

**QUALITY OF LIFE AMONG ADULT PATIENTS WITH
SENSORINEURAL HEARING LOSS ATTENDING ORL CLINIC AT
MUHIMBILI NATIONAL HOSPITAL DAR ES SALAAM, TANZANIA**

Sigrid Cyril, (MD)

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Department of Otorhinolaryngology**



**Quality of Life Among Adult Patients with Sensorineural Hearing Loss Attending ORL
Clinic at Muhimbili National Hospital Dar Es Salaam, Tanzania**

By

Sigrid Cyril Lucas

**Dissertation Submitted in Partial Fulfilment of the Requirements for the
Degree of Master Medicine in Otorhinolaryngology of
Muhimbili University of Health and Allied Sciences
October, 2021**

CERTIFICATION

The undersigned certify that they have read and hereby recommend for acceptance by Muhimbili University of Health and Allied Sciences a dissertation entitled “**Quality of life among adult patients with sensorineural hearing loss attending ORL clinic at Muhimbili national hospital Dar es salaam, Tanzania**”

in (partial) fulfillment of the requirements for the Degree of Master of Medicine (Otorhinolaryngology) of Muhimbili University of Health and Allied Sciences.

Dr Enica Richard

(Supervisor)

Date: _____

DECLARATION AND COPYRIGHT

I, **Sigril Cyril**, declare that this **dissertation** is my own original work and that it has not been presented and will not be presented to any other University for a similar or any other degree award.

Signature: _____

Date: _____

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DEDICATION

To my beloved husband Dr. Alex Masao, my children Alvin and Sandra, my beloved mother Dr. Agnes Msoka and my father Cyril Lucas Msoka for their endless love and constant encouragement.

Abstract

Sensorineural hearing loss has been found to decrease quality of life (QOL) as it basically compromises communication thus affecting multiple forms of social, emotional and physical function; such individuals are more likely to experience mental and physical health decline. Although sensorineural hearing loss is prevalent in adult Tanzanians with Otorhinolaryngology complaints, no study has established its impact on QOL.

Objective: This study was set out to examine the impact of sensorineural hearing loss on the quality of life among adults attending to the Otorhinolaryngology clinic at Muhimbili National Hospital.

Methodology: A quantitative cross-sectional study was carried among 136 adult patients with sensorineural hearing loss attending the Otorhinolaryngology clinic of Muhimbili National Hospital. Data was collected using WHOQOL BREF and developed medical examination form for collecting clinical information. Data was summarized at univariate level by summary statistics, comparisons at bivariate was done by Chi-square test; level of significance was set at $P < 0.05$.

Results: Sensorineural hearing Loss was most prevalent in female compared to male participants, (60.29% and 39.71%). More than half of the participants with sensorineural hearing loss were aged between 18 and 47 years (67.0%). Bilateral sensorineural hearing loss was the most common (79.4%), occurring in more than half of the study population (53.0%) and the majority being female participants (48%). Mild and moderate sensorineural hearing loss presented almost evenly in the study population (21% and 20%), both being common in participants aged between 18 and 47 years and more prevalent in female compared to male participants. The majority of the population experience poor quality of life (69.12%), social health domain scoring highest in contribution to QOL. Poor quality of life was common in participants with mild and moderate sensorineural hearing loss presenting in even distribution in the study population (22.80% and 22.05%). Female participants and participants aged above 63 years, had higher scores in social health domain compared to other age groups. Quality of

life status was only associated with sensorineural hearing loss lateralization (p value=0.007). Conclusion: Generally, the results of this study indicate poor quality of life associated with sensorineural hearing loss, more observed in female participants, those with bilateral sensorineural hearing loss. Majority of participants with sensorineural hearing loss were aged between 18 and 47 years and social health domain scored the highest in mean score compared to other domains. Generally, the results of this current study suggest that, female participants and participants aged above 63 years have good social health compared to the male participants and other age groups. The results of the current study also add detail regarding quality-of-life domains indicating that; social health is having the highest mean score compared to other domains.

Recommendation: Early detection of hearing loss and early management is advised to improve quality of life. This will enable better working performance in young population with sensorineural hearing loss. Improvements of physical, environmental and psychological health of individuals with sensorineural hearing loss especially the youth will significantly improve the general quality of life status of the individuals. Proper counseling, use of hearing aids and cochlear implants for those with indications together with sign language training and lip reading should be advocated in individuals so as to improve quality of life especially in the young populations who are still at colleges and or working to be able to cater for their families. We also recommend that larger population studies to be carried out to investigate the influence of the quality of life of the individual with sensorineural hearing loss.

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LIST OF ABBREVIATIONS

ASHA.....	American Speech Language Hearing Association.
CNS.....	Central Nervous System.
dB.....	Decibels.
MNH	Muhimbili National Hospital.
NPC.....	New Pediatric Complex.
OPD.....	Out Patient Department.
ORL.....	Otorhinolaryngology.
PI.....	Principal Investigator.
PITD.....	Participant Identity Number
QOL.....	Quality of life.
R.....	Programming language and a free software developed and designed by Ross Ihaka and Robert Gentleman used for statistical computing and graphics.
WHO.....	World Health Organization.

DEFINITION OF TERMS

- Hearing loss:** Also known as hearing impairment is a partial or total ability to hear.
- Risk Factors:** It is a variable associated with an increased risk of disease or infection.
- Quality of life** Individual's perception of their position in life in the context of their culture and value systems in which they live.
- Psychosocial consequences:** These include psychological effects like insomnia, depression and anxiety which directly depreciates the quality of life of the individual.

CHAPTER ONE

1.1 Background

World Health Organization (WHO) disability report of 2016 estimated that about 360 million people in the world have varying levels of hearing impairment. 12% of this group have profound hearing loss with impaired quality of life (1). Previous studies indicate that, more than 50% of people with hearing impairment are residing in developing countries. This indication reflects the burden of hearing impairment especially in developing countries where hearing loss is not a priority medical condition.(2)

Moreover, WHO is predicting a high increase of hearing loss burden worldwide, with a flex of 2.3% annually from 2017 to 2025. The prediction is tantamount to a drop in quality of life of the people with hearing loss, focusing more impacting on social life, psychological effects and economical oriented impacts.(3)

Hearing loss has been reported to cause severe psychological effects in children and adults. It has been highlighted that, adults with hearing loss experience difficulties in working areas, poor social life, anxiety and insomnia. Collectively these impacts lead to severe psychological effects. For young patients, hearing loss has major impact on social life and physical function leading to major impacts in education and general quality of life .(4) Hearing loss causes self-isolation which makes an individual stay away from the community that surrounds him this later leads to depression and mental disorder that in the long run can cause improper physical functioning and poor quality of life.

The assessment of quality of life in persons with hearing loss and its impact in social and health services is of paramount importance for improving services to this group, in terms of health, education and transportation services in developing countries. (3)

1.1.1 Causes and types of Hearing Loss

Hearing loss can generally be classified into four types; Conductive Hearing loss, sensorineural hearing loss, Mixed and Central. Conductive hearing loss can be contributed by; Wax impaction in ear canal, Atresia of the canal, perforation of tympanic membrane, otosclerosis, dislocation of ossicular chain, cholesteatoma and Otitis media with effusion. Sensorineural hearing loss on the other hand can be contributed by Genetic hearing loss, congenital infections, acquired infections, ototoxicity, noise induced and presbycusis. In any implicated cause, sometimes more than one causative agent can present in a patient. Severity can be grouped as 0-20dB Normal, 21-40dB Mild, 41-55dB Moderate, 56-70dB Moderate-severe, 71-90dB Severe and >91dB Profound. Sensorineural hearing loss is a type of hearing loss due to pathology in the cochlear or acoustic nerve (cranial nerve VIII impairment) while Central hearing loss refers to the type of hearing loss that is purely from the organic disorders in the brain brainstem or cerebral cortex. (2,5,6)

Studies indicate that, more than 42% of hearing loss cases can be treated if proper medical intervention is performed at the right time, as soon as possible. This is adjacent to providing education to communities and innovation of treatment policies to reflect the current demands and challenges. (7)

Causes of hearing loss can either be environmental or genetic. Environmental causes contribute more to causation of hearing loss by more than 85% predominating more in Africa compared to developed nations. (8,9) Noise is also considered to be a major accelerant factor for SNHL accounting for 12.5% of environmental factors worldwide. Other factors like age related degenerative process, genetic mutations, and chronic diseases are among causative agents of SNHL for adults aged 32 and above. (7,10,11) On the other hand, congenital and genetic hearing losses are the most prominent occupying 55 to 60% of all SNHL alone. Also, there is evidence of unknown causes related to genetics and child birth to be among the major growing concern. (12)

1.1.1 Hearing Loss Burden.

More than 350 million people are suffering from hearing loss worldwide due to several reasons and causing factors. Africa alone bears for 42% of the total burden .(13) The prevalence of hearing loss in 2012 was about 10% in females aged above 15 years and about 12% in males aged 15 years and above. (14,15)

For the case of Africa, very little is known concerning the burden of hearing loss and its impacts on the quality of life. Few previous studies indicate hearing loss was heavily manifested in southern Sahara (2.8%) compared to other part of the world. For adults aged 15 years and above, it is estimated that more than 16% are from Africa while only 4.5% are from developed countries.(2)

1.1.2 Global Distribution of sensorineural Hearing loss

As stated by WHO that Hearing Loss is ranking the fifth among the major contributors of world disability index by the year 2016. The distribution of sensorineural hearing loss is not evenly due to factors like: Population levels, health care facilities and poverty indexes (Gross National Income). (3)Compiled information in 2016 indicated that hearing loss was heavily manifested in southern Sahara compared to other part of the world. For adults aged 15 and above, it is estimated that more than 16% are from Africa while only 4.5% are from developed countries. (2)

Generally, it is estimated that, hearing loss is prevalent by 2.6% in southern Asia, 2.3% in Southern Sahara Africa. Under this distribution, hearing loss is more prevalent in males by 12% compared to females. Although, there is inadequate information on Hearing loss especially in Africa, it is perceived that; the magnitude can be much higher.(16)

1.2 Problem Statement

In Africa hearing loss burden is estimated to increase by 0.3% annually since 2013, still very little is known on the impacts of SNHL to the quality of life of patients, focusing on psychological impacts like; depression, anxiety and insomnia; social impacts, physical immobility and discomfort. Also, there is inadequate information concerning hearing loss magnitude and its impact in the social life of the patients in Tanzania. Moreover, there is still no clear evaluation and statistical based estimation on the quality of life of patients with SNHL. These gaps are major contributing factors to poor treatment and management policies for Hearing loss and a major set-back in efforts to reduce the burden of hearing loss.(17–21)

1.3 Conceptual Frame work of the Study

Figure 1 below highlights the Quality of life as a sole dependent variable which is influenced by the clinical characteristics and, Social-demographic characteristics of the patient. Also, social health, physical health, psychological health and environmental health domains as independent variables have major contribution to the QOL outcome. (3,21–25)

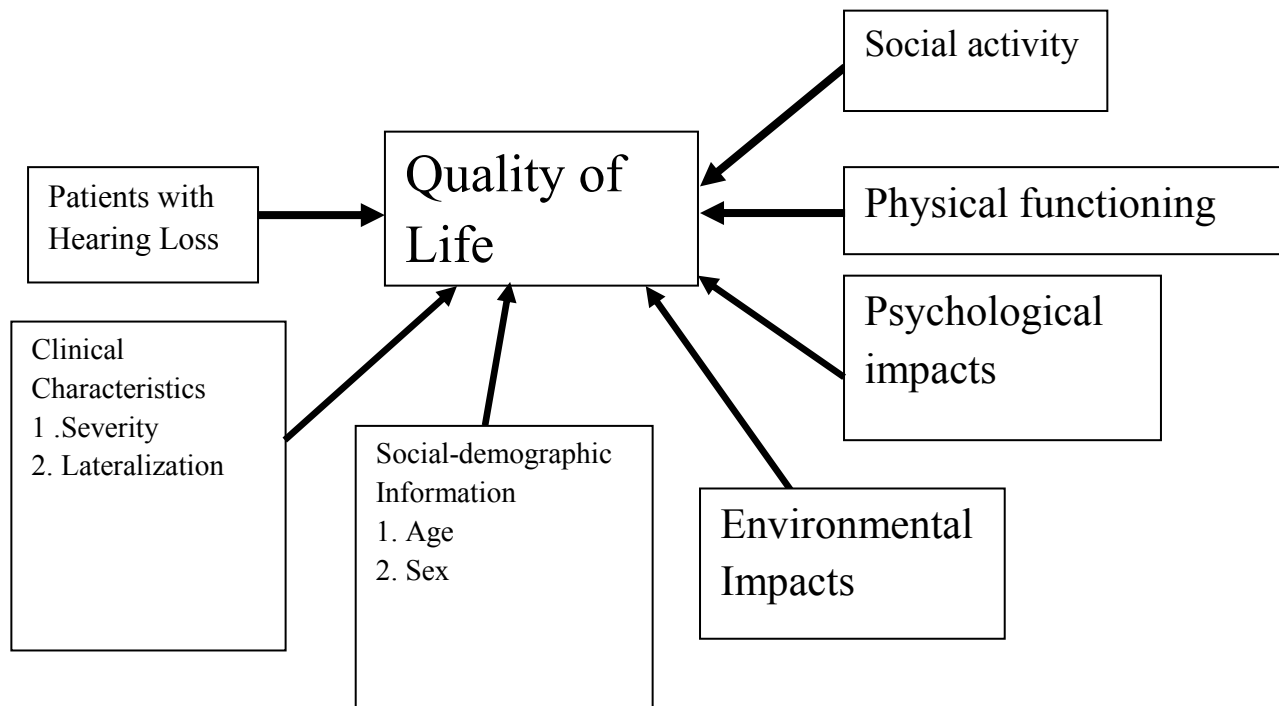


Figure 1; Study flow and framework

1.4 Rationale

This study assessed the QOL for adult patients with sensorineural HL attending Muhimbili National Hospital. The results of this study will provide an overview of information on the magnitude of hearing loss with details on lateralization and severity. The information will be useful in planning interventional programs and resource allocation planning.

The results of this study will highlight the impacts of hearing loss in social, psychological and physical functioning of patients. This measure will reveal the required corrective actions to innovate treatment and management policies for patients with SNHL.

Last but not least this study is done as a requirement in fulfillment of my masters of medicine degree in otorhinolaryngology.

1.5 Research questions

1. Does age and sex of adult patients with SNHL affect the QOL?
2. What is the impact of severity of SNHL in QOL?
3. What is the impact of lateralization of SNHL in QOL?

1.6 Objectives

1.6.1 Broad Objective

To assess the Quality of Life in adult patients with sensorineural hearing loss attending ORL clinic at Muhimbili National Hospital

1.6.2 Specific Objectives

1. To assess the effect of age and sex characteristics on the QOL of patients with SNHL.
2. To assess the effect of severity of SNHL on the QOL of patients with SNHL.
3. To assess the effect of lateralization of SNHL on the QOL.

1.7 LITERATURE REVIEW

1.7.0 The impact of SNHL on the Quality of life

1.7.1 Sensorineural Hearing Loss

Hearing loss is a sudden or gradual decrease in how well an individual can hear. This situation can be work-related (occupation), genetically oriented, due to infection or accidents. (26)

About 75% of sensorineural hearing loss can be prevented and 45% can be treated efficiently if tackled at early stages. Unilateral and bilateral SNHL have an almost even distribution in occurrence, differing only by 4%. (16,19)

It was Bist et al (2017) who stated that, “Hearing loss is the most prevalent sensory deficit in human and it increases with age. Sensorineural hearing loss accounts for 90% of all hearing loss and it is found in 23% of the population older than 65 years of age”, the study also revealed SNHL to be predominantly in male with average of 45.5 years old. (8)

1.7.2. The impact of age and sex on QoL for patients with SNHL

Generally hearing loss has been reported to decrease the quality of life in every population regarding age and sex. Studies report the decrease of quality of life with reference to age. The impact of hearing loss in quality of life is diverse depending on the age and sex, together with other social economic factors like jobs, education and social interactions. Averagely, hearing loss despite the type and severity has been reported to negatively impact the quality of life (27).

It is indicated that, sudden sensorineural Hearing loss to be the most impactful in adult patients compared to younger aged patients. This type of hearing loss has huge impacts on social and economic domains and leads to severe psychological impacts(28).

A study conducted by Shaimaa et al (2018) (29), indicated that hearing loss was common among female participants (occurring to more than half of the study population). The study indicated that the most affected domain of quality of life was Environmental domain with a negative response of more than 48% of the study population.

Another study conducted in the US, indicated a diminished quality of life among youth patients aged between 11 and 18 years (30). The study indicated a poor quality of life among youth with a severely diminished social life domain. The youth reported stigma, segregation and mocking which generally reduced their quality of life.

Another study conducted in 2017 which involved defining quality of life indicated the negative impact of SNHL, more than 47% of the study population reported a diminished social quality of life and general wellbeing (16). The study indicated that social and environmental domain to be the most impacted domains in QOL.

1.7.3 Severity of SNHL and Quality of life

Literature indicates the significant association between the severities of SNHL with the QOL of patients. Previous studies indicate that the severity of hearing loss is significantly associated with the diminished quality mainly due to difficulties in communication (31).

Other studies indicate the decrease in function of physical and mental component for patients with moderate and moderate severe hearing loss. These studies highlighted an impaired quality of life generally for patients with moderate severe hearing loss (28,32). For mild hearing loss, participants indicated a fair score in the quality of life mainly in communication and social domains. Very few less than 5% indicated poor psychological health.

A study done Gates et al, indicates an increased negative impact of severe and profound hearing loss to the quality of life caused by depression, insomnia and poor communication. The study highlighted that, most of the participants (more than 40% of the study population) complained of insomnia and depression leading to poor social life. In the study social domain was the most negatively influenced by hearing loss, followed by environmental domain (33).

Another study done in the US, indicated a wide distribution of impacts caused by hearing loss to the quality of life of individuals with SNHL and other types (34). The study highlighted the impact of hearing loss from mild to profound SNHL with parallel impact in social life and economic status. Mild hearing loss occurring to younger participants caused a severe diminishing impact to the social life in schools and in social activities. On the other hand, for

older participants; social-economic status was negatively influenced due to difficulties in communication, depression and insomnia. More than 34% of people with moderate severe SNHL quitted their jobs leading to severe economic impacts.

1.7.4 Lateralization of SNHL and Quality of life

There is no clear indication on the impact of laterality of SNHL and its impact on the quality of life. Very few studies directly indicate the impact of laterality to the domains of quality of life assessed.

A study done by Reiss et al (2014) narrowly indicated a fair distribution of lateralization among patients with sudden SNHL. The study examined the laterality and its distribution with the associated impacts in quality of life.

Another study done using focus groups of children aged between 11 and 18 years revealed that; Unilateral SNHL was more common in younger aged population, and has mild impacts to the quality of life since children learned to adopt the circumstances (Borton). The situation was quite different in children with bilateral SNHL. Despite the severity, this group experienced more diminished quality of life and had difficulties in adapting the circumstances. Children with bilateral hearing loss showed poor social and psychological health. Other presented with anxiety, depression and segregation.

For adults, previous studies indicate the poor score of quality of life domains in patients with bilateral hearing loss compared to unilateral hearing loss. Poor scores were observed from social and environmental domains. Other studies indicated poor quality of life in adults with unilateral SNHL complaining difficulties in communication and lack of sleep.

1.7.5 Quality of social Life and Physical functioning for patients with sensorineural hearing Loss.

World Health Organization identifies quality of life basing on the accessibility, quality and adequacy of all necessary life sustaining service. The adequacy of services provided, accessibility and affordability reflect the quality of life. The reports also identify communication ability to be among the most important factor that is necessary for service inquiry and provision. It was identified that, SNHL is the fourth contributor in disability index, hence contributing to communication difficulties by 85% in north America alone.(3)

In Asia studies identified that for patients with SNHL, mobility difficulties contributed by 42% in lowering the quality of life in more than 7 countries in the continent. This indicates that, among patients with SNHL in Asia transportation service was inadequately provided leading to mobility difficulties.(9,19,35)

There is little information regarding quality of life for patients with sensorineural hearing loss in Africa. A study done in Nigeria indicated that more 55% persons with sensorineural hearing loss had poor quality of life.(11)

Another study conducted in Zambia indicated the increasing of sensorineural hearing loss burden while little is done in the assessment of quality of life leading to weak treatment and management policies.The study highlighted the strength and weaknesses of ICF(International Classification of Functioning,Disability and Health-Children and Youth) as far as hearing loss is concerned. (35)

Other studies revealed the importance of conducting research on QOL for person with hearing loss to identify areas that provide inadequate services for structured corrective actions. The studies revealed how adult patients with hearing loss define quality of life; more than 76% focused on ability to communicate, ability to participate in social activities and affordable health services. It was also indicated that; there is a slight difference in quality of life for adolescents and the general population.(18,24)

1.7.6 Sensorineural Hearing loss psychological impacts

There is still very inadequate information regarding the impact of SNHL to patients' psychological health. Most of the covered topics, focused on children and young adolescents. Previous studies indicate the association of SNHL with insomnia and speech disorders. Although the evaluation was done in children aged below 17 years, the results indicated depression and social isolation to be among the major impacts associated with SNHL.(37)

Another study indicated that, children with SNHL have poor performance in schools, associating the issue with poor concentration and focus. The study indicated that children and adolescents with SNHL have difficulties in concentrating and focusing reflecting poor psychological health. The studies suggested difficult in speech to be among the major factors affecting communication and leading in building pressures of performance in learning and social interaction.(38,39)

CHAPTER TWO

2.0 METHODOLOGY

2.1 Study design

This study was a cross-sectional hospital based.

2.2 Study Area

This study was conducted at Muhimbili National Hospital in otorhinolaryngology audiology clinic. MNH is the largest referral hospital in the United Republic of Tanzania receiving patients from different regional and district hospitals in the country. The Hospital is equipped with 1,500 bed facility, attending 1,000 to 1,200 outpatients per day, admitting 1,000 to 1,200 in patients per week. The Otorhinolaryngology clinic is conducted every day of the week at new outpatient department building and about 1921patients attend per month which is approximately 26,437 per year.

The available healthcare providers range from super specialists, speech therapists, clinical audiologists, resident doctors, registrars, medical interns, nurses, and attendants. The audiology unit is one of the subunits of otorhinolaryngology clinic located at new pediatric complex building at MNH. The unit is well equipped with all necessary equipment that can be used in diagnosis and evaluation of Hearing Loss.

2.3 Study Population

The Study population was all patients with sensorineural hearing loss without hearing aids attending Otorhinolaryngology clinic at Muhimbili National Hospital.

2.4 Sample Size

The sample size was calculated by using the Yamane formula for sample size calculation assuming a finite population (40):

$$n = N / (1 + Ne^2)$$

Where; N= Total population, n=Sample size, e=error value

Therefore,

N = 175(Adult patients with sensorineural hearing loss attending ORL audiology clinic at MNH in six months in the year 2020 to 2021.

e = 0.05 (error value at 95% confidence)

Inserting figures;

$$n = 175 / (1 + 175 * (0.05)^2) \\ = 122$$

Therefore; 122 patients with SNHL were included in this study.

Adjusting for non-responders by taking into account an approximate of 10% of the sample size with no response giving a response rate (R) of 90%.

Adjusted sample size = $N (1/R) = 122(1/0.9) = 134$

Hence a minimum sample size adjusted for response is 134, therefore for this study 134 patients were considered as a sampling frame.

2.5 Inclusion Criteria

All consenting patients with SNHL without hearing aids attending ORL clinic aged 18 years and above were included in the study.

2.6 Exclusion Criteria

- Mentally Unstable Patients.
- Patients with other types of hearing loss ie conductive hearing loss and mixed hearing loss.
- Patients with hearing aids.

2.7 Sampling Strategy

A list of the eligible 136 patients were made, and sampling was done in the respective days of attendance to the clinic until the required sample size was achieved.

2.8 Data collection techniques

2.8.1 Collection of clinical data

Pure Tone Audiometric findings from both ears were recorded and the severity of hearing loss was graded into five categories; mild (26-40 dB HL), moderate (41-55 HL), moderately severe (56-70 dB HL), severe (71-90 dB HL), and profound (>91 dB HL and above). The individuals with unilateral Sensorineural hearing loss were regarded as a normal hearing individuals. The medical examination information was entered in an integrative case record form (appendix 2).

2.8.2 Collection of Quality-of-life data

Participants confirmed with SNHL were included in the study and required to fill their demographic and quality of life information as indicated in the WHOQOL BREF questionnaire. The questionnaire was then attached to the corresponding case report form. The scores were compiled and summarized as indicated in the tool. Obtained information was then integrated in Microsoft spread sheet coding all the information and recorded variables.

2.9 Data collection Tools

2.9.1 WHO QOL BREF

This study utilized field version WHO QOL BREF (appendix 2), questionnaires enacted by the World Health Organization for assessing quality of life in patients with hearing loss. The questionnaire is pretested and standardized in larger population response module and the scores were acceptable. Also, the questionnaire is designed to track the changes in quality of life while providing vital information to health care takers and legislators in developing efficient treatment and management protocols and policies. The questionnaire measures the following broader domains: physical health, psychological health, social relationships and environment. The quality-of-life scores were obtained by summing up the scores from each question of each domain. Mean score of each domain indicated quality of life score in that

particular domain. The higher the domain score the better the quality of life in that particular domain. Each question carried 5 marks making a total of 130 marks. The scores were averagely grouped into two categories below 78 indicated poor quality of life and above 78 indicated good quality of life.

2.9.2 Local developed medical examination forms

This study also utilized a developed medical examination data collection tool for recording otoscopic examination and audiological findings (appendix 1). The tool was evaluated by otorhinolaryngology audiologists and specialists, and necessary adjustments were made to fit the required criteria.

2.10 Hearing Assessment procedure

2.10.1 Otoscope Examination

This was done for the examination of the external auditory canal and the tympanic membrane by using otoscope. Other instruments used were...

Headlight: To illuminate the ear during examination.

Cerumen hook: For cerumen or foreign body removal from the external auditory canal.

Otoscope findings like foreign body and cerumen impaction were managed and patients were asked to return after one week for audiological examination.

The ears were examined to rule out any tympanic membrane injury or perforation and observe for the normal translucency appearance, if intact, patients underwent audiological examination.

For the case of tympanic membrane perforation patient were referred to otorhinolaryngology surgical clinic and were not included in the study.

For the case of ear discharge the affected ear was cleaned through aural toileting, tympanic membrane of each ear was examined if translucent then was considered normal and antibiotics were given based on the duration and nature of the discharge.

Patients were asked to return after completion of usage of antibiotics, where the ears were re-examined again, if dry they were included in the study.

2.10.2 Pure Tone Audiometer

A clinical audiometer (Piano Invertis SRL, 2013) which is available at the audiology unit, under the department of otorhinolaryngology (MNH) was used to ascertain the type and severity of hearing loss.

Clinical audiologist performed audiometric tests by using supra-aural ear phones in a sound proof room with ambient noise calibrated at <35dBA based on ASHA (America Speech Language Hearing Association) whereby both air and bone conduction was done to each participant at the frequencies of 250, 500, 1000, 2000, 4000, 6000 and 8000 Hz for each ear separately.

The diagnosis of sensorineural hearing loss was reached when the air bone gap is <15dB.

2.11 Data analysis

Data was obtained from Audiology Clinic and was summarized and analyzed by using R. Analysis version 14 to obtain frequency distribution of all variables. Bi-variate analysis was done between dependent variables and independent variables with Pearson chi square test used where P-Value less than 0.05 was considered to indicate statistical significance.

2.12 Description of study variables

Demographic and clinical characteristics of the patients are independent variables which were measured quantitatively and described in frequency distribution. On the other hand, Quality of life components; social life, psychological health, environmental and physical function were dependent variables measured by a qualitative scale.

2.13 Ethical consideration and Approval

Approval was sought from Muhimbili University of Allied and Health science ethics committee and Muhimbili National Hospital research committee. The permission to use the WHO research tool was sought from the World Health Organization (Permissions

Management, Reprint Rights and Licensing) office and was granted under permission request number 361588. Informed consent was obtained from study respondents. The study imposed minimal risks and is expected to benefit the study participants. Participants' confidentiality was maintained through the use of codes and not names on the questionnaires and all filled questionnaires were kept under lock and key by the principal investigator.

2.14 Validity and Reliability of Data

Validity issue: Questionnaires utilized in this study, were reviewed by experienced audiologists and evaluated by medical professionals. Then the questionnaire was translated to swahili language for maximum understanding of questions.

Reliability issue: To ensure reliability of the data and procedures in this study, the hearing loss findings were reviewed by restudying and reinterpreting the results to confirm the reports produced during the study. In any case in this study where ambiguity arose, the findings were discussed by otorhinolaryngology specialists for settlement.

2.15 Study limitation and mitigation

2.15.1 Limitations

In this study there was expected communication barrier for the patients with bilateral severe or profound sensorineural hearing loss.

2.15.2 Mitigation

To overcome the communication barrier in this study, the questionnaires were clearly explained and translated into swahili for a better understanding. Interview was conducted in a quiet room to avoid background noise, lip reading and writing was also done to ensure smooth communication for patients with severe or profound sensorineural hearing loss.

CHAPTER THREE

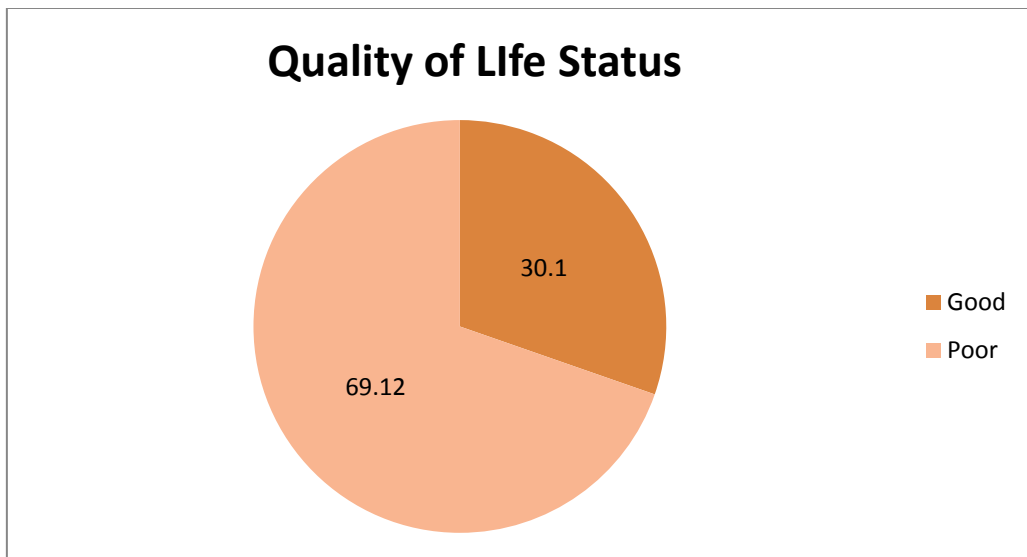
3.0. RESULTS

Table 1: Mean Score of QOL domains in the study population

Domain	Mean score (SD)
Physical health	11.15 (2.37)
Psychological health	11.29 (2.48)
Social health	13.66 (3.06)
Environmental health	11.15 (2.08)

Social health domain scored the highest in determining the quality of life of the participants compared to other domains (13.66). Other domains scores contributed with an almost even distribution in the study population (table 1)

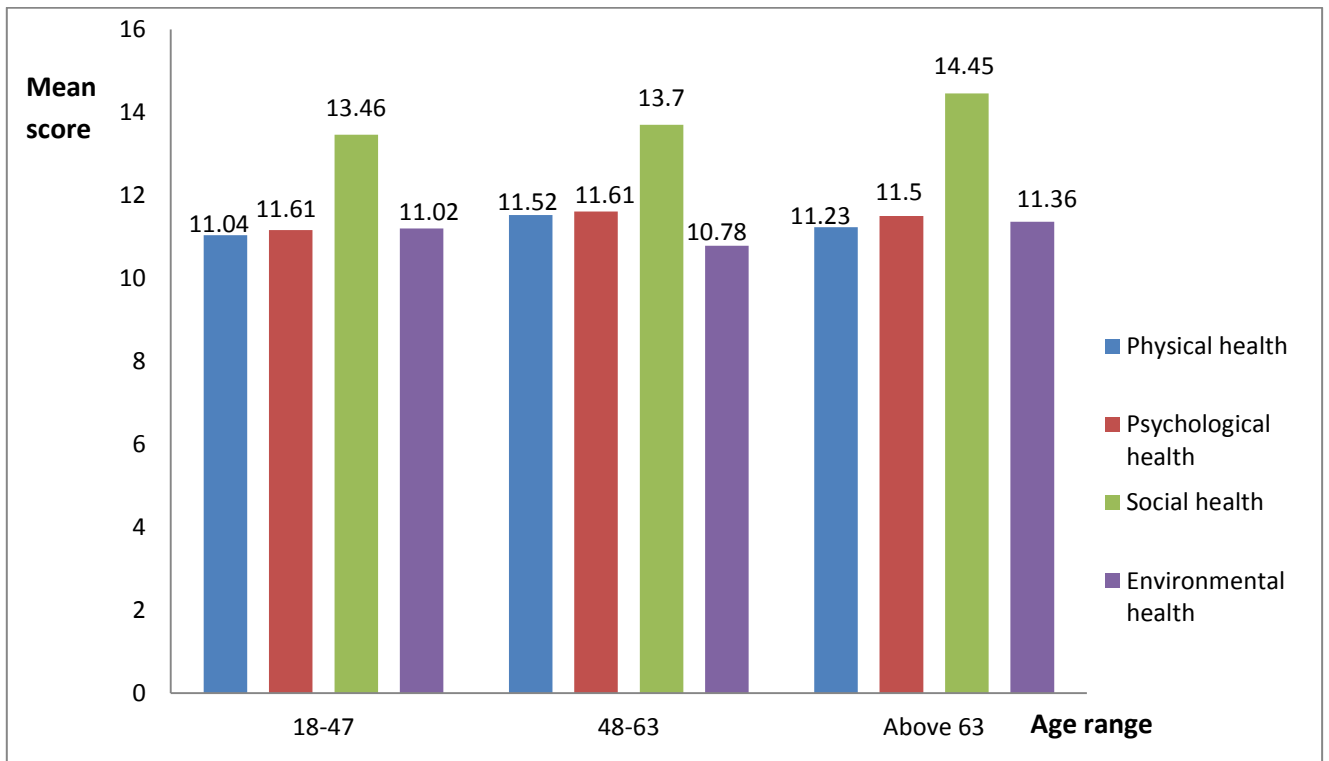
Figure 2: Quality of life status



In the study population, more than half of the participants had poor quality of life (69.12%) and only 42 participants had good quality of life accounting for 30.1% of the study population.

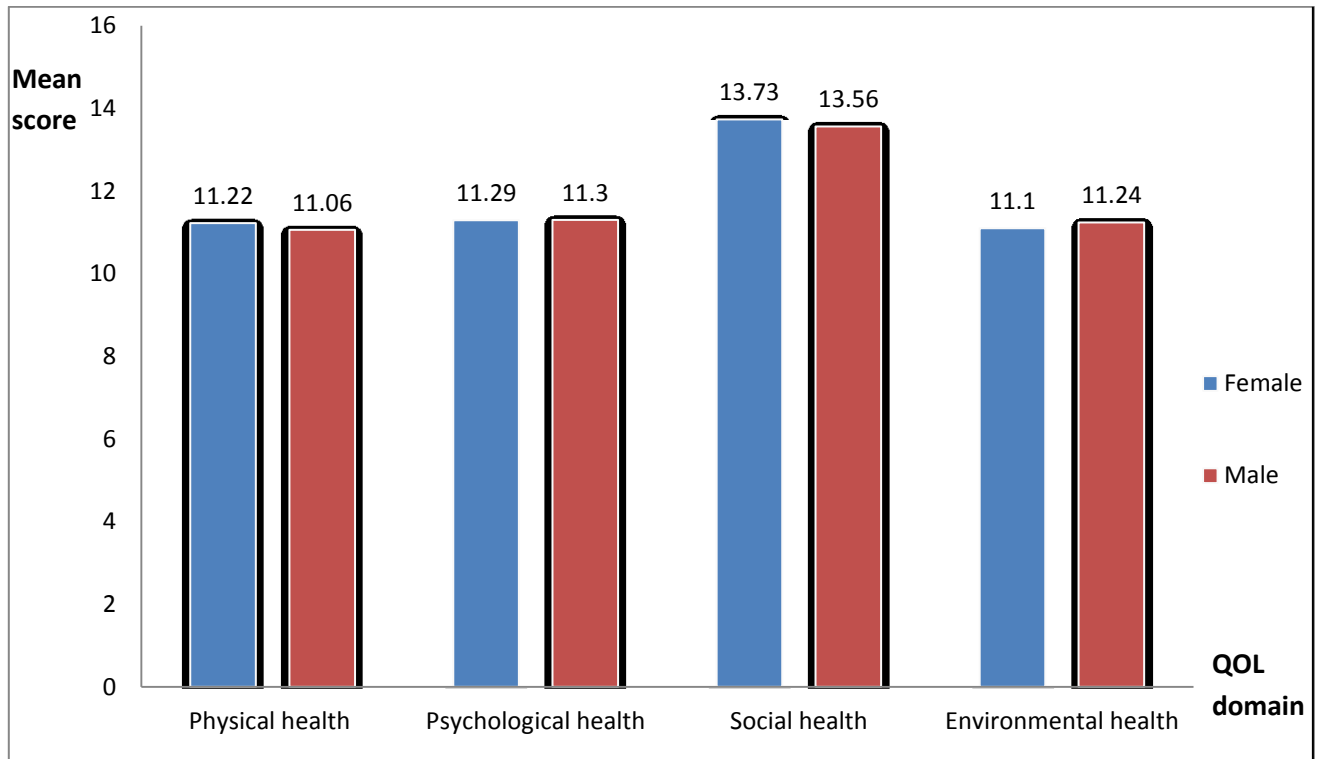
3.1. Mean score for QOL domains according to age and sex

Figure 3: Mean score for QOL domain according to age



Generally, participants aged above 63 years had higher mean score in the social domain followed by psychological domain compared to lower age groups, however this difference was not statistically significant.(figure 3).

Figure 4: Mean score for QOL domain according to sex



Female participants had slightly higher mean score in social QOL domain compared to male participants, while other domains of QOL indicated almost even mean scores for female and male participants, however this difference was statistically insignificant. (Figure 4)

3.1. Quality of life Vs. Severity and Lateralization of SNHL

Table 2: Quality of life according to severity of SNHL

Criteria	QOL Status		P value
	Good	Poor	
1. Severity of SNHL			
Normal	15 (54%)	13 (46%)	0.100
Mild	12 (28%)	31 (72%)	
Moderate	11 (27%)	30 (73%)	
Moderate severe	3 (20%)	12 (80%)	
Severe	0 (0)	3 (100%)	
Profound	1 (17%)	5 (83%)	

All participants with severe SNHL had poor quality of life while almost all participants with profound SNHL had poor quality of life accounting for 83% of the subpopulation. Poor quality of life was common in participants with mild and moderate SNHL occurring in an almost even distribution of 31% and 30% of the sub-populations This difference between the severity of SNHL and the quality of life of the participants was not statistically significant($p=0.100$)

Table 3: Quality of life according to lateralization of SNHL

Criteria	QOL Status		P value
	Good	Poor	
2. Lateralization of SNHL			0.007
Bilateral	27 (25%)	81 (75%)	
Left ear	4 (40%)	6 (60%)	
Right ear	11 (61%)	7 (39%)	

Poor quality of life was most common in participants with bilateral SNHL accounting for 75% of the sub-population. For participants with unilateral SNHL, poor quality of life was most common in participants with left ear SNHL accounting for 60% of the sub-population, this difference between lateralization of SNHL and the quality of life of the participants was statistically significant ($p= 0.007$).

CHAPTER FOUR

4.1 DISCUSSION

Sensorineural hearing loss still poses a major health and quality of life challenges worldwide, and the burden is at rising levels with increased magnitude and diminishing quality of life of the patients and the community in general. There is a crucial need to investigate the quality of life of patients with SNHL to suggest and provide evidence-based recommendations to alleviate the situation.

This study investigated the quality of life among adult patients attending ORL clinic at Muhimbili National Hospital. Widening the knowledge in quality of life of patients with SNHL will adequately improve treatment and management procedures implemented.

The current study showed social health domain had the highest mean score compared to other domains which presented with an almost even distribution indicating an equal contribution to the quality-of-life status of the participants. This observation is quite similar to previous studies which indicate social health domain contributes more in quality of life score (18,21). The observed similarity might be due to resemblance in study settings and ethnicity, in which previous and current studies were conducted in Africa, implementing hospital-based settings and participant's age groups were parallel.

A study done in Kenya (41) revealed different results to the current study. The study indicated that the major contributing domain to the quality of life was psychological health domain accounting for more 40.5% of the study population. The study was conducted in larger population, implementing community-based survey settings.

The current study shows that; averagely more than half of the study population had poor quality of life (69.12%) while the rest had good quality of life (30.1%). This finding is quite similar to several previous studies (18,22,23,30), which indicate the majority of the populations to have poor quality of life.

The current study indicated that; when considering the age groups; social health domain had higher mean score in participants aged above 63 years compared to other groups. Also, participants aged between 18 and 47 years have lowest mean score in psychological QOL domain compared to other groups. This might be the reason for poor social health amongst the participants aged 18 to 47 years due to depression and isolation. This finding is quite different from other studies done in children and youth population in Nigeria (11) which indicated that environmental health QOL domain has a higher mean score compared to other domains. The reason might be contributed to the fact that, the previous study was done in population of participants aged between 12- and 31-years attending school, considering school environment; poor infrastructures in learning institution contributed to poor environment health.

Moreover, the current study indicates higher mean scores of social health QOL domain in both male and female participants, with slightly higher value in females (13.56 and 13.73 respectively). Other domains presented with an almost equivalent contribution to the quality-of-life status for both male and female participants. The results observed might be due to social interaction nature in women compared to men. This indication is parallel with a previously study done in Brazil, which shows social health domain to produce higher mean scores. The study was done in small sample size with resemblance in age of participants included.

The current study found out that, there is no significant association between the severity of SNHL and the quality of life of the participants (p value=0.10). The current study shows that, the majority of participants with mild SNHL experienced poor quality of life. Also, almost all participants with severe and profound SNHL have poor quality of life (100% and 83.3%); the reason for such indication can be contributed by communication difficulties for participants with severe SNHL. This finding is quite similar with previous studies which revealed the poor quality of life observed in most participants with mild SNHL and all participants with severe SNHL experienced poor quality of life(7,10,11). The observed similarity might be contributed by resemblance in study areas, sampling size and study settings.

Some previous studies were conducted in Africa, implementing hospital-based design and in smaller sample sizes similar to the current study.

Our study found out that; the majority of participants with bilateral SNHL have poor quality of life compared to the participants with unilateral SNHL (75% Vs 25%). Additionally, our study found a strong association between the lateralization of SNHL and the quality of life of the participants. These findings are concomitant to previous studies done (42,43), which shows participants with bilateral hearing loss have poor quality of life and there is a strong association between lateralization and quality of life. The observed similarity might be contributed by alignment of sample sizes and study settings, in which the current and previous studies were hospital based with an almost even sample sizes in similar ethnicity of the study population.

CHAPTER FIVE

5.0 Conclusion

Generally, the results of this study indicate poor quality of life associated with SNHL, more observed in female participants and to those participants with bilateral SNHL.

Majority of participants with SNHL were aged between 18 and 47 years and social health domain scored the highest in mean score compared to other domains. Moreover, the results of this study suggest that, female participants and those aged above 63 years have good social health compared to the male participants and other age groups.

The results of the current study also add detail regarding quality-of-life domains indicating that; social health domain is having the highest mean score compared to other domains.

5.1 Recommendations

Early detection of hearing loss and early management is advised to improve quality of life. This will enable better working performance in young population with SNHL. Improvements of physical, environmental and psychological health of individuals with SNHL especially to the young population will significantly improve the general quality of life status of the individuals.

Proper counselling for patients with mild SNHL, use of hearing aids and cochlear implant for those with indications, training in sign language and lip reading should be done as well so as to improve quality of life especially in the young populations who are still at colleges and or working so that they can be able to cater for their families. We also recommend that larger population studies to be carried out to investigate the influence of the quality of life of the individual with SNHL.

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**SHULE YA UDAKTARI
IDARA YA PUA, SIKIO NA KOO**

FOMU YA RIDHAA

Namba ya utambulisho: _____

Utangulizi:

Habari, kwa jina naitwa Dr Sigrid C. Lucas, ni mwanafunzi daktari katika idara ya pua, sikio na koo katika chuo kikuu cha afya na sayansi shirikishi Muhimbili.

Kama sehemu ya mafunzo yangu katika chuo hiki, ninafanya utafiti wenye kichwa cha habari “Ubora wa maisha miongoni mwa wagonjwa wenye tatizo la usikivu wanao tibiwa katika hospitali ya Taifa Muhimbili, Tanzania”

Lengo la utafiti huu:

Utafiti huu unalenga kutathmini ubora wa maisha miongoni mwa wagonjwa wenye tatizo la usikivu na pia kujua jinsi tabia za ugonjwa huu zinavyo athiri ubora wa maisha ya mgonjwa.

Utendaji wa utafiti huu:

Utafiti huu sanasana unahusu kujibu dodoso inayo jumuisha maswali yenye viwango kutoka chombo cha ubora wa maisha ya tatizo la usikivu pamoja na vifungu vingine vya maswali yanayo husu taarifa zako za kijamii na kidemografia kama mgonjwa kwa ujumla na pia maswala ya ugonjwa wako.

Ushiriki katika utafiti huu:

Ushiriki katika utafiti huu niwa hiari kabisa.

Kama utachagua kushiriki na kutoa idhini kwa kusaini fomu hii ya ridhaa, utatakiwa kutumia dakika chache kwa ajili ya mahojiano ili kujaza na kumaliza dodoso.

Hata hivyo kama utachagua kutokushiriki, uwe na tumaini kwamba matibabu ya ugonjwa wako hayato athirika kwa namna yoyote; kusema hivyo ni kwamba utapata matibabu unayostahiki.

Zaidi ya hapo, unaruhusiwa kujitoa kushiriki kwa hiari yako mwenyewe na wakati wowote hata kama ulishatoa idhini mwanzoni na wala hautatukosea kwa hayo maamuzi.

Usiri:

Maelezo yote yatakayo kusanywa pamoja na majibu yatakayo patikana wakati wa utafiti huu yata shughulikiwa kwa usiri wa hali ya juu na hayata funuliwa kwa mtu yeyote nje ya timu ya watafiti wahusika.

Faida:

Kwa kushiriki katika utafiti huu, itatusaidia kuelewa vizuri zaidi jinsi ugonjwa wa usikivu unavyo athiri ubora wa maisha na sababu zipi zinazo shawishi ili matibabu yaweze kushughulikia vipengele hivyo na kuboresha matokeo kwa ujumla.

Madhara:

Kwa kushiriki katika utafiti huu, hatutarajii hatari zozote wala kukusudia madhara yoyote juu yako wakati wa kufanya utafiti.

Gharama:

Kwa kushiriki katika utafiti huu, hauta hitajika kulipia malipo yoyote na pia wewe hautalipwa.

Mawasiliano:

Kwa habari, maswali au maelezo zaidi kuhusu utafiti huu au wasiwasi wowote kuhusu ushiriki wako, unaweza kuwasiliana na wafuatao:

1. Dr Sigrid C. Lucas (Mtafiti mkuu)
Mwanafunzi daktari wa pua, sikio na koo
Idara ya pua, sikio na koo
Chuo kikuu cha afya na sayansi shirikishi Muhimbili
S. L.P. 65001
Dar es Salaam
Simu: +255782406665
2. Dr Enica Richard(Msimamizi)
Daktari bingwa wa pua, sikio na koo
Idara ya pua, sikio na koo
Hospital ya taifa Muhimbili
S. L. P. 65000
Dar es Salaam
Simu: +25554307717
3. Dr Bruno Sunguya
Mkurugenzi
Kurugenzi la UtafitinaUchapishaji
Chuo kikuu cha afya na sayansi shirikishi Muhimbili
S. L. P. 65001
Dar es Salaam
Simu: +255767554844

Sahihi:

Mimi, _____, nimesoma / nimejulishwa yaliyomo kwenye fomu hii na nimeelewa maelezo yake kwa wazi.

Mimi natoa idhini / sitoi idhini kushiriki katika utafiti huu.

Sahihi ya mshiriki: _____

Tarehe: _____

Sahihi yamhojaji (Mtafiti mkuu / Mtafiti msaidizi): _____ Tarehe: _____

SCHOOL OF MEDICINE**DEPARTMENT OF OTORHINOLARYNGOLOGY****INFORMED CONSENT FORM****Identification No.:** _____**Introduction:**

Hello, my name is Dr Sigrid C. Lucas, a postgraduate student in the department of Otorhinolaryngology at Muhimbili University of Health and Allied Sciences.

As part of my postgraduate program at this university, I am conducting a study titled “Quality of life among Adult patients with sensorineural hearing loss at Muhimbili National Hospital

Aim of this study:

This study aims to assess the quality of life among Adult patients with sensorineural hearing loss.

Methodology of this study:

This study mainly involves responding to a questionnaire consisting of standardized questions from the validated quality of life WHO-BREF questionnaire other sections with questions related to your socio-demographic characteristics(age and sex) and also clinical and psychosocial characteristics of the disease.

Participation in this study:

Participation in this study is absolutely voluntary.

If you choose to participate and give consent by signing this form, you will be required to spend few minutes for an interview in order to fill and complete the questionnaire.

However if you choose not to participate, rest assured the treatment for your disease will not be affected nor compromised in any way; that is to say you will receive the treatment that you are entitled to.

Furthermore, you are allowed to withdraw from participation at your own will and at any time even if you have already given consent initially and you will not be penalized for such decision.

Confidentiality:

All data collected as well as information obtained during this study will be handled with utmost confidentiality and will not be revealed to anybody outside the research team.

Benefit:

By participating in this study, it will help us to better understand how sensorineural hearing loss affects the quality of life and what factors influence it such that these aspects can be addressed during the treatment protocol and improve the overall outcome.

Risk:

By participating in this study, we do not anticipate any risks nor intend any harm on you while conducting the study.

Cost:

By participating in this study, you will not be required to make any payments and no payment will be made to you as well.

Contacts:

For further information, questions or queries regarding this study or any concerns with respect to your participation, you may kindly contact the following:

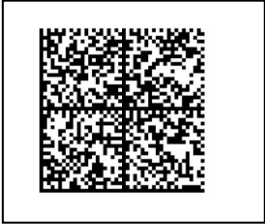
1. Dr Sigrid C. Lucas (Principal investigator)

Otorhinolaryngology postgraduate student
Department of Otorhinolaryngology
Muhimbili University of Health and Allied Sciences
P.O. BOX 65001
Dar es Salaam
Mobile: +255782406665

Dr Enica Richard(Msimamizi
Otorhinolaryngology specialist
Department of Otorhinolaryngology
Muhimbili National Hospital
P.O. BOX 65000
Dar es Salaam
Mobile: +25554307717

Appendix 1.

Data Collection tool No.2: Medical examination



PHONE NO:

PTID:

Note:1.The Participants Identity number (PTID) in this data tool should correspond to the PTID on the WHOQOL BREF questionnaire.

2.No names, or other identification tags should be used in this data tool other than defined by the PI

2. Age and Sex

Age	
Sex	

A. Hearing loss

	Right ear	Left ear
Hearing loss		
Other symptoms		

B. Otoscopy Findings

	Right ear	Left ear
EAC		
Normal		
Cerumen impaction		
Ear discharge		
Foreign body		
Inflammed		

Status of TM Intact Perforated

If perforated any discharge Yes No(**end here**).

If intact Continue to the next table below.

Tympanic membrane

		Right ear	Left ear
Color	Normal(translucent)		
	Dull		
	Dark blue		
	Hyperemic		
Mobility	Mobile		
	Immobile		
Position	Normal		
	Retracted		
	Bulging		
	Retraction pockets		
Other findings	Air Bubbles		
	Air – Fluid Level		

C. Pure tone audiometrySide of Sensorineural hearing loss Right ear Left ear

Severity of Hearing loss	Left Ear	Right Ear
	<input type="checkbox"/> Mild <input type="checkbox"/> Moderate <input type="checkbox"/> Moderate Severe <input type="checkbox"/> Severe <input type="checkbox"/> profound	<input type="checkbox"/> Mild <input type="checkbox"/> Moderate <input type="checkbox"/> Moderate severe <input type="checkbox"/> Severe <input type="checkbox"/> profound

Appendix: 2

World Health Organisation Quality of Life instrument (WHOQOL-BREF)

THE WORLD HEALTH ORGANIZATION
QUALITY OF LIFE (WHOQOL) –BREF
KISWAHILI

PTID:

Umri	
Jinsia	

Maswali yafuatayo yanajaribu kuchunguza unavyohisi hali yako ya afya na maisha kwa ujumla kutokana na tatizo lako la usikivu.

Nitakusomea maswali na majibu yake Tafadhali chagua jibu ambalo linalingana na maoni yako.

Ukijibu maswali haya ukumbuke vitu ambavyo vimefanyika maishani mwako wiki nne zilizopita kuanzia sasa.

1. Je kutokana na uwezo wako wa usikivu, ukikadiria hali ya maisha yako (kazini, nyumbani chuoni), je waweza kusemaje?

Codes:

1. Mbaya sana.
 2. Mbaya.
 3. Sio mbaya wala sio nzuri.
 4. Nzuri.
 5. Nzuri sana.
- 1 2 3 4 5

2. Je unaridhishwa na uwezo wako wa usikivu?

Codes:

1. Hauridhishi sana.
 2. Hauridhishi.
 3. Hauridhishi kiasi.
 4. Unaridhisha.
 5. Unaridhisha sana.
- 1 2 3 4 5

3. Ni kwa kiasi gani unaona tatizo la usikivu limekuzuia kufanya vitu ambavyo ungependa kufanya?

Codes:

1. Halijanizuia hata kidogo.
 2. Limenizuia kidogo.
 3. Limenizuia kwa kadri.
 4. Limenizuia sana.
 5. Limenizuia kabisa
- 1 2 3 4 5

4. Je kutokana na shida yako ya usikivu, ni kwa kiasi gani unahitaji matibabu ya masikio katika maisha yako ya kila siku?

Codes:

1. Sihitaji hata kidogo.
2. Nahitaji kidogo.
3. Nahitaji kwa kadri.
4. Nahitaji sana.
5. Nahitaji sana kabisa.

1 2 3 4 5

5. Je kutokana na shida yako ya usikivu, ni kwa kiasi gani unafurahia maisha?

Codes:

1. Sifurahi hata kidogo.
2. Nafurahia kidogo.
3. Nafurahia kwa kadri.
4. Nafurahia sana.
5. Nafurahia sana kabisa.

1 2 3 4 5

6. Je kutokana na shida yako ya usikivu, ni kwa kiasi gani unaona kwamba maisha yako yana umuhimu?

Codes:

1. Umuhimu haupo hata kidogo.
2. Umuhimu upo kidogo.
3. Umuhimu upo kwa kadri.
4. Umuhimu upo sana.
5. Umuhimu upo sana kabisa.

1 2 3 4 5

7. Je kutokana na shida yako ya usikivu, ni kwa kiasi gani unaweza kuwa makini kufikiria juu ya jambo fulani?

Codes:

1. Sina umakini hata kidogo.
2. Umakini upo kidogo.
3. Umakini upo kwa kadri.
4. Umakini upo sana.
5. Umakini upo sana kabisa.

1 2 3 4 5

8. Je kutokana na shida yako ya usikivu ni kwa kiasi gani unahisi usalama katika shughuli zako za kila siku?

Codes:

1. Sina usalama hata kidogo.
2. Usalama upo kidogo.
3. Usalama upo kwa kadri.
4. Usalama upo sana.
5. Usalama upo sana kabisa.

1 2 3 4 5

9. Je, mazingira yako yapo katika hali ya utulivu isiyo madhara kwa usikivu wako?

Codes:

1. Hakuna utulivu hata kidogo.
2. Utulivu upo Kidogo.
3. Utulivu upo kwa kadri.
4. Utulivu upo Sana.
5. Utulivu upo Sana Kabisa.

1 2 3 4 5

10. Je uwezo wako wa usikivu unakuwezesha kuwa makini katika shughuli zako za kila siku?

Codes:

1. Sina umakini hata kidogo.
2. Nina umakini Kidogo.
3. Nina umakini kwa Kadri.
4. Nina umakini Sana.
5. Nina umakini Sana Kabisa.

1 2 3 4 5

11. Je, unauwezo wa kukubali kuishi na hali ya kutokusikia?

Codes:

1. Sikubali hata kidogo.
2. Nakubali kidogo.
3. Nakubali kwa kadri.
4. Nakubali Sana.
5. Nakubali Sana kabisa.

1 2 3 4 5

12. Je, kutokana na shida yako ya usikivu, una uwezo wa kupata kipato cha kutosha kutimiza mahitaji yako ya kila siku (chakula, mavazi na malazi)?

Codes:

1. Hakitoshi hata kidogo.
2. Kinatosha kidogo.
3. Kinatosha kwa kadri.
4. Kinatosha sana.
5. Kinatosha sana kabisa.

1 2 3 4 5

13. Je, kutokana na shida yako ya usikivu, upatikanaji wa taarifa muhimu za Maisha yako ya kila siku mfano upatikanaji wa huduma za afya, usafiri upoje?

Codes:

1. Hazipatikani hata kidogo.
2. Zinapatikana Kidogo.
3. Zinapatikana kwa Kadri.
4. Zinapatikana Sana.
5. Zinapatikana Sana Kabisa.

1 2 3 4 5

14. Je, kutokana na shida yako ya usikivu ni kwa kiasi gani unapata nafasi ya kupumzika na kufurahia maisha?

Codes:

1. Sipati nafasi hata kidogo.
2. Napata nafasi kidogo.
3. Napata nafasi kwa kadri.
4. Napata nafasi sana.
5. Napata nafasi sana kabisa.

1 2 3 4 5

15. Je, kutokana na shida yako ya usikivu, mawasiliano kwa njia ya simu yapoje?

Codes:

1. Mabaya sana.
2. Mabaya kidogo.
3. Sio mabaya wala sio mazuri.
4. Mazuri.
5. Mazuri sana.

1 2 3 4 5

16. Je kutokana na shida yako ya usikivu, ni kwa kiasi gani unaridhishwa na uwezo wako wa kupata usingizi?

Codes:

1. Hauridhishi sana.
2. Hauridhishi.
3. Hauridhish iwala haupendezi.
4. Unaridhisha.
5. Unaridhisha sana.

1 2 3 4 5

17. Je kutokana na shida yako ya usikivu, ni kwa kiasi gani unaridhishwa na utendaji wako wa kazi katika maisha yako ya kila siku?

Codes:

1. Hauridhishi sana.
2. Hauridhishi.
3. Hauridhishi kiasi.
4. Unaridhisha.
5. Unaridhisha sana.

1 2 3 4 5

18. Je, kutokana na shida yako ya usikivu ni kwa kiasi gani unaridhishwa na uwezo wako wa kufanya kazi?

Codes:

1. Hauridhishi sana.
2. Hauridhishi.
3. Hauridhishi kiasi.
4. Unaridhisha.
5. Unaridhisha sana.

1 2 3 4 5

19. Je, kutoka na na shida yako ya usikivu ni kwa kiasi gani unaridhishwa na maisha yako ya kila siku?(chuoni , kazini,nyumbani)

Codes:

1. Hayaridhishi sana.
2. Hayaridhishi.
3. Hayaridhishi kiasi.
4. Yanaridhisha.
5. Yanaridhisha sana.

1 2 3 4 5

20. Je, kutokana na shida yako ya usikivu ni kwa kiasi gani unaridhishwa na mahusiano yako na watu wengine?

Codes:

1. Hayaridhishi sana.
2. Hayaridhishi.
3. Hayaridhishi kiasi
4. Yanaridhisha.
5. Yanaridhisha sana.

1 2 3 4 5

21. Je, kutokana na shida yako ya usikivu kwa kiasi gani unaridhishwa na mahusiano yako ya kimapenzi?

Codes:

1. Hayaridhishi sana.
2. Hayaridhishi.
3. Hayaridhishi kiasi.
4. Yanaridhisha.
5. Yanaridhisha sana.

1 2 3 4 5

22. Je, kutokanana na uwezo wako wa usikivu ni kwa kiasi gani unaridhishwa na usaidizi unao pata kutoka kwa marafiki zako?

Codes:

1. Hauridhishi sana.
2. Hauridhishi.
3. Hauridhishi kiasi.
4. Unaridhisha.
5. Unaridhisha sana.

1 2 3 4 5

23. Je kutokana na uweszo wako wa usikivu ni kwa kiasi gani unaridhishwa na hali ya utulivu wa makazi ambayo unaishi?

Codes:

1. Hairidhishi sana.
2. Hairidhishi.
3. Hairidhishi kiasi .
4. Inaridhisha
5. Inaridhisha sana.

1 2 3 4 5

24Je nikwa kiasi gani unaridhishwa na upatikanaji wa huduma za matibabu ya tatizo lako la usikivu?

Codes:

- 1.Hauridhishi sana.
 - 2.Hauridhishi.
 - 3.Hauridhishi kiasi
 - 4.Unaridhisha.
 - 5.Unaridhisha sana.
- 1 2 3 4 5

25Je, kutokana na shida yako ya usikivu ni kwa kiasi gani unaridhishwa na huduma za usafiri kutoka sehemu moja kwenda nyingine?

Codes:

- 1.Hairidhishi sana.
 - 2.Hairidhishi.
 - 3.Hairidhishi kiasi
 - 4.Inaridhisha.
 - 5.Inaridhisha sana.
- 1 2 3 4 5

26.Je,kutoka na na shida yako ya usikivu hali ya moyo mzito, taharuki, na wasiwasi huja kwako mara ngapi?

Codes:

- 1.Hakuna hata kidogo.
- 2.Ipo kidogo.
- 3.Ipo mara kwa mara.
- 4.Ipo sana.
- 5.Ipo kila mara.

Je, una maoni yeyote kuhusu maswali ambayo yameulizwa?

The World Health Organization Quality of Life (WHOQOL)-BREF

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World Health Organisation Quality of Life instrument (WHOQOL-BREF)

THE WORLD HEALTH ORGANIZATION
QUALITY OF LIFE (WHOQOL) –BREF
KISWAHILI

PTID:

Age	
Sex	

The following questions ask how you feel about your quality of life, health, or other areas of your life. I will read out each question to you, along with the response options. Please choose the answer that appears most appropriate.

‘Please keep in mind your standards, hopes, pleasures and concerns about your life in the last four weeks.

1. How would you rate your quality of life?

Codes:

1. Very poor.

2. Poor.

3. Neither poor nor good.

4. Good.

5. Very good.

1 2 3 4 5

2. How satisfied are you with your hearing health?

Codes:

1. Very dissatisfied.

2. Dissatisfied.

3. Neither satisfied nor dissatisfied.

4. Satisfied.

5. Very satisfied.

1 2 3 4 5

3. To what extent do you feel that hearing loss prevents you from doing what you need to do?

Codes:

1. Not at all.

2. A little.

3. A moderate amount.

4. Very much.

5. An extreme amount.

1 2 3 4 5

4. With regard to your hearing disability how much do you need medical treatment to function in your daily life?

Codes:

1. Not at all.
2. A little.
3. A moderate amount.
4. Very much.
5. An extreme amount.

1 2 3 4 5

5. With regard to your hearing disability how much do you enjoy life?

Codes:

1. Not at all.
2. A little.
3. A moderate amount.
4. Very much.
5. An extreme amount .

1 2 3 4 5

6. With regard to your hearing disability to what extent do you feel your life to be meaningful?

Codes:

1. Not at all.
2. A little.
3. A moderate amount.
4. Very much.
5. An extreme amount.

1 2 3 4 5

7. With regard to your hearing disability how well are you able to concentrate?

Codes:

1. Not at all.
2. A little.
3. A moderate amount.
4. Very much.
5. An extreme amount.

1 2 3 4 5

8. With regard to your hearing disability how safe do you feel in your daily life?

Codes:

1. Not at all.
 2. A little.
 3. A moderate amount.
 4. Very much.
 5. An extreme amount.
- 1 2 3 4 5

9. How noisy is your living environment?

Codes:

1. Not at all.
 2. A little.
 3. A moderate amount.
 4. Very much.
 5. An extreme amount.
- 1 2 3 4 5

10. With regard to your hearing disability do you have enough energy for everyday life?

Codes:

1. Not at all
 2. A little
 3. A moderate amount
 4. Very much
 5. An extreme amount
- 1 2 3 4 5

11. Are you able to accept living with hearing disability ?

Codes:

1. Not at all.
 2. A little.
 3. A moderate amount.
 4. Very much.
 5. An extreme amount.
- 1 2 3 4 5

12. With regard to your hearing disability do you have enough money to meet your daily needs(food, clothing and shelter)?

Codes:

1. Not at all.
 2. A little.
 3. A moderate amount.
 4. Very much.
 5. An extreme amount.
- 1 2 3 4 5

13. How available is the information about hearing health in your day-to-day life?

Codes:

1. Not at all.
 2. A little.
 3. A moderate amount.
 4. Very much.
 5. An extreme amount.
- 1 2 3 4 5

14. With regard to your hearing disability to what extent do you have the opportunity for leisure activities?

Codes:

1. Not at all.
 2. A little.
 3. A moderate amount.
 4. Very much.
 5. An extreme amount.
- 1 2 3 4 5

15. With regard to your hearing disability how is your ability to get around from one place to another ?

Codes:

1. Very poor.
 3. Neither poor nor good.
 4. Good.
 5. Very good.
- 1 2 3 4 5

16. With regard to your hearing disability how satisfied are you with your sleep?

Codes:

1. Very dissatisfied.
2. Dissatisfied.
3. Neither satisfied nor dissatisfied.
4. Satisfied.
5. Very satisfied.

1 2 3 4 5

17. With regard to your hearing disability how satisfied are you in performing your daily living activities?

Codes:

1. Very dissatisfied.
2. Dissatisfied.
3. Neither satisfied nor dissatisfied.
4. Satisfied.
5. Very satisfied.

1 2 3 4 5

18. With regard to your hearing disability how satisfied are you with your working capacity ?

Codes:

1. Very dissatisfied.
2. Dissatisfied.
3. Neither satisfied nor dissatisfied.
4. Satisfied.
5. Very satisfied.

1 2 3 4 5

19. With regard to your hearing disability how satisfied are you with yourself?

Codes:

1. Very dissatisfied.
2. Dissatisfied.
3. Neither satisfied nor dissatisfied.
4. Satisfied.
5. Very satisfied.

1 2 3 4 5

20. With regard to your hearing disability how satisfied are you with your personal relationships?

1. Very dissatisfied.
2. Dissatisfied.
3. Neither satisfied nor dissatisfied.
4. Satisfied.
5. Very satisfied.

1 2 3 4 5

21. With regard to your hearing disability how satisfied are you with your sex life?

Codes:

1. Very dissatisfied.
2. Dissatisfied.
3. Neither satisfied nor dissatisfied.
4. Satisfied.
5. Very satisfied.

1 2 3 4 5

22. With regard to your hearing disability how satisfied are you with the support you get from your friends?

Codes:

1. Very dissatisfied.
2. Dissatisfied.
3. Neither satisfied nor dissatisfied.
4. Satisfied.
5. Very satisfied.

1 2 3 4 5

23. With regard to your hearing disability how satisfied are you with the noise conditions of your living place?

Codes:

1. Very dissatisfied.
2. Dissatisfied.
3. Neither satisfied nor dissatisfied.
4. Satisfied.
5. Very satisfied.

1 2 3 4 5

24. With regard to your hearing disability how satisfied are you with your access to health services?

Codes:

1. Very dissatisfied.
 2. Dissatisfied.
 3. Neither satisfied nor.
 4. Satisfied.
 5. Very satisfied.
- 1 2 3 4 5

25. With regard to your hearing disability how satisfied are you with your transport?

Codes:

1. Very dissatisfied
 2. Dissatisfied
 3. Neither satisfied nor dissatisfied
 4. Satisfied
 5. Very satisfied
- 1 2 3 4 5

26. With regard to your hearing disability how often do you have negative feelings such as blue mood, despair, anxiety, depression?

Codes:

1. Never
 2. Seldom
 3. Quite often
 4. Very often
 5. Always
- 1 2 3 4 5

Do you have any comments about the assessment?

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Appendix: 3

UNITED REPUBLIC OF TANZANIA
 MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY
 MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES
 OFFICE OF THE DIRECTOR - RESEARCH AND
 PUBLICATIONS



Ref. No.DA.282/298/01.C/

Date: 01/02/2021

MUHAS-REC-02-2021-482

Dr. Sigrid Cyril Lucas,
 MMed in Otorhinolaryngology,
 School of Medicine
MUHAS

**RE: APPROVAL FOR ETHICAL CLEARANCE FOR A STUDY TITLED:
 QUALITY OF LIFE AMONG ADULT PATIENTS WITH SENSORINEURAL
 HEARING LOSS ATTENDING OTORHINOLARYNGOLOGY CLINIC AT
 MUHIMBILI NATIONAL HOSPITAL DAR ES SALAAM, TANZANIA.**

Reference is made to the above heading.

I am pleased to inform you that the Chairman has on behalf of the University Senate, approved ethical clearance of the above-mentioned study, on recommendations of the Senate Research and Publications Committee meeting accordance with MUHAS research policy and Tanzania regulations governing human and animal subjects research.

APPROVAL DATE: 01/02/2021

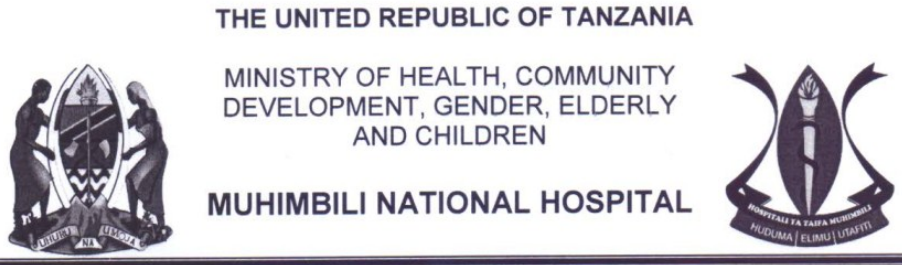
EXPIRATION DATE OF APPROVAL: 31/01/2022

STUDY DESCRIPTION:**Purpose:**

The purpose of this study is to assess the quality of life in adult patients with sensorineural hearing loss attending ORL clinic at Muhimbili National Hospital.

The approved protocol and procedures for this study is attached and stamped with this letter, and can be found in the link provided: <https://irb.muhas.ac.tz/storage/Certificates/Certificate%20-%20369.pdf> and in the MUHAS archives.

Appendix: 4



In reply please quote;

Ref. No.: MNH/TRCU/Perm/2021/027

Date: 11th February, 2021

Head of Department
ENT
Muhimbili National Hospital

RE: PERMISSION TO COLLECT DATA AT MNH.

Name of Student	Dr. Sigrid Cyril Lucas
Title	“Quality of Life Among Adult Patients with Sensorineural Hearing Loss Attending Otorhinolaryngology Clinic at Muhimbili National Hospital, Dar es Salaam, Tanzania”.
Institution	Muhimbili University of Health and Allied Sciences
Supervisor	Prof. Ndeserua H. Moshi
Period	11th February 2021, to 10th March, 2021

Approval has been granted to the above mentioned student to collect data at MNH.

Kindly ensure that the student abide to the ethical principles and other conditions of the research approval.

Sincerely,

[Signature]
Reid B. Mchome

Coordinator –Teaching, Research and Consultancy Unit



c.c DSS

c.c Dr. Sigrid Cyril Lucas