identified basing on the records of children with hearing impairment in the selected schools. The researcher was provided with the

telephone numbers of the qualified parents by the head teachers, which she used to contact them for interview appointments. Thereafter, the researcher made arrangements with them to agree on the dates for interview in the location convenient for each of them. The interviews were carried out in both schools and homes depending on the preference of the parent. Permission was sought to record the interview alongside writing responses which were being provided. The language mainly used was English but for parents who could not understand English, Ateso was used since the researcher too has it as her mother language. Therefore, she interacted with the participants in the local language in order to capture all details she needed to respond to the study. All recordings were transcribed and compared with what was written that formed raw data that was later analyzed and reported.

### **3.6 Data presentation and analysis**

This is a way of selecting and interpreting data to get suitable information, suggesting conclusions and supporting decision making Morrison (2019). All data was analyzed and coded under themes generated from interview transcripts. The themes related to each objective. Therefore, descriptive method of data presentation and analysis was used centered on the three research objectives. The presentation was done using tables, charts and verbatim statements.

### **3.7 Ethical considerations**

Ethics in research refer to norms acceptable for carrying out research (Creswell, 2018). In this study, all participants took part voluntarily. This implied that the researcher gave the participants freedom of choice to contribute in the study.

There was need to consent with the respondents before engaging them as another important ethical consideration, cooperation with the respondents was totally observed through building good rapport with the respondents upon reaching the study area.

Confidentiality of the data collected was observed. This meant that the real identity of the participants wouldn't be disclosed in the study but rather, the researcher used codes to represent categories of participants. Acknowledgement of another author was observed as well. This was an attempt to avoid plagiarism.

## CHAPTER FOUR

### PRESENTATION AND DISCUSSION OF RESULTS

#### 4.0 Introduction

This chapter presents, interprets and analyses data on how hearing impairment among children is being managed at family level in Olok sub-county, Pallisa district. The data collected was presented in relation to the themes derived from the objectives of the study and these included; the awareness of how hearing impairment is commonly caused among children at family level in Olok sub-county, how hearing impairment affects the language and communication development of children at family level in Olok sub-county, and the strategies used in managing hearing impairment among children at family level in Olok sub-county.

#### 4.1 Demographic Information

In this section, personal information about the respondents is presented. It provides information about their gender, age and educational level.

**Table 3:**

*Demographic Information of parents*

<b>Gender</b>	Male	4
	Female	5
<b>Age</b>	18-30 years	4
	31-50 years	3
	50 years and above	2
<b>Educational Level</b>	Primary	5
	Secondary	3
	Tertiary	1

**Source:** Primary data

Table 3 above shows the age bracket, gender and educational level of the respondents. The table shows female as the majority of respondents (N=5) and slightly fewer male parents participated in the study. This is because, it was found that many of the respondents were single mothers and care takers of children with hearing impairment.

The information obtainable in the table also shows that there were younger parents (N=4) between the age of 18-30 years and fewer older parents (N=2) of more than 50 years. It can be argued that these young women are actively involved in struggling to take care of the child with hearing impairment without any experience and support. The study found out that the age group above 50 was majorly older persons taking care of the grandchildren who also needed assistance. However, they provided vital formation in relation to the management of hearing impairment among children at family level. This argument is in line with Mazlan (2019) who stated that success in early diagnosis and intervention of hearing loss in children is determined by maternal knowledge and attitude towards childhood hearing loss. This could help in the management of hearing impairment among children at family level.

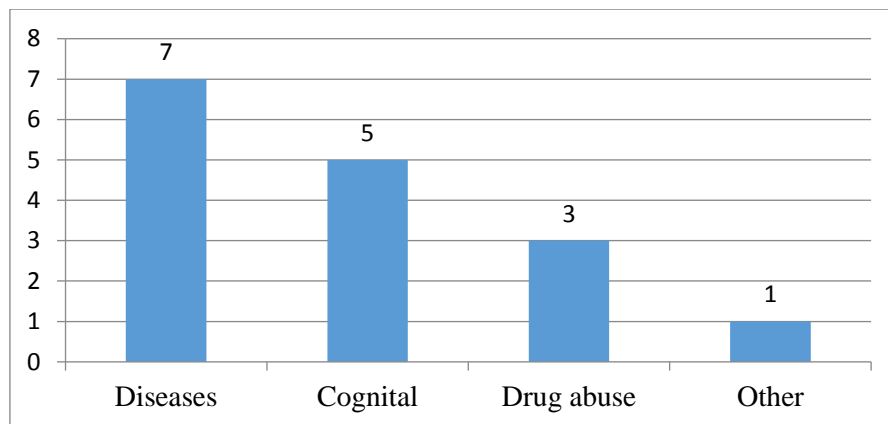
Information concerning education level of respondents was recorded. Findings indicated that majority of the respondents (N=5) attended primary level of education. There were fewer respondents (N=1) who managed to attain tertiary level of education. This demographic information tells a lot about understanding of level of those caring for children with hearing impairment in the community. It implied that as most parents had low level of education and were young parents, they might have lacked experience with child care and needed support in the

management of children with hearing impairment at family level in Olok sub-county.

#### **4.2 Parents' awareness of how hearing impairment is commonly caused among children at family level in Olok sub-county**

The first objective of the study sought to establish the awareness of how hearing impairment is commonly caused among children at family level in Olok sub-county. Results of the study revealed the following as expressed below.

##### **Causes of hearing impairment**



**Figure 1:**

##### ***Causes of hearing impairment among children at family level***

**Source:** Primary data

Figure 1 above shows the reported causes of hearing impairment among children at family level as known by parents in Olok sub-county. The findings indicated that parents (N=7) were informed about diseases as the common causes of hearing impairment, this was followed by congenital causes (N=5) and other causes that parents (N=1) could not specify was the least.

#### 4.2.1 Diseases

Based on the findings, parents were aware of the cause of auditory deficit in their children. Disease was reported as a common cause of hearing impairment. The argument corresponds to Victory (2022) analysis that hearing loss could result from infections that damaged the inner ear like otitis media, effusion, meningitis, measles, and mumps. As exemplified by participant, her child developed the condition due to a pus discharge in their ears and was once treated with local herbs. One of them had this to say:

*My child got an infection in the ear and due to poverty, I had to take him for local medication using herbs that worsened the condition and he developed hearing Impairment.*

According to Safdar et al. (2022), infections like otitis media with effusion are the major ear infections causing hearing impairment among children. The use of herbs compound the hearing loss as the dose and timing is not scientifically regulated. These findings called for keen observation towards the children's ear for assessment of ear infections. Proper treatment and management of hearing loss among children at early stages helps in controlling the condition, and avoids permanent hearing loss.

Permanent hearing losses are usually sensorineural, but may also be conductive. As noted by Ann et al. (2017), congenital hearing loss may result from non-genetic factors like Rubella cytomegalovirus, herpes toxoplasmosis, other serious infections, birth complication and anoxia; or transfuse of blood for some reason. He further observed that premature birth of babies that have under birth weight

requiring life-sustaining medications for breathe due to premature birth are at elevated jeopardy of acquiring auditory deficit.

The above statement was supported by narrative statements which showed that the parents were aware of what led to the hearing loss in their children. As observed by one parent: *“Abu ikakoku kodekakin adekana akwapu itorinen cuti amamutu aipupu”* Translated; *“my child fell sick of measles and it’s from then that she developed hearing loss.”*

Awareness of and knowledge about the causes of hearing impairment in children by their parents has a lot of implications. Parents must be aware of causes before, during and after birth. As observed by Korver et al (2017), acquired hearing impairment results from infections for example otitis media, meningitis, mumps, otosclerosis, measles, perforated ear drum and this affects children later in life as one grows. When parents are aware of the causes of auditory deficit, they are able to seek early assessment of the children and giving proper treatment in early stages of the sickness to avoid the occurrence of the impairment in the nearby future.

#### **4.2.2 Congenital**

Another respondent reported the cause of hearing impairment as being congenital. This group were aware that a person can be born with hearing impairment, if one of the parents or grandparents had a hearing loss. One participant was quoted saying: *“Edounit eong etelepat elaai cuti konye toma apaki adio mamu etupiti aruo na I bokoroka ido abuka riengunite nai erai papaka ekiming ate ngesida eurutere”*



*Translated; I delivered my son and he seemed normal but after some time he could not respond to my figure snaps, this made me scared because my father is also a Deaf and was born with a hearing impairment.*

According to the respondents, the cause of the hearing impairment was associated to hereditary factor arising from her father. This finding support Doug (2018) assertion that more children are usually born with congenital hearing loss roughly a half of these cases, are hereditary, amounting to approximately 70%. According to Korver et al. (2017), having the autosomal dominant gene, passes it to the offspring. He or she can neither have the hearing loss, but rather has other signs and symptoms of genetic condition, which amounts roughly to 15% of genetic hearing losses. As confirmed by Sloan-Heggen et al (2016), hereditary hearing loss stands at approximately 80% in children being mostly caused by autosomal recessive gene. This has no visible abnormalities however its abnormalities are associated with the inner ear.

Hearing is a complex process therefore; there shouldn't be disbelief that the causes of auditory deficit are also complex. According to the findings, few respondents could not specify the cause. This can be argued that when hearing impairment occur due to injury of the ear, particularly the internal ear it may not be identified. Infants for example may be born with hearing loss acquired during pregnancy due to viral infections from the mother. According to Starkey (2018), the cause of hearing loss is sometimes genetic and a combination of environmental factors. Therefore, due to genetic changes involved some people

are most likely to develop hearing loss after taking certain antibiotic medication, which is difficult to identify.

#### **4.2.3 Drug abuse by parents during pregnancy**

Another finding reported by parents as possible cause of hearing impairment was use of drugs. While the drugs were not specified, Wilunda et al (2018) argued that smoking before and during pregnancy makes the unborn babies stand at elevated risks of developing hearing impairment. Durante et al. (2017) adds that maternal smoking during pregnancy carries negative effects on the fetal growth affecting the proper development of the cochlea in babies making them stand more chances of developing hearing impairment in future. According to Victory (2021), use of toxic drugs in the course of pregnancy by mothers can possibly cause hearing impairment in children. The awareness of the misuse of drugs as a cause of hearing loss may help to raise awareness among women in Olok sub-county who were smoking and have children with hearing impairment to sensitize other parents to avoid their children being affected by smoking. The discoveries showed significant information in relation to smoking control by expectant mothers. Smoking can be argued and considered a health risk priority as it might endanger the auditory system in individuals.

Regarding to what parents have done since they realized that the child has hearing impairment, findings revealed that parents visited health facilities for help, one participant responded that: *“Upon realizing that my child could not perceive sounds, I took her to a health facility for further management”*.

Cordell (2021) says that occasionally though with all tests, hearing loss causes may stay mysterious. It is paramount for the defect to be identified early. It is also vital that intervention for auditory deficit commences at initial stages in health centers which may comprise of parental support, communication therapy and hearing gadgets like cochlear implants and hearing aids. Even if the cause is still being observed a child with hearing loss is given the best chance to language development, social interactions and education for a better future.

#### **4.2.4 Accidents**

Other findings revealed that accidents have left a number of children with hearing impairment. Participants (n=2). One of the respondents stated that: - *“My daughter fell off a labor suite and landed down on her head living her unconscious and since then she doesn’t perceive any kind of sound”*.

This concurs with Kozin et al.(2021) who sighted that traumatic brain injury reportedly being a common basis of auditory deficit in the history of children who have suffered accidents leading to acquired long term disability. Teema (2021) further confirmed that hearing loss is a well-known consequence in children with traumatic brain injury resulting from falls, motor vehicle accidents, hit by objects and other accidents. This finding aligns with the disability theory that it’s the nature of the environment which disables individuals but once put in a disability free surrounding, these individuals equally perform like the rest in society. The theory was important as it called for precautions against the occurrence of accidents on children especially during birth as it could control defects on the child’s ear that might result into hearing impairment in life.

Participants (N=2) pointed out that their children suffered the impairment due to lack of enough oxygen in the body. One of them said that;

*My child was ill and admitted in hospital and I was told by the medical personnel that the baby did not have oxygen in the body this resulted into hearing loss.*

The findings are important because the effect of delayed delivery anoxia is one among the conditions that can also cause hearing impairment in individuals. According to Jibril et al. (2021), children having hearing impairment and suffering from sickle cell disease are usually characterized by vaso-occlusion which leads to impaired blood flow and supply to several organs making them deprived of oxygen which highly affects the cochlear and resulting into hearing loss. The intervention called for periodic monitoring of the children which may help in controlling the occurrence of hearing loss.

#### **4.2.5 Excessive noise**

Loss of hearing due to excessive noise was reported by many Participants (N=6). The response from one of them was: *“My son became hard of hearing due to induced noise in the ear he was always using ear phones when listening to music”*.

According to these findings, exposure to loud noise can lessen one’s hearing ability leading to hearing impairment. This argument agree with Pienkowski (2021) that high levels of noise sound are capable of automatically and permanently damaging the ear. He further emphasizes that not only war or factory noise is dangerous to the ear but any kind of noise pollution in the environment.

As Piňosová et al (2018) confirmed, long term exposure to noise pollution and risks associated to acoustic noise exposure at work place can easily result into hearing impairment in individuals. Teema (2021) support the argument and asserts that being in close contact with excessive noise also leads to hearing impairment among individuals and in this case children at family level. Control of noise pollution in the environment which may endanger the ears is one way to prevent hearing loss among individuals in the community.

Parents were asked about when they noticed the child was having hearing loss. The findings varied. The common finding revealed that children acquired the condition before the second birthday, (Participants n=8). The major response: *“My child lost hearing when he was 18 months after suffering from measles”*.

These findings inform us that children could easily lose their hearing ability at early stages of growth. According to Victory (2021) there is no proper age of acquiring hearing impairment as it occurs at any point of the child’s growth and development due to various causes. Hearing loss may occur at any point in one’s life and is more complicated when it happens before a child acquires language.

Many revealed that children were born with the condition, Participants (N=7). According to one of the responses: *“My son was born with the impairment and seems to have inherited because my mother was as well a deaf”*.

Considering that many respondents were young parents from Olok sub-county, Pallisa District. The findings inform of how challenging it is to notice a child is born with hearing loss. According to Nicolson (2021) inherited form of deafness contributes to a larger number of hearing loss among individuals where parents

tend to pass the condition on to their offspring's. The argument confirmed that there may be hearing impairment inherited from the parents, and yet most parents are not aware of. Some of these cases are informed by medical reports.

As confirmed by some participants (N=5), they got to know from the medical report that their children were having hearing impairment. One parent said: " *I was given a medical report showing that my child has a hearing loss*".

The findings signified that medical reports are important source of information to parents about hearing impairment. Inverso (2020) emphasized that hearing tests are always done in hospitals by specialists that informs parents. These tests are carried out depending on ages, development and health of the child and further make reports and proper recommendations to the parents. These showed the relevance of visiting health centers in case of suspicion of hearing loss in children.

Apart from medical reports, parents were able to notice that children would only pick loud sound than low sound, participants (N=4). One of the respondents said that: "*My child only understands words spoken at a high tone*".

The findings disclosed the varying levels of hearing impairment in children in Olok sub-county. According to National Health Service- NHS (2021) some children with hearing loss perceive sounds at a high tone. Such children when holding a conversation with friends tend to speak louder and can easily miss out on the flow of the conversation. It is therefore important that individuals are keen while talking to children with hearing loss.

The findings therefore, found limited evidence on the prevalence and causes of hearing impairment though data was presented, making meaningful comparisons

was difficult due to variations in participants' responses and cut-offs used. Moreover, hearing impairment causes were often undefined limiting the utility for service delivery improvement. More and better data is urgently required on the causes and prevalence of hearing impairment in Pallisa district.

Research on hearing impairment is faced with issues of unified definition and its categories, lack of standardized quick and easy screening tools besides inadequate funding and highly skilled personnel in the field. Therefore, based on Africa's global burden of disease reports, the prevalence of hearing impairment in Pallisa is possibly underestimated. Studies are further required to quantify the exact prevalence and causes of Hearing Impairment in Africa.

#### **4.3 Effect of hearing impairment on language and communication development at family level in Olok sub-county**

Objective two of the study examines the effects of hearing impairment on language and communication development among children.

The second objective of the study sought to examine how hearing impairment affects the language and communication development of children at family level in Olok sub-county. Results of the study revealed the following as expressed below.

**Table 4:**

*The effect of hearing Impairment*

<b>Effects of Hearing Impairment</b>	<b>No. of responses</b>
Academic performance	7
Communication barriers	6
Financial constraints	4
Limited social interaction	4
Discrimination and rejection	3

**Source:** Primary data

**4.3.1 Academic performance**

Respondents were asked whether hearing impairment had an effect on academic performance of learners. Following the responses from 9 participants, seven (n=7) of them revealed that hearing impairment had an effect on academic performance as children with hearing impairment had reduced academic achievement. This is exemplified by one participant who expressed that: *“My child doesn’t perform well in his class work”*

A similar response from one child is also that: *“I found it hard to attend class I do not understand what is taught and more so math makes me hate class”*.

What is noteworthy in the above finding is that the academic performance of most of the children with hearing impairment was poor. This is supported by Choudhry et al. (2021) who asserted that children with hearing impairment experienced low academic achievement as compared to their counterparts as they hurdle in communicating and understanding speech and sound.



However other respondents (N=2) said that academic performance would be possible if the children are given proper attention and managed by trained teachers of special Needs.

In addition to the above, the findings of the study revealed that many parents of such children often do not mind about taking them to school to attain education as their counterparts. One of the female participants expressed that: *“When parents are invited to attend government centered programs to alleviate the lives of children with hearing impairment they forego”*

On another note, a similar response was recorded from a child with hearing impairment, he was quoted saying; *“I find it hard to attend class I do not understand what is taught and more So English makes me hate class”*

The finding signifies that children with hearing impairment faced challenges in academic achievements. Though the required support to a child by parents might be sorted, the child finds it hard to adjust to the learning situation unless parents join hands. In relation to the finding above, Mazlan (2019) stated that children’s problems and home needs can neither be solved by parents nor other relevant stake holders alone but need joint effort. This implied that, parents created a bond between the teachers, the family as well as other resourceful personnel that shaped the character in a child for societal inclusion.

Though, the pre-lingual had more difficulties as compared to the post-lingual hearing impairment in a study by Jones (2022), this however, is greed by the researcher that children who with signs of Deaf clearly had challenges in language development. Therefore, special trained teachers should be employed

in schools to compensate special skills in children with specific abilities for better living in future. Specialized schools might lead to better education of children with hearing impairment and given appropriate materials to the group of children.

#### **4.3.2 Communication barriers**

The results of the study in Table IV above show that out of 9 participants who responded to interviews, 6 of them revealed that children with hearing impairment faced communication barriers. In this regard, the children had difficulties understanding and perceiving sound, especially while in noisy places. One respondent had this to say: *“I always find challenges in class I can’t understand the teacher properly more so when there is noise in the class”*

In another instance, the findings also showed that children with hearing impairment had problems in proper pronunciation of words. Regarding the finding, one respondent stated: *“My child is always laughed at when she fails to pronounce a number of words and she finds it hard to participate in class”*

A similar finding indicated that CWHI faced challenges in expressing themselves. This is exemplified in the following expression by one participant that: *“I cannot articulate words correctly during communication and my friends laugh at me, this made me shy”*

The above findings confirmed that children with hearing impairment still found problems in understanding and distinguishing between different sounds while in noisy places and couldn’t fluently pronounce some words correctly during communication. Coelho et al. (2015) agree with the argument and emphasized that hearing impairment can impair voice production which easily affects one’s

pronunciation of words and speech limitation with specific deviations in communications and presents negative impact on education and social life of individuals affected. The findings might lead to early assessment of the children with hearing impairment for better interventions and proper management of the condition.

More findings disclosed that the children had problems in understanding speech from different people, Participants (N=2). One respondent expressed that: *“My child cannot internalize conversation from different individuals especially the ones who are not at a close distance and audible enough”*.

Apart from having challenges in understanding and distinguishing sounds, the findings indicated that children faced difficulty in understanding speech from different people especially those at a distance. The findings confirmed that children with hearing loss had difficulties in activities involving listening and localizing sound in noisy places and had a wide range in auditory difficulties as compared to those with the hearing ability. However, it also emerged from the responses that children with signs of hearing impairment had communication challenges and used gestures as they communicated with their parents and other family members, participants (N=6). One respondent stated this: *“I usually communicate with my child locally in local signs and also tap her in order to get her attention properly”*.

According to the findings, parents and their children with auditory deficit communicated using local signs and gestures. Goldin-Meadow and Yang (2017) support the argument that children with hearing loss and born of hearing parents commonly used local signs and gestures for communication as they couldn't

understand commonly spoken language and neither had they been exposed to sign language. Training in sign language for both parents and their children could improve on communication among the family members.

As evidenced by parents' negative attitude towards their children, they lacked training in sign language as a means of communication that could commonly be used in the environment especially at home. Purnami et al (2018) supported the argument and asserts that deafness is desperation of language and not simply distraction of sound. Children with hearing impairment basically have problems in perceiving sound and identifying the variation between morphemes, words, phonemes and larger syntactic patterns and couldn't recognize the patterns and associate them with meaning.

Other four participants disclosed that children had muffled voices. According to one respondent: *"My child has unclear speech while talking"*.

Children with hearing loss who do not speak clearly have an indication of hearing loss. According to the report from Mayo Clinic (2021) muffled speech is associated with individuals with hearing impairment. This is important that parents are keen on their children's speech and pronunciation of words as it may help in identifying any hearing defect.

Another finding still revealed that children would withdraw from conversations. One respondent had this to say: *"My daughter in primary four usually isolates herself from the rest while having a conversation"*

The findings indicated that children who could be withdrawing from the conversation showed signs of hearing loss. These findings are in agreement with

Starkey (2018) who observed that Persons with hearing loss have more chances of being socially isolated from others. The findings implied that hearing impairment might affect one's social being. Withdrawal from conversations will also affect children's learning, participation and development. In addition to withdrawal from conversations, the findings specified that children had difficulty in understanding words while in noisy places, participants (N=3). One respondent stated: *"My daughter always misses out words expressed while in a crowd or noisy places"*.

According to findings hearing impairment present gaps in listening and understanding words while in noisy places. Similarly, frequent asking for pardoning so as to perceive any information are indicators of hearing loss. Participants (N=2). One respondent stated: *"My daughter in primary five always asks for repetition of any word, says her teacher"*

Victory (2022) confirmed that individuals with hearing loss struggle to understand speech and sound especially while in a noisy environment. It implied that reduction of background noise while communicating to individuals with hearing loss could improve on their social being.

### **4.3.3 Financial constraints**

The results in Table IV above show that four (n=4) out of nine respondents revealed that parents with children with hearing impairment experienced financial constraints when managing a child with hearing impairment. As an example, to the finding above, one respondent expressed that: *"I have nothing to*

*support this child only God will, am poor not even working, I can't even find a pet job".*

The implication of the above finding is that parents with CWHI spent a lot of time taking care of these children and as such, they could not find adequate time to concentrate on income generating activities. In addition, the fact that taking care of CWHI could be an expensive task and yet, the parents may not have had reasonable opportunities for work. Therefore, they ended up not having money to address their household needs, including taking care of their CWHI. This is supported by Rachel et al (2019) who confirmed that managing families of children with hearing challenges and disabilities at large requires parents to have enough finances to sustain their families and provide necessities for children. However, most of such families are deprived due to limited income at house hold.

In addition to the above, the 'Deaf child world wide' (2017) is also consistent with the finding that parents are the most influential patterns in the rearing of children. However, low financial status among families of children with hearing impairment causes failure to full support of their needs. Such children never benefit from education and other privileges and society renders them useless and cursed. Training on income generating activities could improve on the lively hoods of such children.

#### **4.3.4 Limited social interaction**

The study results in Table IV above also show that CWHI encountered the problem of limited social interaction. Considering that discrimination is faced by children with disabilities, children with hearing impairment faced difficulties

during social interaction as reported by four (N=4) study participants during interviews. In this regard, one participant mentioned:

*My daughter of 6 years of age finds it hard to associate with the friends during their play time, she says they laugh at her so she isolates herself and plays alone.*

A similar response was cited out among 3 participants (N=3). This is exemplified in the response of one participant who expressed that: *"I find it hard to talk to my friends they always laugh and mock at me and they have given me a Knick name "Akiming" translated as "a deaf."*

In relation to the above finding, other two (2) parents revealed that children with hearing impairment are Knick named. One participant said:

*My child has been Knick named by her siblings as 'Amajing' translated as "deaf. She neither interacts with them at home I always find her seated alone even though they are served food together she feels shy to share with the rest.*

Besides that, children also reported that they were being segregated by their fellow children and do not want to play with them when they are back home, they said they would also become deaf. This showed that most parents who interacted freely and assisted their children in home work were probably few and those highly educated. A positive parental-child interaction could promote language development and social communication in a child being building blocks for literacy and academic achievement. Sign language should therefore be trained to the family members of the child with hearing impairment as

soon as their child is discovered having hearing defect to simplify free interaction and communication.

It was further revealed that lack of parental involvement has increased the rate of discrimination among children with hearing impairment. Respondents revealed that, majority of these children are being discriminated in all sorts starting from home and even to the learning centers. The researcher agreed with this finding because most of the children are not given due respect and care like the other ordinary children unlike those mainly from learned families.

#### **4.3.5 Discrimination and rejection**

Lastly, the findings of the showed that discrimination against and rejection of children with hearing problem was a common problem they faced in Olok sub-County in Pallisa district. This was reported by three study participants. These participants revealed that most people in the community looked at these children as a problem and therefore, they had bad attitudes towards CWHI. A certain participant reported on this that: *“Some people in the community do not want these children to mix freely with others”*.

Negative attitude was reflected as the most outstanding effect on children with hearing impairment at family level. O’Neill et al. (2019) argued that for so long, deaf people have been lagging behind not as a result of their disability, or because they want to, but rather as a result of societal attitude towards them. O’Neill’s argument is supported by Owusu (2018) that most parents possess negative perception towards their children with disability. One respondent expressed that:



*“Most fathers distance themselves from their children with Hearing Impairment as they feel being burdened.”*

In another dimension, the study findings revealed that children with hearing impairment were overprotected by some parents to a point that they left them dormant, helpless and uncreative in life. Children become more challenged as they have no mentor for their cognitive development. Parents always lost trust for their children even in adult age due to the inappropriate upbringing rendered to them. Children learn by imitating others or doing. Therefore, if children are not involved in various learning activities in the early years, their cognitive is adequately not trained to handle future challenges that might be encountered.

In similar situations, due to fear of rejection or stigmatization by the society, parents perhaps left children with hearing impairment at home alone as they moved out for recreation with other siblings. These were demoralized psychologically as they felt rejected and unloved. Learning of children with hearing impairment is doomed without interaction as well as socialization. It explained why children feared to contribute to any ideas in learning groups and form groups even in school. A feeling of low self-esteem was the worst encounter by majority of learners as they saw their counter parts visited and none checked on them.

The above expression revealed that due to the condition of their children, majority of parents are still living in the denial. Stigmatization as a fear from the society further renders parents to abandon their children and having no affection for them at all. In a similar way, when one of the parents was not the child's natural parent, it is a way to escape from the responsibility as the other party might feel

troubled to carry on alone. Immoralities at early age could result from this avoidance during search for affection and mentors.

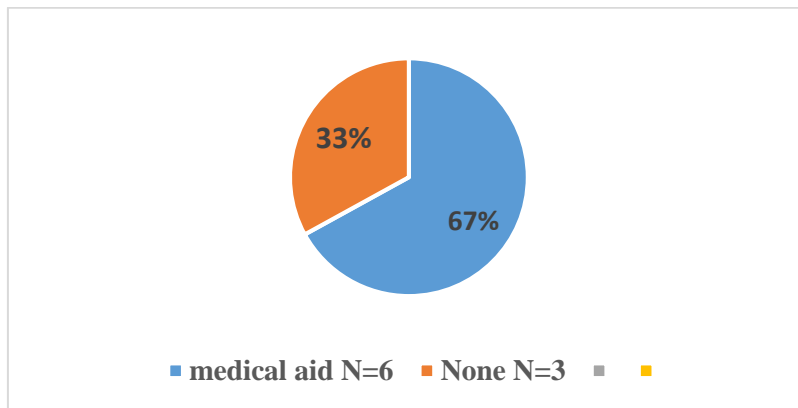
The above findings are consistent with Ann (2022) who reported that children with hearing impairment have trouble in making friendship among their counterparts without hearing impairment and interaction with them becomes difficult. She added that sharing of ideas between children with hearing impairment and their ordinary counter parts and friendship maintenance is limited.

In summary, it is recognized that hearing is essential for the development of speech and language, communication, and learning. Children who have hearing loss or other auditory processing issues are nevertheless at risk of developmental delays. The impacts on a child's development are more severe the earlier in the child's life a hearing loss happens. Additionally, the impact will be less severe in the long run the earlier the issue is recognized and addressed.

#### **4.4 The strategies used in managing hearing impairment among children at family level in Olok sub-county**

Objective three of the study aimed to explore the strategies used in managing hearing impairment among children at family level in Olok sub-county. The information regarding this matter was collected and the findings were recorded as follows.

#### 4.4.1 Medical support



**Figure 2:**

*Shows the need for medical attention*

**Source:** Primary data

The findings in the figure above revealed that majority of the participants (N=6) agreed that children with hearing impairment were taken to the health centers for further medical attention and management although a few (N=3) disagreed about it. A response from the children also showed that they were taken to seek medical attention. The major response was that: *“My mother told me that she took me to the main hospital to assess my ears because I could not respond when called”*.

The implication of the above findings is that parents recognize the importance of taking children with hearing impairment to medical professionals for review and that it is one of the best ways of managing such a deficit. However, due to ignorance among some parents and also negative perceptions towards children with hearing impairment, they look medical attention as wastage of time.

The findings above are essential because they specify that children with hearing impairment are taken to the health facilities for further assessment and proper management of the condition. This is in agreement with Purnami et al. (2018)

who confirmed that hearing loss should be effectively assessed during the early stages of the child's growth. Most cases of hearing impairment in children have unknown causes that usually result in late diagnosis. New born hearing screening programs are therefore recommended for early detection of hearing loss in infants and children with delayed speech.

Escobar-Ipuz et al. (2019) further observed that hearing tests are always done in hospitals by audiologists. These carry out tests depending on the age development and the health of the child. It further makes proper recommendations for better management to the parents. This outcome is significant as it gives guidance to parents towards early assessment of the hearing impairment in their children.

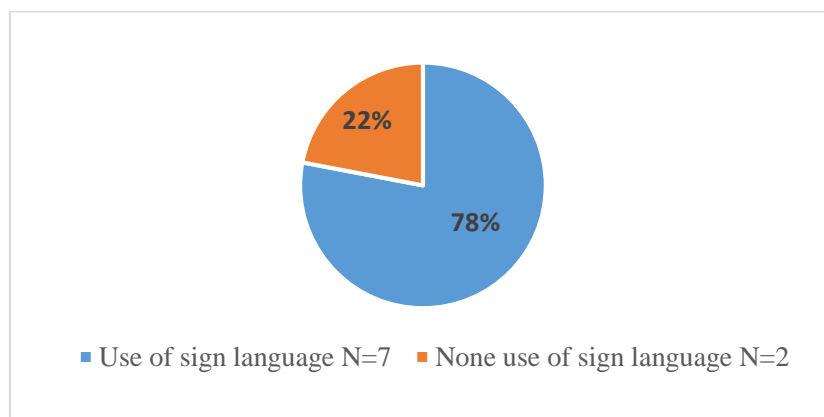
Parents visited health centers on realizing that their siblings couldn't respond normally to sound, Participants (N=9). One of the major responses was: *"Upon realizing my child could not perceive sounds; I took her to a health facility for further management"*

Considering that parents visited health centers the findings inform that they sought medical examination for their children who showed signs of hearing impairment for better management of the condition at family level. Rahul (2021) concurs with the argument and asserts that children with auditory deficits should be taken to the hospitals for specialized treatment of the ears depending on the condition for proper management. It is necessary to have a child assessed and treated on the condition present so as to improve on their functionality.

#### 4.4.2 Education and training on sign language

During the study, the findings also revealed that lack of knowledge about sign language by parents puts a barrier to communication between the parents themselves and child with hearing impairment. Thus, majority of the participants (N=7) suggested the need for education and training of parents in sign language as indicated in Figure IV below.

#### Use of sign language



**Figure 3:**

#### *Responses on sign language*

**Source:** Primary data

In the figure above, it was revealed that management of children with hearing impairment at family level would be easily addressed through education and training in the use of sign language. Some of the results show that some of parents (N=2) who attended courses offered by the school to train in Uganda sign language (USL) were those hearing parents having children with hearing loss. This indicated that parents wanted to fluently communicate with their children and assist them in daily activities at home and in school work. On the other hand,

most parents (N=7) stated that due to distance from their home, they failed to attend the training and some forgot because of the gap between the training seasons. Two hearing parents expressed that:’

*I know I’m supposed to learn sign language to enable both of us communicate and understand each other, but sign language is very hard. Additionally, learning sign language evenly is too demanding in terms of transport yet some of us are from distant places and worse still have no regular income.*

More findings from three participants revealed that training children in sign language with their parents can equally help to manage hearing impairment. In this regard, a certain participant expressed that: “*Elimokit eong akaasala na ingwalasik ebbe arai akoto eong apedor kageu alosenene kede ikoku aisisia einer kede akan*” Translated that:- “*The councilor in charge disabilities told me that incase I wanted to manage communicating with my child I should enroll together with the child for sign language training*”.

Another finding from five participants also indicated that it is good to have a child trained in sign language for easy expression with the friends. The major response was:

*One of my friends said that she has seen children with hearing impairment communicating to one another and also sees some people signing on TV so she encourages that I*

*should find a rightful placement such that the child learns sign language for easy management at home.*

The implication of the above issues raised by the parent in relation to mastery of sign language is that parents can easily manage hearing impairment among children through practice and training, as the saying goes “practice makes perfect”. It is indeed very true that mastering sign language requires two key aspects: interest and regular practice. The distance and limited time failed most parents from learning sign language yet, they were willing. This implied that, such courses should be introduced in nearby regular schools for easy access by more families.

The above findings are supported by Jones (2022) who observed that providing support to children with hearing impairment and their family is vital to ensure that Deaf children are diagnosed early enough and given proper interventions and trainings in different areas such as sign language as a copying strategy to improve on their performance in life. As observed by Charanjeev (2015), parental acceptance would enable the children to adapt and get well along with everyone, and feel secure and confident.

The results above were however, inconsistent with Bell (2021) who reported that prayers were used as a coping strategy by African-American parents facing same difficulties and were less likely to seek help from mental health therapists. In line with Harithasan and Mazlan (2019), religious beliefs are vital in understanding beliefs towards people with disability. Religious organizations might offer constructive support and appreciate disability as a whole on religious ground and could value it as gift or will from God.

#### **4.4.3 Provision and use of hearing aid**

The findings of the study revealed that management of hearing impairment in a family is possible through provision and use of hearing aids for children with hearing impairment. In this regard, most of the parents suggested for the need to avail hearing aid to children with hearing impairment as it can help to manage the condition. One study participant expressed that: “*Ebala amwalimu ikakoku ebbe, adumakin ikoku acuma na epupere kaak*”. Translated, “*The teacher to my child advised me to find a hearing aid for my child to aid proper hearing*”

The above finding is significant because it confirmed that parents are aware and willing to support their children use hearing aids as a means of managing Hearing loss. It's evident that parents are aware that if their children fail to use hearing aids, their quality of life will eventually be affected. This is consistent with the findings of Jordan et al. (2021) that hearing impairment can impede the quality of life of individuals which affects their self-esteem but one can improve on all aspects of life as they are introduced to the use of hearing aids.

#### **4.4.4 Reduction on background noise**

In addition, four participants conceded that during the communication process to children with hearing impairment, one needs to reduce background noises. This is exemplified in the following response: “*Arai inera eong kede ika pese erai eong awanyuni ebe emamei adis wumat na ecelet keere*”. Translated, “*When am talking to my daughter, I make sure that there is no noise in the background and even move nearer to her in case I want her to understand my words*”.



The above findings are necessary because they showed that reducing noise from the background while communicating with children with hearing impairment is a strategy used to manage hearing impairment among the children at family level. The finding is consistent with Raina (2021) who reported that children with hearing impairment face difficulty in locating and differentiating sounds and voices leading to trouble in identifying and understanding different sounds in the environment. This may help in improving on the environment for communication with children with hearing impairment.

#### **4.4.5 Seeking appropriate academic placement of CWHI**

More findings from two participants (N=7) indicated that parents sought appropriate placement for their children with hearing impairment. One respondent stated: *“After realizing that my child had a hearing impairment in primary two, I was advised by her teacher to find for her a rightful placement”*.

According to Amatzia (2016), a rightful placement for students with hearing impairment should be considered for better education of such children. Parents have to put into account the communication need and social aspect for the child. Reasonable accommodation should therefore be observed for proper education of children with hearing loss. According to the findings, parents find rightful placement for education of children with hearing impairment.

#### **4.4.6 Child enrollment in rehabilitation centres**

Besides rightful placement, parents enrolled their children in rehabilitation centers as revealed by four participants. Regarding this finding, one participant

had this to say: *“My neighbor who is a nurse advised me to register my son with a rehabilitation center for skill management which I adhered to”*.

Considering that some parents were educated, this implied that they enrolled their children in rehabilitation centers for better management of the condition. Koliadiuk (2015) confirms that physical rehabilitation for Children with auditory deficit is the most important achievement for promoting social integration and active work in the society for improved livelihoods. Rehabilitation is therefore vital for children with hearing impairment to enhance better skill training for independent living in future.

#### **4.4.7 Lobbying for child assistance**

Besides, the findings from three study participants (N =3) revealed that parents lobby for assistance for their children with hearing impairment from well-wishers as a way for long term life improvement. One participant said:

*When I confirmed that my child has hearing impairment, I had to reach the church which connected me to one of the compassionate organizations that facilitated further assessment of my child, and he was given hearing aids.*

The findings implied that parents lobbied for assistance for their children with hearing impairment. As supported by Wiener and Blasch (2017) hearing impairment could be deleterious to ones' speech and language development however provision of hearing aids as an early intervention is a standard support given to children with hearing loss to improve on the hearing ability of the child. It implied that support given to children with hearing impairment could improve

on their functionality for better participation and proper management of the condition in children.

Jones (2022) confirmed that communication is a unifying factor in individuals and hearing impairment can affect the progress in expression together with the education of the child therefore providing support to children with hearing impairment and their family is vital to ensure that proper interventions and trainings in different areas are given as a coping strategy to improve on their performance in life.

## **CHAPTER FIVE**

### **SUMMARY CONCLUSION AND RECOMMENDATIONS**

#### **5.0 Introduction**

This last chapter builds on the study findings presented in the previous chapter four to bring out a summary of the study. It also provides the conclusions and recommendations of the study. The chapter concludes with suggestions for further research.

#### **5.1 Summary of the findings**

The following section brings out a summary of the findings derived from the study and it follows the demographic information of participants and the study objectives.

##### **5.1.1 Demographic information of participants**

The study established that most of the children with hearing impairment were living with their mothers who were young and inexperienced in identifying CWHI early as well as taking good care of their CWHI. The age is coupled by low education level, which means that there was limited information among parents regarding hearing impairment. Parents were able to report about the causes of hearing impairment among children at family level and these are summarized as follows:

### **5.1.2 The awareness of how hearing impairment is commonly caused among children at family level in Olok sub-county**

The first objective of the study sought to establish the awareness of how hearing impairment is commonly caused among children at family level in Olok sub-county. The study established that the parents were aware of numerous causes for hearing impairment among children, ranging from obvious to obscure. After parents visited health centers, those causes that were invisible became known to them. As many children experienced hearing impairment after having pus discharge in their ears, which were again treated with herbal medicine, the study demonstrated that disease was the most common cause of hearing impairment. Another cause of HI was congenital, and parents were aware that their children would be born deaf. Accidents, lack of oxygen, excessive noise, and drug usage were some additional causes that the study identified, albeit the participants did not disclose the drugs. These results show that children who are not given proper care by their parents or guardians could easily lose their hearing abilities. Instead, the application of herbal medication had a greater impact on children's hearing abilities, suggesting that herbs have a greater impact on children than conventional medicine does. Specialists are thus needed at the neighboring medical facilities.

### **5.1.3 How hearing impairment affects the language and communication development of children at family level in Olok sub-county**

Objective two of the study sought to establish how hearing impairment affects the language and communication development of children at family level in Olok sub-county. Poor academic performance, communication barriers, financial

constraints, limited social interaction, and discrimination and rejection were five effects caused by hearing impairment that the study identified. These effects are related to livelihood, and the child and family may suffer if no actions are taken to address them. For instance, the study found that parents of CWHI frequently did not mind sending them to school so they can receive the same education as their peers. The child could become impoverished as an adult as a result of this. Due to communication difficulties, especially for parents who are illiterate in sign language, HI would result in parents giving up on raising their own children. Additionally, the child can find it very challenging to attend school and communicate with others. Because most parents stay at home to care for their hearing-impaired children, financial limitations also look to be harmful to families because parents will have less time for work. Finally, parents' overprotection of CWHI would render them powerless, uncreative, and inert.

#### **5.1.4 The strategies used in managing hearing impairment among children at family level in Olok sub-county**

Objective three of the study aimed to explore the strategies used in managing hearing impairment among children at family level in Olok sub-county. The participants revealed a number of existing strategies and among them; medical attention was the most effective strategy. In this case, parents would go to health facilities to request medical examinations for children who exhibited indicators of hearing impairment in order to treat the disease more effectively. Another strategy, such as parents with CWHI enrolling in academic courses provided by schools for training in Ugandan sign language, has evolved. Hearing aids were also offered and used. Parents urged that in order to better manage the problem,

hearing aids should be made available to all CWHI. Along with advocating for the child's financial or in-kind support, the study participants also recommended reducing background noise and securing the children's proper academic placement in special schools and rehabilitation facilities. It follows that managing children with hearing impairment requires both medical and social interventions, including medical care, rehabilitative assessment, community awareness raising, welfare, and guidance and counseling.

## **5.2 Conclusion**

Basing on the objectives and analysis of the study findings, the following conclusions were made:

**5.2.1** The first objective of the study sought to establish the awareness of how hearing impairment is commonly caused among children at family level in Olok sub-county. The study concluded that there are a variety of causes for hearing impairment, ranging from obvious to obscure. Many children experienced hearing impairment after having pus discharge in their ears and being treated with herbal medicine. This therefore revealed that disease was the most common cause of hearing impairment. Other causes emerged and these include; congenital, accidents, lack of oxygen, excessive noise, and drug usage, albeit the participants did not disclose the drugs. Specialists are thus needed in the nearby medical centres.

**5.2.2** Regarding the second objective that intended to establish how hearing impairment affects the language and communication development of children at family level in Olok sub-county, the study concluded that poor academic

performance, communication barriers, financial constraints, limited social interaction, and discrimination and rejection are five effects resulted from hearing impairment that the study identified. These effects are related to livelihood, and the child and family may suffer if no actions are taken to address them. Children may not be sent to school by their parents/guardians so they can receive the same education as their peers. In addition, communication difficulties may also affect their education as well as social interactions. Hence, there are many chances of CWHI becoming impoverished as an adult.

**5.2.3** The last objective of the study aimed to explore the strategies used in managing hearing impairment among children at family level in Olok sub-county. In this regard, the study concluded that most effective strategy is medical attention where parents go to health facilities to request medical examinations for children who exhibit indicators of hearing impairment in order to treat the disease more effectively. Other strategies include parents with CWHI enrolling in academic courses provided by schools for training in Ugandan sign language, provision of hearing aids to CWHI for use, advocating for the child's financial or in-kind support, reducing background noise and securing the children's proper academic placement in special schools and rehabilitation facilities.

### **5.3 Recommendations**

The following recommendations are based on the conclusions reached in accordance with the study objectives and they aim to improve on the ways of managing hearing impairment among children at family level in rural communities.



### **5.3.1 The awareness of how hearing impairment is commonly caused among children at family level in Olok sub-county**

The study revealed that some children got the hearing impairment at a later stage in life developing pus and thereafter, being treated by their parents with herbal medicine. Therefore, the study recommends that parents should learn to always seek for medical attention of their children from qualified health personnel in health facilities. This will help avoid damaging the ears of the children. In addition, it will also help them to properly manage diseases before worsening to the level of causing hearing impairment among children.

The study also revealed that some parents could not easily detect the condition of hearing impairment among their children due to limited knowledge about the way of making assessment. In this regard, the study recommends that the political leaders of Pallisa district should work closely with the Ministry of Health to establish a section at the health centers with staff that have knowledge on assessment and intervention of hearing problems in children. This will encourage early detection thus, effective treatment.

Since accidents were among the causes of hearing impairment among children as revealed by the study, parents are therefore, recommended to always protect their children by sensitizing them to avoid playing in dangerous places.

In addition, there is need to train and empower parents on skills for early assessment of their children's hearing loss to ascertain the functionality of the ear for better management of auditory problems at family level.

Lastly, the study revealed that excessive noise from ear phones also caused hearing impairment among children to a certain extent. Therefore, children and adults as well are recommended to avoid putting on very high volumes when using ear phones. They should also avoid over using ear phones as they can cause harm to the ear drum and lead to hearing difficulties.

### **5.3.2 How hearing impairment affects the language and communication development of children at family level in Olok sub-county**

The study revealed that some children may end up not being sent to school due to the condition of hearing impairment. The study therefore, recommends that parents should solicit for fund to buy for their children assistive listening devices (ALD) to help them communicate in one-to-one conversations. This will help children to attend school and also be able to interact with their peers freely.

The study also recommends that parents should organize themselves into associations such as Village Savings and Loan Associations (VSLA) that help them to learn from each other and support one another financially and physically on how to manage deafness in their children. These associations will help parents of children with hearing impairment save for emergencies such as treatment of hearing impairment condition among their children, buying assistive listening devices, and paying schools fees for their children among others.

Lastly, the study recommends that training in sign language at community level should be carried out for children with hearing impairment as well as their parents.

### **5.3.3 The strategies used in managing hearing impairment among children at family level in Olok sub-county**

The study revealed that majority of parents of CWHI in Olok sub-county sought for medical attention of their children regarding hearing impairment after detecting certain signs on them. Therefore, the study recommends that parents should learn to be careful with the signs and symptoms they detect among children regarding hearing difficulties. They should respond immediately by taking the children to the nearby health facility for medical examination.

Parents of children with hearing impairment are also recommended to enroll for training in Ugandan sign language so that they can easily communicate with their children and also give them all the kind of emotional support they need.

Lastly, the government through the Ministry of Finance, Planning and Economic Development and the Ministry of Education and Sports should plan for provision of hearing aids to pupils with hearing impairment in inclusive primary schools in rural communities at a free cost. This will not only help children with this condition enroll and complete primary school, but also help in the realization of the goal of Universal Primary Education in Uganda.

### **5.4 Suggested areas for further study**

Some insights have been drawn from the perspectives and experiences of parents with children with hearing impairment. Nevertheless, some research gaps that could expand this research and provide additional insights regarding managing hearing impairment among children at family level still remain. In the first place, a study should be carried out on the effect of hearing impairment among children

on their social engagement in the community. Also, there is need to conduct a study and determine the factors that promote active parental involvement in the education and care of children with hearing impairment in rural communities.

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## **APPENDICES**

### **APPENDIX I: CONSENT FORM**

My names are Ademun Deborah Omonuk a second-year student pursuing a Master's degree of Special Needs Education (SNE) of Kyambogo University (KYU). I am carrying out a research study on the ways of managing hearing impairment among children at family level in Olok Sub-County, Pallisa District

#### **Purpose of the research**

The research was carried out as a requirement for the partial fulfillment of the requirements leading to the award of a Master's degree in SNE of Kyambogo University. I would like to examine the managing hearing impairment among children at family level

#### **Research procedures**

Participation in the study will involve answering questions in the interview guide and specifically those related to the topic. You may also be selected for the focus group discussions. All questions will focus on managing hearing impairment among children at family level. , the common causes of hearing impairment, the effects of hearing impairment on language and communication and the effective strategies of managing hearing impairment among children at family level in Olok Sub County in Pallisa District.

#### **Potential benefits of this study**

This study may be used to widen the knowledge on the management of hearing impairment among children at family level

It may also aid institutions to identify causes and strategies for enhancing management of hearing impairment among children at family level

Last but not the least it can be used as a platform for future research among stakeholders of children with special needs.

**Provisions for confidentiality**

Names of persons who have provided pertinent information will not be included in the research results. All research data will be confidential. All research data will be stored in lockable facility accessible to only the primary investigator for the duration of the study. Audio tapes and other records will be destroyed after the completion of the study.

**Risks and Discomforts**

Every effort will be made to eliminate possible risks to all participants in the study.

**Participation**

Participation in this study is entirely voluntary, the participant can withdraw from the study anytime without any penalty or loss of any possible benefits.

Primary investigator

**Ademun Deborah Omonuk**

Sign----- Date-----

Participant

I have read and understood the above information, I willingly accept to participate in the research study

Name----- Sign-----

Date-----

**APPENDIX II: SEMI-STRUCTURED INTERVIEW GUIDE FOR  
PARENTS**

**To be read to the respondents**

I am **Ademun Deborah Omonuk** a student of Kyambogo University pursuing Masters in Special Needs Education. Research is one of the requirements for the award of this Masters.

My study is focusing on: “Managing hearing impairment among children at family level in Olok Sub-County in Pallisa District.”

You have been selected to participate in this study because of your experience in managing children with hearing impairment in your family. Your responses will be treated with utmost confidentiality and only used for purposes of this study. I therefore, request you to provide answers to the following questions as best known to you:

**SECTION A: DEMOGRAPHIC INFORMATION**

Tick appropriate Box:

1. Gender: Male                   Female
2. In which age group do you belong: 18-30  30-50  50-70
3. Education Level: Certificate: Diploma  Degree  Masters

Others Specify.....



**SECTION B: The common causes of hearing impairment among children at family level**

4. How many children do you have with hearing impairment in your family?

.....

Do you have other relatives with hearing impairment in your family? If yes, what caused their hearing impairment?

.....

What have you been told caused hearing impairment who told you?

.....

**SECTION C: The effects of hearing impairment on language and communication development among children**

5. How does hearing impairment affect your child/children in daily activities in your family?

.....

How does your child/ children with hearing impairment communicate with other family members?

.....

**SECTION D: The effective strategies of managing hearing impairment  
among children at family level**

6. How do you support your child/ children with hearing impairment in your family?

.....

What services are available for your child/ children with hearing impairment in your community?

.....

Do you have any other information you would like us to share about your child/ children with hearing impairment? If yes, give details:.....

**Thank you**

**APPENDIX III: SEMI-STRUCTURED INTERVIEW GUIDE FOR  
CHILDREN WITH HEARING IMPAIRMENT**

To be read to the respondents,

I am **Ademun Deborah Omonuk** a student of Kyambogo University pursuing Masters in Special Needs Education. Research is one of the requirements for the award of this Masters.

My study is focusing on: “Managing hearing impairment among children at family level in Olok Sub-County in Pallisa District.”

You have been selected to participate in this study because of your experience in living with hearing impairment. Your responses will be treated with utmost confidentiality and only used for purposes of this study. I therefore, request you to provide answers to the following questions as best known to you:

**SECTION A: DEMOGRAPHIC INFORMATION**

Tick appropriate Box:

Gender: Male  Female

In which age group do you belong 1-5 yrs  5-10yrs  10-17yrs

What is your highest Education Level: primary  Secondary?

Others Specify:.....

**SECTION B: The common causes of hearing impairment among children at family level**

How many children have hearing impairment in your family?

.....

Do you have other relatives with hearing impairment in your family? If yes, what caused their hearing impairment?

.....

What have you been told is the cause of Hearing Impairment who told you that?

.....

**SECTION C: The effects of hearing impairment on language and communication development among children**

How does hearing impairment affect your daily activities at home?

.....

How do you communicate with other people at home?

.....

**SECTION D: The effective strategies of managing hearing impairment among children at family level**

How does your family members support you at home?

.....

What services are available a for you in your community?

.....

Do you have any other information you would like us to share concerning hearing impairment? If yes, give details:.....

**Thank**

**APPENDIX IV: LETTER OF INTRODUCTION FROM THE  
UNIVERSITY**



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**APPENDIX 8**

**Date: 07/01/2023**

**TO WHOM IT MAY CONCERN**

**RE: ADEMUN DEBORAH OMONUK**

Dear Sir/Madam,

This is to introduce to you the above named student Reg: No 19/U.GMSN/20988/PD Pursuing Master in Special Needs Education, Department of Visual Impairment Studies, Kyambogo University.

She intends to carry out research on “Managing Hearing Impairment among Children at Family Level in Olok Sub-County, Pallisa District” in partial fulfillment of the requirements of the award of Master in Special Needs Education.

The purpose of this letter therefore is to request you to grant her permission to carry out her study in your institution.

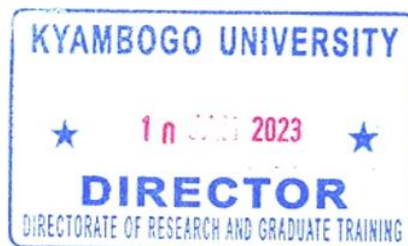
Any assistance rendered to her will be highly appreciated.

Yours sincerely,

| 

Prof. Bosco Bua

AG. DIRECTOR



## APPENDIX V: LETTER OF INTRODUCTION FROM THE DEO

### PALLISA DISTRICT

Tel.0778354691



PALISA DISTRICT LOCAL GOVERNMENT  
Education department  
P.O BOX 14  
PALISA -UGANDA

20<sup>th</sup> June 2022

In any correspondence on  
This subject please quote CR/161/2

To whom it may concern.

Dear Sir/Madam

**Ref. Ademun Deborah Omonuk**

This is to bring to your attention that the above reference is a student of Kyambogo University Pursuing a Masters' Degree in Special Needs Education of Kyambogo University.

As a requirement for award, she is being assigned to conduct a study on ways of managing hearing impairment among children at family level in Olok Sub-County, Pallisa District.

You are expected to exercise and observe the utmost ethical traits during the study and that the results of the study will be consulted for academic purpose and you are requested to share the research report with the school.

I therefore request you to a code her all the necessary assistance she may need from your office.

Yours in service,

Deo Pallisa District.

A handwritten signature in blue ink, appearing to read 'Lukendo Agnes'.

Lukendo Agnes.



**AG, DISTRICT EDUCATION OFFICER**

Copy;

Parish chiefs , Olok sub-county.

The head teachers Olok sub-county.

**APPENDIX VI: LETTER OF INTRODUCTION FROM THE CDO**  
**OLOK SUB-COUNTY**

Tel.0773754468



**PALISA DISTRICT LOCAL GOVERNMENT**  
**Education department**  
**P.O BOX 14**  
**PALISA -UGANDA**

CDO, Olok sub-county

Pallisa district

11/07/2022

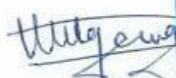
Ademun Deborah Omonuk.  
Kyambogo University  
Kampala.

**RE: PERMISSION TO CONDUCT RESEARCH.**

This is to inform you that you have been granted permission to carry out a research study on the management of hearing impairment among children at family level in olok sub county pallisa district as part of the requirement in the fulfillment of the award of a masters Degree of Kyambogo University in Special Needs Education of Kyambogo.

By the copy of this letter you are requested to follow the research ethics as expected of you. Therefore all the concerned are required to cooperate accordingly.

Yours in service,

  
**COMMUNITY DEVELOPMENT  
OFFICER  
OLOK S/COUNTY  
PALLISA DISTRICT LOCAL GOVT  
DATE \_\_\_\_\_**

KAGENYI WILLIAM

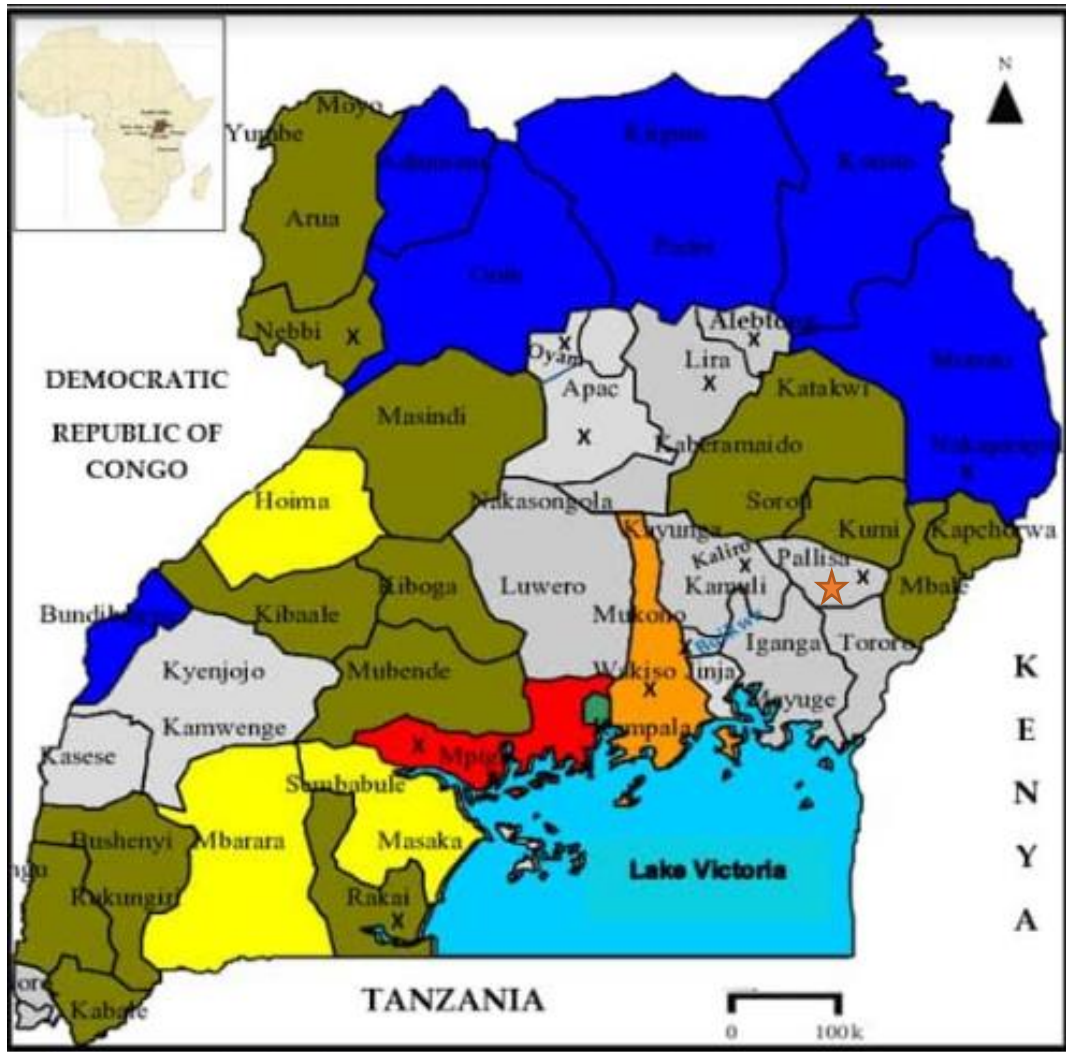
**COMMUNITY DEVELOPMT OFFICER**

Copy;

Parish chiefs , Olok sub-county.

The head teachers Olok sub-county.

**APPENDIX VII: SKETCH MAP OF UGANDA SHOWING PALLISA DISTRICT**



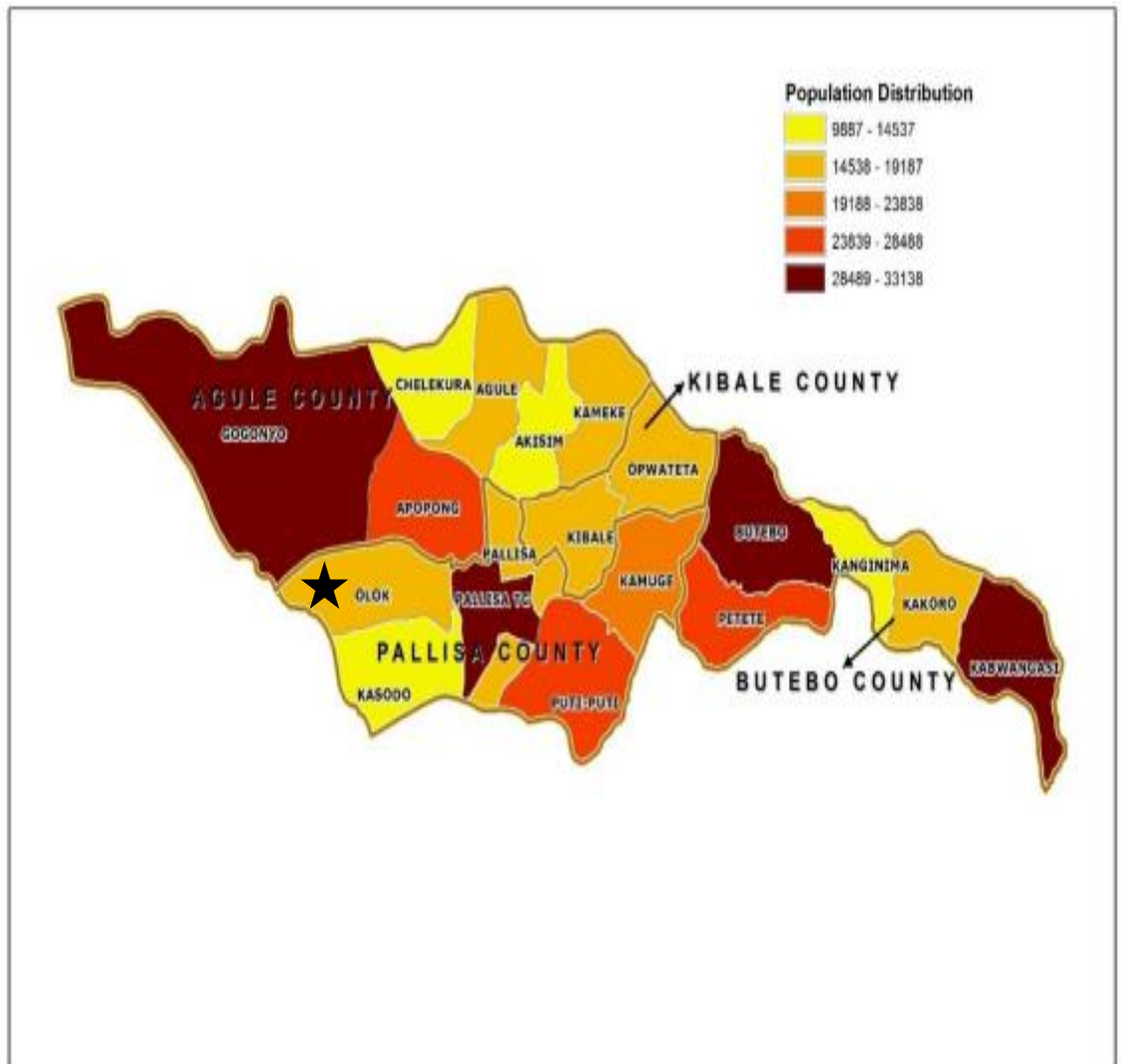
**KEY**

-  Pallisa District (Study area)



**APPENDIX VIII: SKETCH MAP OF PALISA SHOWING STUDY**

**AREA**



**Key**

★ Study area (Olok Sub-county)