

**BARRIERS TO ACCESSING HEALTH CARE SERVICES AND COPING
STRATEGIES AMONG PEOPLE WITH HEARING IMPAIRMENTS
IN IBADAN METROPOLIS, OYO STATE**

BY

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CERTIFICATION

I certify that this study was carried out by Ibukunoluwa Comfort Mesagan in the Department of Health Promotion and Education, Faculty of Public Health, College of Medicine, University of Ibadan under my supervision.

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DEDICATION

This research work is dedicated to the Almighty God for His faithfulness towards my academic pursuit, for His mercies and grace throughout the course of this program and to people with disabilities, who have experienced or are experiencing difficulties in accessing various services globally.

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ABSTRACT

People with hearing impairments experience various forms of barriers when accessing healthcare services. This is due to their inability to communicate with healthcare providers, poor health knowledge, low socioeconomic status among others. Because of the difficulties experienced while accessing quality healthcare services, this has resulted in their avoidance of health systems, misdiagnosis, frustrations and lack of confidence in the health system. Previous studies focused on communication barriers only. Hence, this study was, therefore, designed to explore the barriers to accessing healthcare services and coping strategies among people with hearing impairments in Ibadan Metropolis, Oyo State, Nigeria.

A descriptive cross-sectional survey design was adopted for this study. A purposive sampling technique and snowball approach was employed to select 80 respondents who are residents within Ibadan Metropolis. A validated interviewer-administered structured questionnaire was used to obtain information on socio-demographic characteristics, health-seeking behaviour, individual/demand-side barriers, institutional/supply-side barriers, and the strategies employed in coping with these barriers. The data collected were analysed using descriptive statistics and inferential statistics such as fishers exact test with the level of significance set at $p=0.05$

Respondents' age was 26.6 ± 7.3 . Majority (63.8%) of the respondents fall within 18-25 years age range and the major method of communication for people with hearing impairments is through the use of sign language (92.5%). Majority (66.3%) had secondary school education while few (18.8%) had tertiary education. Only 13.8% of the respondents were employed and 10.0% were self-employed. Majority (63.8%) of the respondents, do not have any source of monthly income and 1.3% earn about 40,000 and above monthly. Most (66.3%) of the respondents had been ill in the last twelve months and about 49% visited hospitals. The most common individual /demand-side barriers were lack of finance (65.0%) followed by inability to communicate with physician (62.5%). Fear of misdiagnosis was also a barrier for 55.0% of the respondents while the most prevalent institutional/supply-side barrier was high financial cost (75.0%) followed by delay before seeing a doctor (68.8%). The absence of professional sign language interpreters in most health facilities is a major barrier for most (66.3%) of the respondents. Most (73.8%)

respondents reported they seek help from other sources sometimes, while 67.5 % indicated that they were always accompanied by family members and friends who serve as interpreters in health care settings (67.5%). Less than half, (45.0%) of respondents indicated that the health facilities they visited provide sign language interpreters while 22.5% reported they do not visit hospitals or health facilities due to these barriers. No significant association was found between socio-demographic characteristics and health-seeking behaviour, barriers and health-seeking behaviour, and socio-demographic characteristics and coping strategies.

Barriers to accessing health care services exist both at demand-side/individual and supply-side/institutional level among people with hearing impairments in Ibadan Metropolis. The use of mass media in health education, advocacy and training of health professionals in sign language is very important in improving access to health care services among these population, so that health equity and equality can be achieved.

Keywords: Hearing impairment, Health-seeking behaviour, Demand-side barriers, Supply-side barriers

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LIST OF ACRONYMS

ASL- American Sign Language

BSL- British Sign Language

dB- Decibels

HIV- Human Immuno-deficiency Virus

Hz-Hertz

NGOs- Non Governmental Organizations

SPSS- Statistical Package for Social Science Software

US- United States

WHO- World Health Organization

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OPERATIONAL DEFINITION OF TERMS

Disability: An impairment which may be cognitive, developmental, intellectual, mental, physical and sensory.

Deafness: A disability that results in loss of ability to hear sounds

Access: Ability to make use of various services

Health: According to W.H.O, health is a state of physical, mental and social well-being and not merely the absence of diseases or infirmities

Healthcare: Set of services provided by a country or an organization to treat people who are physically or mentally ill.

Barriers: Factors that restrict the use of various services

Hearing impairment: Partial or total inability to hear

Demand-side/Individual barriers: barriers that arise from individuals, household or community and may affect their health-seeking behaviours.

Supply-side/Institutional barriers: barriers that arise from the health system and can limit access to health services.

Coping Strategies: mechanisms or means on dealing with harmful or unpleasant situations.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

In our society today, obtaining quality health care services is a major challenge and half of the world still lack essential health services (World Health Organization [WHO] and World Bank, 2011). Access to health care services according to Levesque, Harris & Russel (2013) requires gaining entry into the healthcare system, accessing places and care givers who provide the necessary care and services and with whom there is a relationship based on mutual communication and trust between patients and caregivers. Although access to health care is crucial to ensure good health and lead a productive life, not everyone has access to it (WHO and World Bank report, 2017). Challenges are inevitable in life even people with one form of disability or the other are not exempted from it.

The United Kingdom Equality Act (2010), defined person with a disability as someone with any physical or mental impairment which has a severe and negative impact on his or her ability to carry out daily activities. Individuals with varying degrees of hearing loss are inclusive. According to the World Health Organisation (WHO), more than 5% of people globally, that is, about 466million according to the World Health Organisation, have disabling hearing loss (of which 432million are adults and 34million are children) (WHO, 2019). The Projection was made that if no drastic measures are taken by the year 2050, people with disabling hearing loss will be over 900 million or one in every ten people (WHO, 2019). Accessing health care services is a significant challenge for those with hearing impairments or hearing loss. According to Steinberg, Barnett, Meador & Zazove (2006), people with hearing impairment, otherwise known as deaf people, reported difficulties in accessing health care services. Deafness, unlike other disabilities, is not visible, this could be one of the primary reasons why people with hearing impairments experience more challenges in accessing healthcare services. According to Jefwa (2017), the biggest challenge is that deafness is an invisible disability; deaf people cannot be identified until an attempt is made to communicate with them.

In Nigeria, the experiences of the deaf people in every institution, even in the community where they reside are not pleasant ones. Almost every institution (for example, schools,

healthcare facilities, transport system, market places, religious places) contributes to the marginalisation and disparity experienced by the deaf community. According to Treat (2016), 23.7% of Nigerians have hearing impairments, and 84% of this population is undereducated and economically dependent. About 2.5 million (i.e. 2%) people in Nigeria are hearing impaired. Despite the size of this population, information about access to and use of healthcare services is still limited. (Arulogun, Titiloye, Afolabi, Oyewole & Nwarogu, 2013).

1.2 Statement of the problem

Differences exist in the accessibility to healthcare services between persons with hearing impairments and the hearing population. Research has shown that individuals with hearing impairments experience serious communication challenges during the utilisation of healthcare services in various healthcare facilities (Kuenburg, Fellingner, & Fellingner, 2016). The hearing impaired also lack basic health knowledge and information which could be a factor that contributes to the differences in health status when compared with the hearing population. Pick (2013) pointed out that cultural and language barriers also predispose them to poor health knowledge. He further added that, the inability of deaf people to have direct access to health information during primary and secondary education has resulted to poor medical and mental health knowledge which tends to affect their help-seeking behaviours.

The inability of deaf people to access health services, information and education have led to avoidance of the health system, misdiagnosis, frustrations, mistrust and lack of confidence in the health system thereby predisposing them to poor health. People with disabilities are more predisposed to poor health outcomes such as sexually transmitted infections, reproductive health challenges, hypertension, fall-related injuries and obesity among others. In addition, they are more predisposed to mood disorders like depression (US Department of Health and Human services, 2014). Although various laws at both local and global levels have been enacted to address the problem of poor access to healthcare by the hearing impaired. Despite these, little or no effort has been made to address these barriers also the implementation of policies has been challenging, and the health of deaf people continues to be negatively affected. Therefore, this study was conducted to investigate the health-seeking behaviours, barriers and coping strategies of the hearing impaired in accessing healthcare services.

1.3 Justification of the study

Poor access to healthcare services has led to fear, mistrust, misdiagnosis, avoidance of healthcare systems by the hearing impaired and also compounded the burden and health challenges of this special population. Considering the steady increase in the global occurrence of hearing loss and subsequent increase in the population of the hearing impaired, it is crucial to investigate the factors influencing access to healthcare among this population in Nigeria. Previous studies focused on communication barriers only and much work has not been done on the coping strategies employed by this population on poor access to healthcare services. Therefore, this study is in line with the goals of Nigeria Vision 2020, which aim to address the inaccessibility to quality healthcare, particularly among those living with disabilities. Findings from this study can be used as evidence to guide the formulation of policies as well as plan, design and implement health promotion and intervention programs to improve access to healthcare thereby improving the health and wellbeing of people with hearing impairments. Furthermore, findings from this study could be used to advocate and emphasise on the need for health professionals training to be trained in the use of sign language to improve communication with the hearing impaired people in healthcare facilities.

1.5.1.4 Research Questions

1. What is the health-seeking behaviour of the respondents?
2. What are the individual barriers to accessing health care among the respondents?
3. What are the institutional barriers to accessing health care services by the respondents?
4. What are the strategies employed by the respondents to cope with these barriers?

1.5 Broad Objective

The broad objective of this study was to investigate the barriers to accessing healthcare and coping strategies among people with hearing impairments in Ibadan Metropolis.

1.6 Specific Objectives

The specific objectives of this study are to:

1. Assess the health-seeking behaviour of the respondents
2. Identify the individual barriers to accessing health care services among the respondents
3. Identify the institutional barriers to accessing health care services by the respondents

4. Determine the coping strategies employed by the respondents

1.7 Hypotheses

The following null hypotheses were tested

H₀1: There is no significant relationship between socio-demographic variables and healthcare-seeking behaviour.

H₀2: There is no significant association between individual/demand-side barriers and healthcare-seeking behaviour.

H₀3: There is no significant association between institutional/supply-side barriers and healthcare-seeking behaviour.

H₀4: There is no significant association between socio-demographic variables and coping strategies.

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CHAPTER TWO

LITERATURE REVIEW

2.1 Overview of Deafness

Sounds occur at various frequencies and humans and animals respond to frequency band within that range measured in decibels (dB) (Duthey, 2013). According to the National Academies of Sciences, Engineering and Medicine (2016), the sound is formed from waves of air pressure that differs in frequency, amplitude and direction. The ability for humans to detect sounds from low to high pitch lies within the frequency range of 20 to 20,000 Hz and humans can also detect sound as low as 0 dB hearing level. Duthey (2013) also stated that the frequency of sounds the human ear can detect falls within the range of 20Hz to 20,000Hz. This frequency range is referred to as audio or sonic.

The World Health Organization (2019) defined a person with hearing loss as someone who lacks the ability to hear as well as others. Hearing loss which can be used interchangeably with hearing impairment is defined as the partial or total inability to hear. From this definition, hearing loss is a general term for all forms of hearing impairments which range from mild to profound hearing loss. Hearing ability which is measured in decibels (dB), is classified into six according to the World Health Organization. This include normal hearing (25dB), mild hearing loss (26-40db), moderate hearing loss (41-55dB), moderately severe hearing loss (56-70dB), severe hearing loss (71-90db) and profound hearing loss (90 and above) hearing loss (Nasir *et al.*, 2018). A person is said to have disabled hearing loss if the degree of hearing loss is above 40 decibels (dB) in the better ear as an adult or greater than 30 decibels (dB) as a child (WHO, 2018). Deafness is a form of hearing loss and according to Duthey (2013), most times, deafness is commonly referred to as hearing loss. Deaf individuals have various degree of hearing and are often classified along the spectrum of hearing to profound deafness (Richardson, 2014). According to the WHO (2018), people classified to be deaf often use sign language for communication because they have little or no hearing ability. This can also be referred to as profound hearing loss. From this statement, deafness is the highest form of hearing loss with little or no remedy. Deaf people can only cope with their condition through the use of sign language. Deafness usually occurs bilaterally but it can also occur unilaterally on few occasions. It is bilateral when it

affects both ears and unilateral when it occurs on one ear. Individuals whose hearing loss is mild or moderate may not experience difficulties communicating in a quiet environment but will experience difficulties in noisy environment while individual with severe or profound hearing loss experience difficulties communicating in both quiet and noisy environments (Souza, Hoover, Blackburn & Gallun, 2019). Deaf people according to Murray (2019), are unique individuals with a sensory difference in that they are also a linguistic minority.

Deafness can be viewed from two perspectives: The medical perspective and the socio-cultural perspective. From the medical perspective, deafness is a pre-existing physical condition that must be cured and rehabilitated (Chaveiro, Porto & Barbosa, 2009). The Western medical model, which focuses on curing illnesses or deviation from the norm, considers deafness to be abnormal and therefore must be cured (Richardson, 2014). From the preceding, this perspective reveals the mindset of the hearing population, including health professionals towards deaf people. They see them as having a medical condition which must be cured. The socio-cultural perspective reveals how deaf people view themselves. According to Chaveiro *et al.* (2009), a socio-cultural perspective ascertains that the deaf community does not regard itself as a disabling group that should be cured. Richardson (2014) stated that people who are deaf do not consider essential surgeries for cochlear implants since according to them, being deaf is not a disability and surgery has too many risks. Deaf people, unlike other disabled individuals, prefer they give birth to deaf children, but would also accept if they are hearing. The deaf appreciates deaf spouse, family and friends and respect the fact that they are different from the hearing population (Lane, 2005).

2.1.1 Types of Deafness

Several literatures from various scholars reported three types of hearing loss

- i) Conductive hearing loss,
- ii) Sensorineural hearing loss
- iii) Mixed hearing loss

Conductive hearing loss: A person is said to have conductive hearing loss if sounds from the outer ear are unable to get to the middle ear (eardrum and ossicles). Conductive hearing loss is caused could be due to obstruction of the external auditory carnal (Thomas, 2011). Conductive hearing loss is a situation in which an individual is unable to hear faint sounds,

medical or surgical operation is required to correct this condition (Duthey, 2013). Things like ear wax, fluids, allergies, illness, ear infections or perforated eardrums could be possible causes of conductive hearing loss.

(ii) Sensorineural hearing loss: It occurs as a result of damage to the structures of the inner ear. Literatures reviewed have shown that sensorineural hearing loss is also known as deafness and it accounts for 90% of hearing loss. According to Shearer, Hildebrand & Smith(2017), sensorineural hearing loss results from malfunction of the inner ear structures (cochlear and auditory nerves). It can be caused by age, illness, noise exposure, head trauma and genetics. It is irreversible (Duthey, 2013).

(iii) Mixed hearing loss: This condition occurs due to a combination of factors responsible for both conductive and sensorineural hearing loss (Duthey, 2013).

2.1.2 Causes of Deafness

Hearing loss and deafness can be caused by either congenital or acquired factors (WHO, 2018). Hearing loss which occurs at birth or soon after birth is referred to as congenital hearing loss. It could be due to hereditary and nonhereditary factors or certain complications during pregnancy and child birth. According to WHO, acquired causes of hearing loss include infections, maternal rubella, and syphilis during pregnancy, low birth weight, birth asphyxia, and severe jaundice in the neonatal period, and inappropriate use of particular drugs pregnancy.

Acquired causes of hearing loss and deafness according to WHO (2018), refers to hearing loss at any age. It could be caused by infectious diseases, chronic ear infections, otitis media, use of certain medicines, injury to the head and ear, excessive noise, recreational exposure to sounds, ageing, wax or certain objects blocking the ear canal.

2.1.3 Prevalence of Deafness

Hearing loss or impairments is a leading form of disability that can affect anyone irrespective of age, sex, ethnicity, level of education etc. According to Mulwafu, Kuper & Ensink (2016), hearing loss or impairments is the most prevalent sensory disability globally and a condition that is of growing concern. Research carried out by various scholars on the prevalence of hearing impairments revealed that there has been a steady increase in the prevalence of hearing impairments globally. According to research, the first global prevalence of hearing impairment was recorded in 1985, an estimate of 42 million (0.9%) people were said to be hearing impaired. Smith (2009) reported that number of

people with hearing impairments increased 120 million (2.1%) of the world's population in 1995. 70 million of this population in developing countries were adults and 8 million were young individuals. In 2011, it was estimated that 360 million people had disabling hearing impairment of which about 32 million were children below 15 years of age. 7.5 million of these children were below 5 years of age (Smith, 2009).

The WHO report on hearing impairments in 2018, revealed that over 466 million (over 5%) people globally have disabling hearing loss and 34 million (7%) of these are children, 242million (56%) are males and 190 million are females (44%). One-third of the population above sixty-five years are affected by disabling hearing loss and the number of people with disabling hearing loss will increase to over 630million in 2030 and over 900million in 2050.

Hearing loss has been recognized as a major disability among people in the developing countries (Kodiya, Afolabi & Ahmad, 2012). Determining the prevalence rate of hearing impairment in Africa is difficult because of lack relevant information on hearing impairment (Mulwafu, Kuper & Ensink, 2015). In Nigeria, Arulogun *et al.* (2013), reported that an estimated number of 2% of the Nigerian population are hearing impaired. 23.7% of the Nigerian population suffers from disabling hearing loss and other related hearing impairments (Treat, 2016). About 84% deaf people in Nigeria remain undereducated and economically underdeveloped (Elekwe, Agboola & Guteng, 2018). The World Health Organization in 2019 revealed that, 8.5million Nigerians are suffering from disabling hearing loss. Children are the most vulnerable group; no fewer than 3.5 million Nigerian children have a hearing problem. A survey on the prevalence of junior school students, aged 10-15 years in Kaduna metropolis revealed showed that about 14% of school children had hearing loss (Nasir, Labaran, Kodiya & Nwaorgu, 2018). Recently, Dr Jide Idris (Lagos State commissioner for health), stated that about 12million Nigerians suffer from hearing impairments. A research carried out in Kaduna by Kodiya *et al.* (2012), revealed that out of the 5,485 patients studied, 26.2% had hearing loss (812 males and 623 females).

2.2 Health seeking behaviour of people with hearing impairments

According to Oberoi, Chaidharry & Patnaik(2016), health seeking behaviour is any action taken by people who have a health challenges so as to find appropriate solution to their health challenges. It begins with a decision-making process that involves individual and/or household behaviour, community norms and expectations together with health providers'

characteristics and behaviours (Gerald & Ogwuche, 2014). Zazove, Tamsakar, Malia, Stem, Gorenflo, & Meador (2006) reported that the hearing impaired and the hard of hearing might not seek health care services due to their inability to communicate effectively with healthcare providers, unavailability of interpreters and other factors. Low health literacy affects their health-seeking behaviours, interactions with health providers and adherence to medical advice (Barnett, Klein, Pollard, Jr., Samar, Schlehofer, Starr, & Pearson, 2011). Steinberg *et al.*, (2002) opined that factors that affect health-seeking behaviour of deaf people include information deficit, poor communication, and uninformed consent

Barriers to accessing healthcare services by people with hearing impairments

Saurman (2016), stated that the five scopes of access to health care as developed by Penchasky & Thomas in 1981 include: availability, accessibility, affordability, accommodation and acceptability. These barriers can be categorised into demand-side and supply-side. Barriers to accessing healthcare services can arise from the individual (demand side) or the health system (supply side) or both (Ensor & Cooper 2004; O'Donnel, 2007).

2.3 Individual or demand-side barriers to accessing healthcare: Individual or demand-side barriers are those factors that arise from individuals, household or community and affect their health-seeking behaviours. They include a person's belief, demographic characteristics, social factors, and availability of financial resources which may hinder or support the utilisation of health services (Magaard. Seerala & Schulz,2017). They include income, knowledge and education, culture and gender issues. Demand-side barriers may prevent individuals from utilising services from which they can benefit from (O'Donnel 2007). On the demand side, individuals may not use service that may be of immense benefit to them (O'Donnel 2007). Demand-side barriers to accessing healthcare services are factors that may arise from individual service. Individual, household or community characteristics that influence the demand for health services are referred to as demand- side determinants to utilising health services (Singh, 2016).

i) Previous experiences of deaf people: Deaf adults may neglect health care settings due to shame and embarrassment they often experience in the health care settings (Pereira & Fortes, 2010). Richardson (2012) opined that deaf people often avoid healthcare because of their inability to communicate with care providers and lack of trust in their care providers'

intentions and behaviours. Research conducted by Steinberg, Wiggins & Sullivan in 2014, on the experiences and perceptions of deaf women in accessing health care revealed that deaf people are ignorant of the meaning or importance of specific health programmes like cancer screening, mammography or Pap smears. Many negative experiences in health care settings have made members of deaf culture conclude that health care visit will only result in delay and wrong treatment. Thus, they may not seek care unless they are very sick (Richardson, 2014). According to Dyakes (2009), some deaf patients make these health care visits with hesitation and care. A study by Arulogun *et al.* (2013), on the experiences of deaf girls in accessing reproductive health services revealed inability to communicate with the service provider, inability to understand the care provider, missing turns in waiting room because they did not hear their names called and issues on confidentiality of what was discussed with the health provider due to the presence of an interpreter as experiences deaf people face in the health settings. The difficulties experienced by deaf people when communicating with health professionals have often led to a poor understanding of their doctor's instructions (Zazove *et al.*, 2006). Deaf people also experience discrimination during a visit to a health facility and they reported that they were always last to see the doctor

ii) Perceptions of deaf people towards health system: Understanding peoples' perception of health services is essential in determining their level of utilisation.

According to Onyeneho *et al.* (2016), peoples' decision to use available health services depends on their perception and affordability. Their perception is determined by their level of satisfaction in the health system. Research has shown that deaf people feel that doctors do not respect their decision to understand and participate in their care (Iezzoni, O'Day & Kileen 2004). According to Latino (2016), deaf people feel they are being discriminated against because they do not receive care that suits their condition. They are frustrated with the healthcare system because of the perception that they receive care different from people who are not deaf (Steinberg *et al.*, 2006). A study conducted by Witte & Kuzzel (2000), revealed that deaf respondents believed that they are treated differently or less than equal, yet they seemed resigned to the prejudice. Deaf respondents also felt that some health workers disliked working with them, they complained of doctors being impatient with them because their inability to speak and have to write back and forth with the doctors (Steinberg *et al.*, 2006). Patients with hearing disabilities complained that physicians do not have persons trained in medical sign language and cost of hiring and interpreter is very

high (Iezzoni *et al.*, 2004)

iii) Lack of health knowledge and information: Health education is important to improve health, maintain health, make healthy choices, prevent diseases, and reduce risky behaviours. Kuenburg, Fellingner & Fellingner (2016) stated that deaf people face more difficulty in accessing health information than hearing people. One major reason why deaf people are not aware of certain health information and have poor health knowledge is because vital health information are often communicated through public announcements on radio or television (Jefwa, 2017). According to Pollard *et al.* (2009), deaf sign language users do not have access to health information that occurs incidentally in tramways, radio or the television and most health information and educational materials are not produced in sign language. In British sign language, the word Cholesterol could not be interpreted in sign language (Patel, Gill, and Chakathayil & Ojukwu, 2011). In a study conducted by Elekwe & Ebenso (2016) the Disability People Organisation expressed concern over the inability of its members to gain access to public information and communication. This, according to them, is a major barrier encountered by their members. It further stated that deaf people usually get health information latter than their hearing counterparts because of their hearing disability. Most television stations do not employ sign language interpreters, and health programs for the deaf are not available (Elekwe & Ebenso, 2016). A study by Kuenburg, Fellingner & Fellingner (2016), revealed that deaf people in Nigeria, Swaziland, Brazil and the US are not aware of the various means of transmission of HIV. A research conducted in Kogi and Niger states by Smith (2011), revealed that people with disabilities are ignorant of their health status, have low educational status, have inadequate health information and lack of legislation which enhance access to these services. The inability of deaf people to access health information conveyed via mass media or ambient auditory sources such as public conversation has increased the rate of low health literacy among this population (Pollard, Dean & O’hearn, 2009). Elekwe & Ebenso (2016), reported that public information, education and communication is not accessible to people with hearing loss in the country because of the mode of communication.

iv) Issues of confidentiality, trust and privacy: Every individual visiting the health care system has a right to confidentiality and privacy. Communication during a consultation between a deaf patient and a health professional should also be considered private and confidential. Review of relevant literature has shown that the use of interpreters, even though crucial is a breach of privacy. When a sign language interpreter is engaged during

consultation, the appointment goes much smoother, however, there will be a breach of privacy (Dyakes, 2013). According to Arulogun *et al.* (2013), friends and family members are, most time, involved as interpreters between people with hearing impairment and their physicians. Involving family members and friends as interpreters is seen as a breach of confidentiality and can also lead to further miscommunication as the language of the doctor and interpreter may not be the same. Lack of privacy due to an interpreter or a family member could make a person withhold vital information from health worker and also fear of breach of privacy may prevent deaf people from visiting reproductive health centers altogether (Mprah, 2013). According to Richardson (2014), issues of confidentiality exist because interpreters are part of the deaf community and might know the individual personally.

v) Socio-economic challenges: Socio-economic factors can affect have a person's health by creating living conditions which are not conducive to healthy lifestyles (Kritizenger, 2011). World report on disability shows that many people with disabilities experience negative socio-economic outcomes, low employment rates, high rates of poverty, less education and low quality of life than people without disabilities. Deaf people may not be able to afford medical services needed for their optimum health. According to Asonye, Emma-Asonye & Edward (2018), most families and parents of low income status often engage in self-medication due to lack of money to pay for hospital bills.

2.4 Institutional barriers to accessing health care: Institutional barriers are supply-side factors that are peculiar to the health system and can limit access to health services. (Peters, Garg, Bloom, Walker, Brieger, & Hafizur, 2008). They are factors inherent in the health system and cannot be controlled by health service users (Singh, 2016). According to Socias, Shoveller, Bean,Nguyen, Montana, & Shannon (2016), institutional barriers are categorized into availability and acceptability of care. Institutional barriers include the following: health facilities, drugs, human resources, equipment, geographic distance, time of operation, attitude of service providers, waiting time and language issues (Jacobs, Bigdeli, Annear & Damme, (2012); Socias *et al.*, (2016).

i) Communication barriers: Communication is very important for the delivering of effective health care services. It is necessary for effective assessment, diagnosis and management of health conditions. Good communication is the singular most vital components of improved access but it continues to be a major barrier (London Assembly, 2015). For people with

hearing impairments, communication seems to be a major challenge. Several studies have shown that when receiving health care services, deaf patients face serious communication challenges (Chaveiro *et al.*, 2009). The inability of deaf people to communicate effectively with health care providers is a major challenge for both the deaf patient and health professional. People who are deaf and hard of hearing together with their care providers experience challenges when communicating within the health settings (Arulogun *et al.*, 2013). According to Wilkens & Heir (2008), communication barriers prevent or distort effective communication between two parties. This is often the case between a deaf patient and a hearing doctor. Communication within health care settings seems difficult for people with hearing impairments, and this might sometimes affect the care they receive (Middleton, 2010).

A study conducted by Arulogun *et al.* (2013) revealed that communication in health settings is currently below standard, which is one of the reasons why inequality in the use of healthcare services exists between people with hearing impairments and other population. Most methods used as a means of communication include lip-reading, note-taking and use of sign language interpreter. Fifty-three percent of deaf patients prefer lip reading during medical consultations to using a British sign language interpreter, while fifteen percent prefer communication through notes writing. These methods of communication also hinder effective communication between deaf patients and their health care providers (Emond, Sutherland, Allsop, Alexander, & Kyle, 2015). According to Harmer (1991), almost half of the consonant sounds including /f/v/t/d/k/g/p/b/ and /m/ seem to be similar in pronunciation. Most professional lip readers under favourable conditions can only understand about 30-40% of words because many sounds appear the same on the lips (Yates, 2017). Many deaf patients reported that they could not communicate with their physicians during surgeries because these physicians put on a mask, thus making communication through lip-reading difficult (Zazove, Meador, Derry & Gorenflo, 2006).

ii) Lack of health care provider knowledge: Most health care providers are not aware and have limited understanding on issues that concern deaf patients at health facilities; this has resulted to limited access to these facilities by deaf people (Kritizenger, 2011). Most medical training designed for medical staff do not equip them with the necessary skills needed to communicate effectively with deaf patients. Insufficient knowledge about disability, misconceptions, insensitivity and lack of support from health care providers and staff can

affect the health and access of people with disabilities (Assegid, 2017). There is also a lack of awareness by doctors and other medical staff on the way to approach the deaf (Ubido, Huntington and Warbourton, 2002).

iii) Cost of accessing health services: Provision of affordable healthcare is important to clients (Dassah., Aldersey, & Mccoll, 2018). Prohibitive cost of healthcare for the uninsured limit the access of people with hearing impairments to their physician (Karras & Rintamaki, 2012). People with disabilities are not able to access medications and medical services (Dassah *et al.*, 2018). According to World report on disabilities (2011), cost of transportation is also a major barrier to health care access in low and middle income countries. Many individuals including those with insurance coverage reported they have ever postponed their decision to seek healthcare services because they were afraid of the high cost of doing so (Smith, Monti, Mir, Peters, Renuka & Politi, 2018).

iv) Health workers attitude: People with disabilities often encounter negative attitudinal barriers within the society generally and from healthcare providers which has discouraged their use of services and led to negative attitudes (Devkota, Clarke, & Murray, 2017). A research by Emond *et al.* (2015) revealed that 48% of deaf people indicated that the receptionist at the clinic was not helpful. Review of literatures has shown that people with disabilities often experience barriers to health services due to care providers inappropriate attitudes and behaviours (Devkota *et al.*, 2017). In a study conducted by Drainoni, Lee-Hood & Tobias (2006), members of several focus groups gave instances of insensitive and disrespectful behaviours they received from their healthcare providers. Deaf people often neglect healthcare because of communication challenges and also because of lack confidence in the actions and attitude of healthcare providers (Richardson, 2014). In a study conducted by Socias *et al.* (2016), 26.1% of the respondents indicated that they were unable to access healthcare because they felt disrespected by healthcare providers.

v) Long waiting times: A study by Socias *et al.* (2016) revealed waiting for a long time before seeing a doctor was the most frequently experienced institutional-level barrier in accessing health services among the respondents.

2.5 Coping Strategies

Due to the numerous challenges and difficulties encountered in accessing health services,

deaf people have resulted in various ways to coping with these challenges. The challenges encountered by deaf people in health care settings and wider community has made them more resilient and also developed various coping skills (Terry, Quynh, Nguyen, & Malatzky, 2017). Coping according to Martha and Janice (2019), is the ability to manage situations that are threatening, harmful and challenging. It is also important for well-being. W.H.O (1998), defined coping strategies or mechanisms as remedial actions taken by people whose survival and livelihood are being threatened or compromised.

Many deaf people had to rely on family and friends to act as interpreters in medical consultations (Terry *et al.*, 2017). As a way of coping with poor access to health information, deaf people rely on friends or peers. A study conducted by Bat-chava *et al.* (2005), deaf health information was reported as deaf grapevine. Deaf people acquire health knowledge from their friends who may not have access to the correct information either (Blake, Tucker & Glaser, 2014). Most educated deaf people make use of the internet as a source of health information (Kritizinger, 2011).

Research conducted by Zazove *et al.* (2004), has shown that the use of internet as a source of health information is only common among deaf people who are educated, young, employed and earn good income. They further stated that most deaf people suffer severe socio-economic challenges and so may not be able to afford a computer. Several studies have shown that deaf people use avoidant coping strategies as a means of coping with challenges encountered when accessing health care. Avoidant coping strategies is a form of coping with challenges that is characterized by avoiding the stressors (Zeidner & Endler, 1995). Experiences of neglect encountered by deaf people during visit to health facility reduce their enthusiasm to visit the same facility when need arises (Appiah, Georgina, Geoffrey, Wilson, & Duut, 2018). According to Steinberg *et al.* (2004), deaf people avoid healthcare settings was due to inability to communicate with healthcare providers and insensitive behaviours of health professionals.

2.6 Theoretical Framework

Many theories and models are used in health promotion to address health issues. These theories include but are not limited to ecological model, trans-theoretical model, social cognitive theory, the theory of reasoned actions, the theory of planned behaviour and precede-proceed model (Glanz, Rimer, & Lewis 2002). Each of these models identifies behavioural influences and factors relevant to issues targeted by health promotion programmes. The model used for this work is the Ecological model.

The Ecological Model

The ecological model explains the interaction between and within the network across various levels of the environment. The model highlights peoples' relationship with their physical and socio-cultural environments. This model identifies two key concepts in human behaviour which help interventions at various levels to address health issues. The first is that behaviour affects and is affected by multiple levels of influence, while the second is that individual behaviour shapes and is shaped by the social environment. Steckler & Glanz (1998) identified five levels of influence for health -related behaviours which forms the constructs for the ecological model. The levels include intra-personal or individual level, inter-personal level, institutional or organizational level, community level and public policy level. These levels will be briefly explained.

i) The intrapersonal level: At this level, the characteristics of the individual come in the play. Characteristics of individuals such as knowledge, attitude, perceptions and behaviour come into play.

ii) The interpersonal level: At this level, the influence of significant others come into play. Significant others like family members, spouses, friends, relations acquaintances etc. and how they affect an individual behaviour is explained.

iii) The institutional or organizational level: The organizations talk about organizational characteristics and rules. Organizations such as religious bodies, NGOs, workplaces, hospitals etc. constitute groups that may promote discrimination or acceptance of deaf people.

iv) The community level: At the community level, various social networks and cultural norms or standards exist formally or informally among community members. The attitude of members of the community towards deaf people in the community may affect them

positively or negatively.

v) Public policy and laws: Policies at local, regional and national levels comes into play in this level. Policies and laws in a nation or community affect the life and health of people positively or negatively. Using the various construct of the model, it will be applied to this research as follows:

i) Intrapersonal Level: The knowledge, attitude, perception and behaviours of deaf people towards the health system will determine if they will access it or not. Deaf people most times do not visit the health system because of their inability to communicate with the care providers, they also believe that the health systems do not care about them, they experience fear and mistrust and also poor satisfaction when accessing health care. Their level of knowledge towards health issues will also determine if they will visit the health institutions or not. Their ability to afford health services is also considered.

ii) Interpersonal level: The level of support deaf people get from their friends, families, relations or other significant others will determine if they will access health care or not. For example family members, friends, relations can serve as interpreters during visit to the health care settings. They also can support deaf people financially. Peer groups can also be an avenue through which deaf people can be health informed or educated.

iii) Institutional Level: Factors within the organization or institutions such as high costs of visiting the health care systems, the absence of professional sign language interpreters, the attitude of health workers towards people with hearing impairments, delay in seeing doctors, unavailability of medical professionals in the hospital can limit the access of people with hearing impairments.

iv) Community level: At this level, various social network and cultural norms or standards exist formally or informally among community members which may affect access to health care among people with hearing impairments. This include the acceptance people with hearing impairments receive at the community level, support and assistance, skill acquisition at the community level.

v) Public policy: Policies and regulations by the government can hinder or facilitate deaf access to health care. Policies that can encourage deaf access to health care may include: use of sign language interpreters in both public and private health care settings, making healthcare access of people with hearing impairments financially affordable, health insurance coverage etc

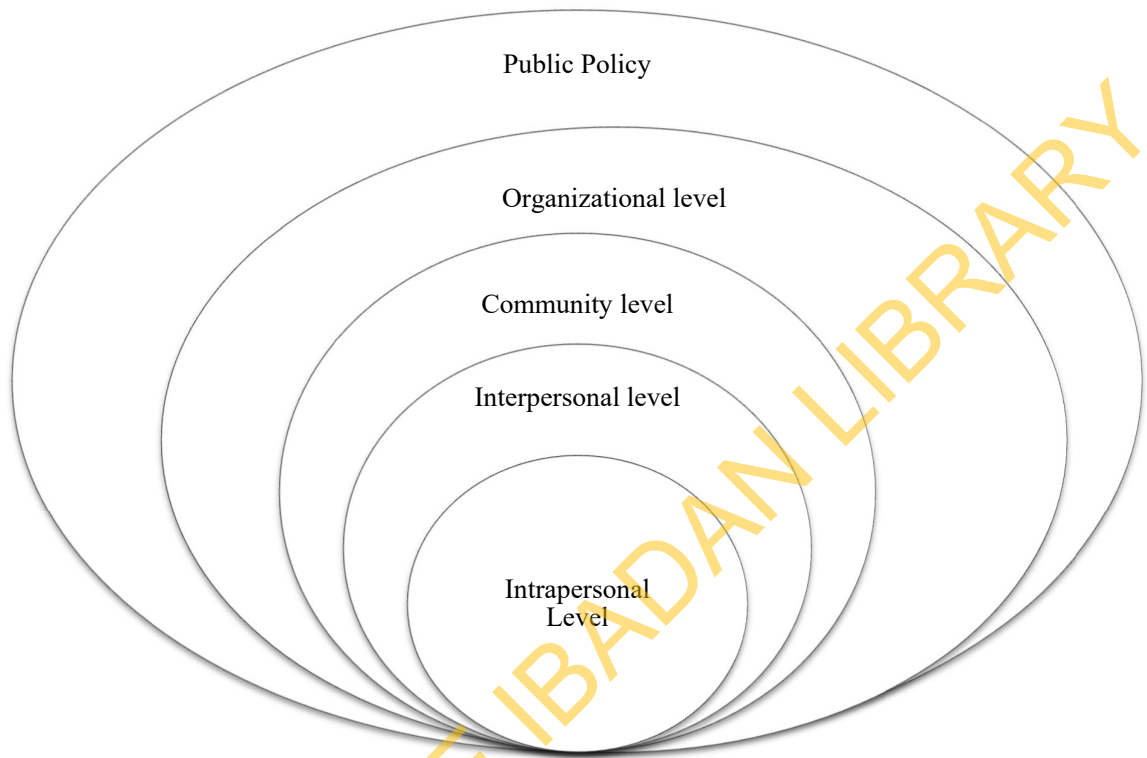


Figure 2.1: Ecological Model

CHAPTER THREE

METHODOLOGY

3.1 Study Design

The study is a descriptive cross-sectional survey.

3.2 The study area

The study was conducted within Ibadan Metropolis. Ibadan is the capital of Oyo State, which is located in the South-West of Nigeria, and also the third most populous city in Nigeria. Ibadan metropolis covers an area of 129.65km², it lies between latitude 3°3'N and 4° 10'N and longitude 7°2'E and 7°40'E. The total population of Ibadan metropolis according to 2006 census result was 1,338,659.

The study area consists of the five urban Local Government Areas in the Metropolis, which are: Ibadan North, Ibadan South-East, Ibadan North-East, Ibadan South-West and Ibadan North-West. The Metropolis has secondary schools, vocational and religious institutions for the deaf. The University of Ibadan is also located within the metropolis. The target populations are found in different institutions within the metropolis, this is a major reason for choosing Ibadan metropolis for this study.

3.3 Study Population

The study population are the hearing impaired adults, both male and female in the metropolis. An adult is a person who is matured, fully developed and reached the age when they are legally responsible for their actions. According to the Nigerian constitution, an adult is a person who has reached the age of 18 years and above.

3.4 Inclusion Criterion

Eligible respondents for this study are deaf adults (18 years and above) residing within the metropolis and who are willing to participate in the study.

3.5 Exclusion Criteria

The hearing impaired who do not give their consent and those outside the defined age group. Hearing impaired people who are not residents within the metropolis will also be

excluded from this study.

3.6 Sample Size

The sample size of the study was calculated using the Leslie Kish formula below

$$N = \frac{Z^2 pq}{d^2}$$

Where:

N = Minimum sample size

Z = Standard normal deviation set at 1.96 interval

P = Reasonable estimate of key proportion (prevalence of people with hearing loss globally by W.H.O 2018 is 5%)

$$(q=1-p) \quad q=1-0.05=0.95$$

d = Degree of accuracy set at 0.05 (precision set at 5% significant)

$$\text{Therefore, sample size is } N = \frac{(1.96)^2 \times 0.05 \times 0.95}{0.05^2}$$

$$N = \frac{0.182476}{0.0025}$$

$$N = 72.9 = 73$$

To take care of the non-response rate, 10% of the calculated sample size was added to the sample size. This is done to address the issues of incomplete response.

$$\text{Non-response rate} = 10\% \text{ of } 73 = 7.3 = 7$$

Therefore, seven questionnaires were added to the sample size calculated to make the sample size 80 to make up for an incomplete response.

3.7 Sampling Techniques

Purposive and snowball sampling techniques were used for the study. Purposive sampling technique is a non-scientific sampling technique in which the researcher identifies and focuses on particular characteristics of the respondents. It relies on the judgment of the researcher in selecting respondents. Snowball sampling technique is a technique in which the researcher identifies a respondent or group of respondents and the respondents identify others that should participate in the study.

Purposive sampling technique was used in selecting schools, churches and other organizations within the metropolis where the target populations can be found while the snowball sampling technique was used in selecting respondents in the identified organizations for the study.

3.8 Instrument for data collection

A structured, interviewer-administered questionnaire was used to collect relevant information from the respondents. Information was collected using a quantitative method. The researcher developed the questionnaire based on the literatures reviewed and also in line with the study objectives. Inputs from the project supervisor and other lectures in the department also helped in structuring the questionnaire. The questionnaire is divided into five sections: section one was designed to gather socio-demographic information from the respondents, section two assessed the health-seeking behaviour of the respondents, section three identified the individual barriers to accessing health services among the respondents, section four generated information on the institutional barriers to accessing health services among the respondents, and section five identified the various coping strategies employed by the respondents.

3.9 Validity of the Instrument

The validity describes the ability of an instrument to measure what it is supposed to measure. The input of the project supervisor and review of relevant literature was used to ensure validity before administering the questionnaire.

3.10 Reliability of the Instrument

To ensure the reliability of the instrument, the researcher carried out a pre-test. The pre-test technique is a method of determining the reliability of an instrument whereby the researcher administers the constructed questionnaire to 10% of the total study population in another representative population. The data generated from the pre-test was not be used in analysing the work. The pre-test for this study was conducted among hearing impaired adults in Akinyele Local Government Area, Ibadan, Oyo State. A Cronbach Alpha measurement and reliability co-efficient measure was carried out on the pre-test questionnaire to determine the reliability of the instrument. The result of the reliability test (0.7) indicated that the instrument was reliable.

3.11 Data Collection Process

The data was be administered by the researcher with the aid of two Research Assistants. The Research Assistants were selected based on their ability to communicate effectively in sign language to the respondents. They were also trained before the time of data collection to ensure accuracy of information gathered. A total number of 80 questionnaires was

administered

The data collection process involved the following steps:

1. Introduction of the researcher and the presentation of ethical approval to conduct the study
2. Administration of questionnaires to the respondents in the five urban local government areas in Ibadan Metropolis.
3. Collection of completed questionnaires and quick on the spot check for completeness and accuracy.

3.12 Variables

The independent variables in this study were the Socio-demographic characteristics of the respondents while the dependent variables were the barriers to accessing health care services and coping strategies by people with hearing impairments in Ibadan Metropolis.

3.13 Data management and Analysis

After collecting the data, cleaning and editing was done on the field and necessary corrections were made. Each copy of the questionnaire was given a serial number for easy identification and recall of any instrument with problems. The copies of the questionnaires were edited and coded by the researcher using a coding guide, the data in each copy of the questionnaire was carefully entered into a computer using the Statistical Package for Social Sciences (SPSS version 20) and analyzed using descriptive statistics such as mean, mode and median. Inferential statistics such as fisher's exact test was also used to test hypotheses. The results obtained from the analysis were summarized and presented in prose, tables and charts.

3.14 Study Limitation

The study did not include children and adolescents less than eighteen years due to time and money. It did not also consider challenges families of people with hearing impairments and health care providers encounter when dealing with them.

3.15 Ethical Approval

Ethical approval was obtained from Oyo State Research Ethical Review Committee, Ministry of Health before data collection (Ref. No. AD13/479/1467). A letter of introduction from the Department of Health Promotion and Education, University of Ibadan was also obtained for easy access to the respondents. The following ethical

considerations were ensured in the conduct of this study.

Confidentiality

To ensure the confidentiality of research respondents, identifiers such as names and other information that can reveal the identity of research respondents was not included in the research instruments. Confidentiality of each respondent was maximally maintained during and after collecting information from the respondents. Adequate plans were made to protect the data, research respondents were also informed of the precautions that were taken to safeguard the data, and the researcher will ensure limited access to the data.

Beneficence

The information gathered from this study can be used to make necessary recommendations to improve the health and quality of life of people with hearing impairments.

Non-maleficence

The study will not cause injury or harm to the respondents since it does not require the collection of invasive materials. Hence, the safety of the respondents is guaranteed.

Voluntariness

Participation in the study was voluntary, and consent was obtained from the respondents by giving the respondents informed consent form to fill after providing them with necessary information about the study. They were also informed of their rights to withdraw at any stage of the study.

Informed Consent

The purpose and benefit of the research were explicitly explained to the respondents and every respondent gave written consent prior to enrolment for the study

Inducements

No fee was paid to any of the respondents.

CHAPTER FOUR

RESULTS

4.1 Socio-demographic characteristics of respondents

Majority (77.5%) of the respondents were Christians, most (68.8%) of the respondents were single and 28.8% were married. The distribution of respondents according to age revealed that majority of the respondents (63.8%) fall within the age range of 18-25 years, 12.5% fall within the age range of 26-33years and 20.0% fall within the age range of 34-41% years. Yoruba constitute the dominant ethnic group of respondents in this study (68.8%). The information on the educational level of respondents revealed that majority of respondents (66.3%) had secondary education and very few (6.3%) had vocational training. On the occupational status of the respondents, only about 25.0% were employed. The commonly used method of communication among the respondents is sign language (92.5%). Most (63.8%) of the respondents do not earn a monthly income while only very few respondents (1.3%) earn between 40,000 thousand and above monthly.

Table 4.1: Socio-demographic characteristics (N= 80)

Variable	Nº	%
Religion		
Christianity	62	77.5
Islam	18	22.5
Total	80	
Marital status		
Single	55	69
Married	23	29
Divorced	1	1
Widowed	1	1
Age (in years)		
18-25	51	64
26-33	10	13
34-41	16	20
42-49	3	4
Ethnicity		
Yoruba	55	68.7
Igbo	18	22.5
Hausa	4	5
Others	3	3.8
Occupational status		
Employed	20	25
Unemployed	11	13.8
Self-employed	8	10
Student	41	51.2

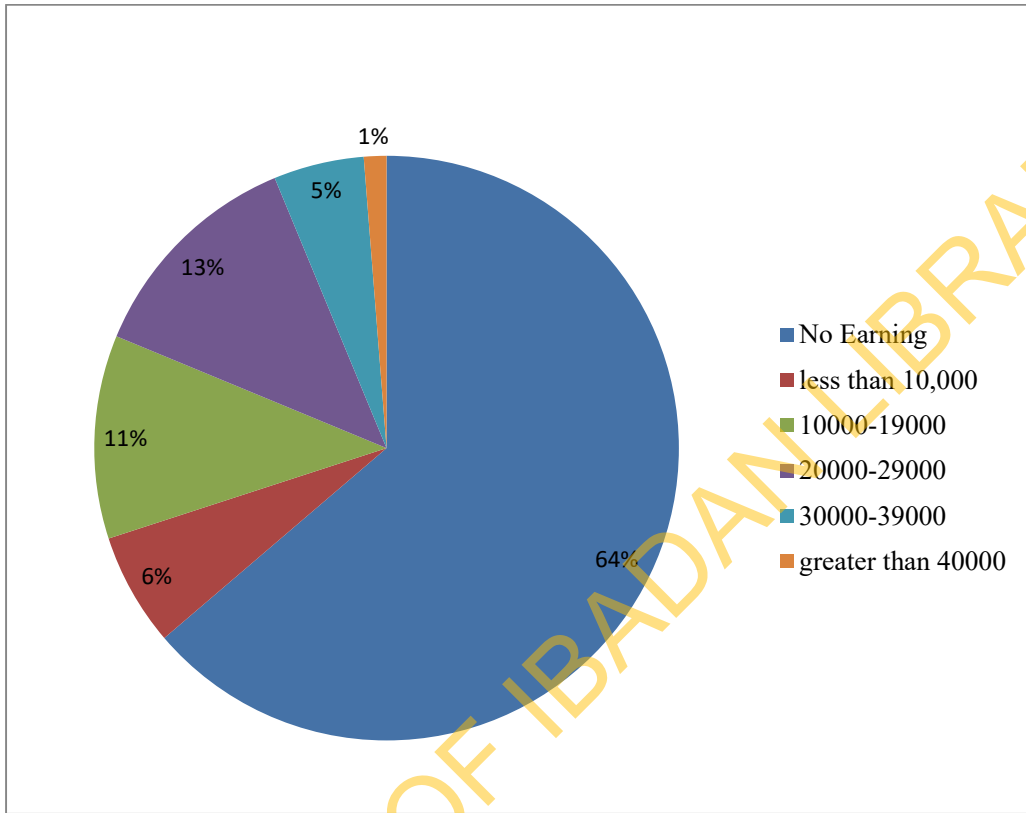


Figure 4.1: Pie chart showing the monthly income of the respondents

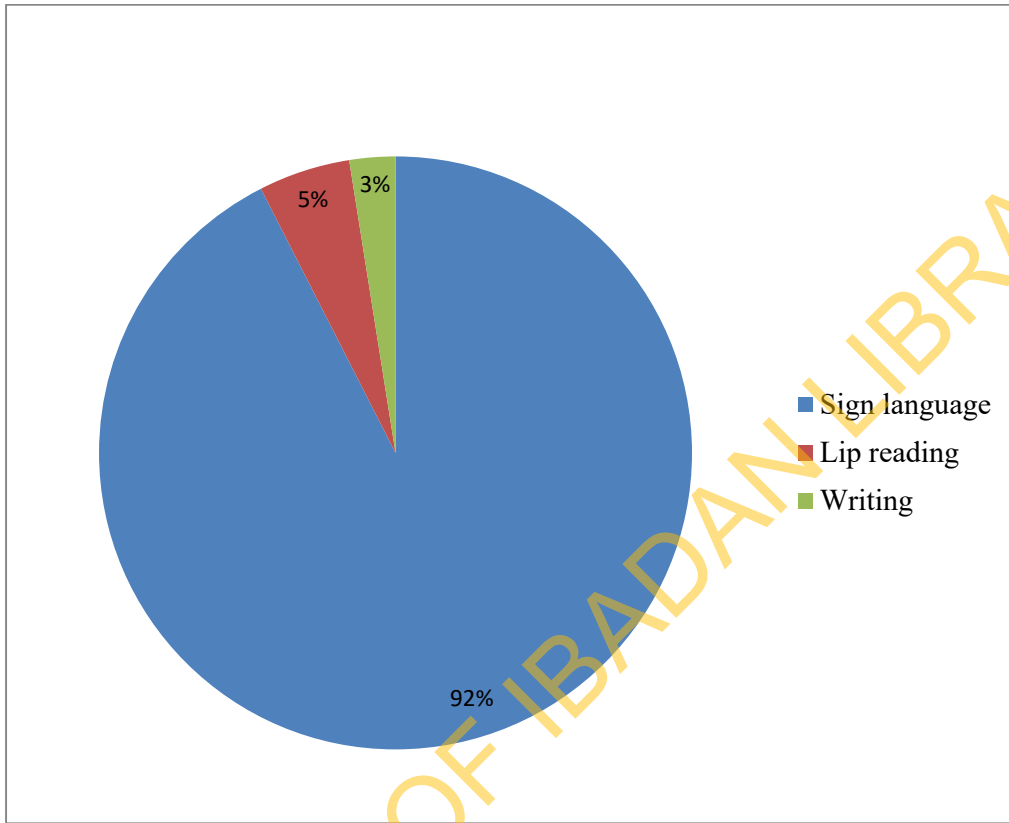


Figure 4.2: Pie chart showing the method of communication of the respondents

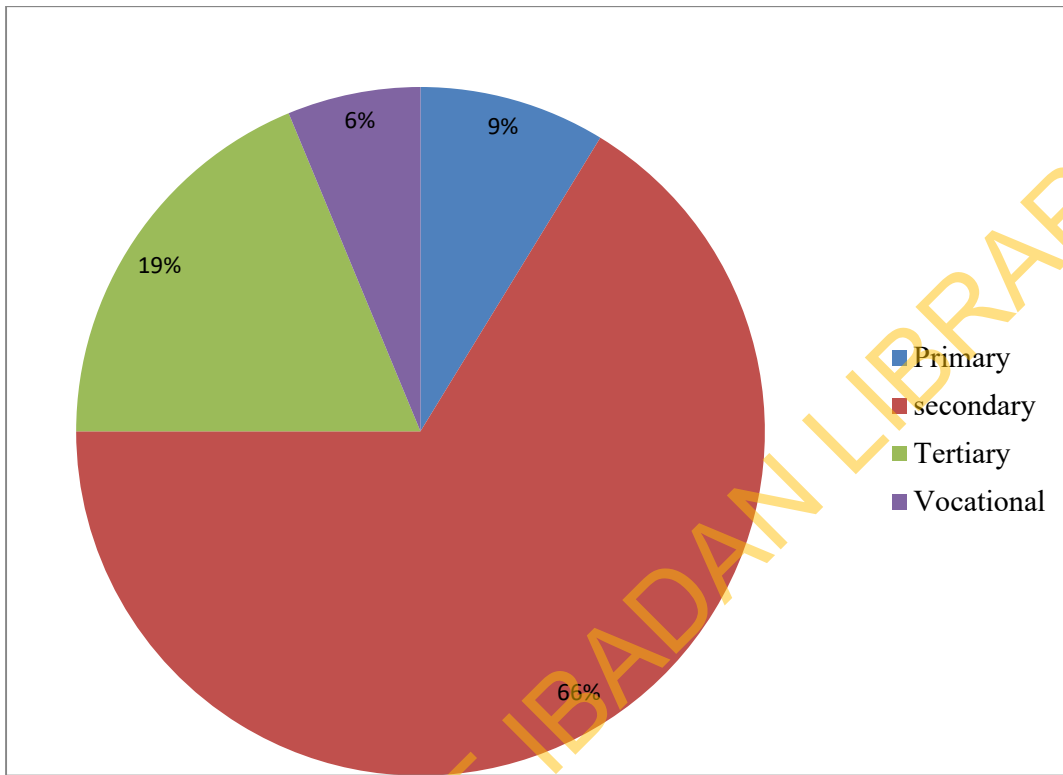


Figure 4.3: Pie chart showing the level of education of the respondents

4.2 Healthcare-seeking behaviour

The result revealed that, among the 80 respondents, about 57.5% indicated that their health status was excellent. Most of the respondents (66.3%) indicated that they have been ill in the last 12 months while 58.5% has been ill for 1-5 times. Among those who were sick within the last twelve months, 49% visited hospitals while 17% took herbs. Most of the respondents (73.1%) who visited the hospital when they were sick went to Government hospitals, 76.9% had ever delayed their visit due to one challenge or the other. 20% delayed their visit because of financial constraints, 15% delayed their visit because of distance 40% delayed their visit because of communication issues, while 25% did so for other reasons. 78.8% of respondents agreed that hospital is the most expensive means of getting help when sick, 32.5% also indicated that going to a hospital is a waste of time. 81.3% had good experiences during their visit to the hospital while 71.3% are likely to revisit the hospital if the need arises.

Table 4.2: Health-seeking behaviour (N=80)

Variables	Nº	(%)
Rate your health		
Very good	46	57.5
Good	27	33.8
Fair	6	7.5
Poor	1	1.3
Episode of illness in the last 12month?		
Yes	53	66.3
No	27	33.8
If yes, number of times?		
1-5 times	31	58.5
6-10 times	17	32.1
11-15 times	5	9.4
What did you do when you were sick?		
I just waited for the symptoms to pass	5	9.4
I went to the hospital	26	49
I sought medication advice from my friends	3	5.7
I sought medication advice from my family members	7	13.2
I engaged in self-medication	3	5.7
I took herbs	9	17
Health facilities visited in the last 12month		
Government	19	73.1
Private	7	26.9
Ever Delayed in hospital visit because of challenge		
Yes	20	76.9
No	6	23.1
If yes, specify the type of challenge		
Finance	4	20
Distance	3	15
Communication	8	40
Others	5	25
Visiting a hospital is the most expensive means Of getting help		
Yes	63	78.8
No	17	21.3
Going to the hospital is a waste of time		
Yes	26	32.5
No	54	67.5
How will you rate your hospital experience		
Good	65	81.3
Bad	15	18.8
Like to revisit hospital based on your previous experience		
Yes	57	71.3
No	23	28.8

4.3 Individual/ demand-side barriers

From Table 4.3 below, 46.3% indicated that their family members do not encourage them to visit modern health facilities while the majority of the respondents (65.0%) indicated that the financial cost of visiting the hospital is very high for them. Most respondents (62.5%) find it difficult to communicate with care providers, 55.0% agreed that they would hide some information from the doctor if a family member or friend is present. About 45.0% are not well informed of the various services carried out in the hospital, 27.5% did not have confidence in doctor's treatment, 27.5% also indicated that their religion does not permit visiting hospitals. Half of the respondents (50.0%) feel they may be misdiagnosed while only 32.5% indicated that previous treatments were not effective.

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Table 4. 3: Individual / demand side barriers

Variable	Nº	%
Family members do not encourage me to visit modern health care facilities	37	46.3
Yes	43	53.7
No		
Financial costs of visiting healthcare is high	52	65.0
Yes	28	35.0
No		
Most of the hospital do not have sign language interpreters	50	62.5
Yes	30	37.5
No		
Will hide some information about my health from the doctor if a family member or friend accompanies me	44	55.0
Yes	36	45.0
No		
I do not know about the various health services	36	45.0
Carried out in the health facilities	44	55.0
Yes		
No	22	27.5
My religion does not permit visiting modern Health facilities	58	72.5
Yes	22	27.5
No	58	72.5
I do not have confidence in doctors treatment Based on previous experience		
Yes	40	50.0
No	40	50.0
I feel I may be misdiagnose since the Doctors don't understand sign language	26	32.5
Yes	54	67.8
No		
Previous treatments have been ineffective		
Yes		
No		

4.4: Institutional/Supply-side barriers to accessing health care services among the respondents

Majority of the respondents (92.5%) revealed that unpleasant situations in the health facilities they visited prevent them from accessing health care services when needed. Findings from this study showed that the high financial cost of medical services was a significant barrier among the respondents (75.0%). A very good number of respondents (66.3%) indicated that there were no professional sign language interpreters in the health facilities they visited, 60.0% revealed that using the hospital interpreters is very expensive in hospitals where they have them, 56.3% indicated the health facility is far from their homes. Some of respondents (36.3%) revealed that sometimes the doctors were not available when they needed them while 61.3% of respondents indicated that the hospitals they visited had few numbers of physician, only few revealed that the hospitals had limited hours of operation, 57.5% indicated that the cost of transportation to the hospital is high while 61% indicated language barrier was a major supply side barrier.

Table 4.4: Institutional/ supply-side barriers to accessing healthcare services

Variable	N	%
Do situations in the health facilities prevent you from visiting health facilities when necessary		
Yes	74	92.5
No	6	7.5
Which of these apply to you		
Attitude of service providers to patients is not friendly		
Yes	34	42.5
No	46	57.5
Doctors are not available when needed		
Yes	29	36.3
No	51	63.7
The health facility is far from home		
Yes	45	56.2
No	35	43.8
Required medicines are not always available		
Yes	25	31.2
No	55	68.8
There are no professional sign language interpreters in the hospitals		
Yes	53	66.2
No	27	33.8
High cost of medical services		
Yes	60	75.0
No	20	25.0
Waiting for a long time before seeing a doctor		
Yes	55	68.8
No	25	31.2
Too many unofficial payments to hospital staff		
Yes	51	63.8
No	29	36.2
High cost of using the hospital interpreters		
Yes	48	60.0
No	32	40.0
Limited hours of operation		
Yes	16	20.0
No	64	80.0
Few numbers of Physicians at the hospital		
Yes	49	61.2
No	31	38.8
High cost of transportation to the hospital		
Yes	46	57.5
No	34	42.5
Language barriers		
Yes	49	61.2
No	31	38.8

4.5: Coping strategies

Common coping strategies employed by respondents were presented in Table 4.5 below. Finding showed that majority (73.8%) of the respondents sought help from other sources sometimes, 67.5% are being accompanied by family members who help to ease communication problems, 52.5% get health information from the internet 47.5% get health information from their friends and 57.5% accept the unpleasant situation in the health facility the way they are. Less than half of the respondents, 43.8%, reported that they are accompanied to the hospital by friends to ease communication problems, 65.0% write to communicate with their healthcare providers, 45.0% go with hired interpreters to the hospital. A few respondents (22.5%) indicated that they do not visit the hospital when sick while 45.0% revealed that the hospitals they visit provides an interpreter to ease communication problems.

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Table 4.5: Coping strategies

Variable	Nº	%
Sometimes I seek help from other sources		
Yes	59	73.75
No	21	26.25
I go to the hospital with my family members to interpret for me		
Yes	54	67.5
No	26	32.5
I get health information from the internet		
Yes	42	52.5
No	38	47.5
I get health information from my friends		
Yes	38	47.5
No	42	52.5
I accept things the way I see them		
Yes	46	57.5
No	34	42.5
Go with friends to the hospital to ease communication problems		
Yes	35	43.7
No	45	56.3
Writing is a means of communication with and the doctor		
Yes	52	65.0
No	28	35.0
I go to the hospital with a hired sign language Interpreter		
Yes	36	45.0
No	44	55.0
I do not visit hospitals again		
Yes	18	22.5
No	62	77.5
The hospital provides sign language interpreters To ease communication problems		
Yes	36	45.0
No	44	55.0

4.6: Test of Hypotheses

4.6.1 Hypothesis 1: There is no significant relationship between socio-demographic variables and healthcare seeking behaviour of the respondents

Finding revealed the relationship between socio-demographic variables and health-seeking behaviour of the respondents. These variables include age (0.16), level of education (0.48), occupational status (0.11), mode of communication (0.77) and income (0.24). The result showed that the p-values calculated are greater than 0.05. This implies that the socio-demographic variables are not statistically significant with the health-seeking behaviour of people with hearing impairments. Hence, the researcher fails to reject the null hypothesis which states that there was no significant relationship between the socio-demographic variable and health-seeking behaviour of the respondents.

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Table 4.6.1: Association between socio-demographic and Health-seeking behaviour

Demographic variable		Health-seeking behaviour						Fishers exact	Df	P-value
		Waited for symptom	Went to hospital	Medication advise from a friend	Medication advise from family	Self-medication	Took herbs			
Age (in years)	18-25	4	18	1	5	0	5	17.32	15	0.16
	26-33	1	2	1	1	0	3			
	34-41	0	5	1	1	2	1			
	42-49	0	1	0	0	1	0			
Education	Primary	0	4	0	0	0	2	13.07	15	0.48
	Secondary	5	16	1	1	1	5			
	Tertiary	0	4	1	2	2	2			
	Vocational	0	2	3	0	0	0			
Occupational	Employed	0	4	2	3	3	2	18.04	15	0.11
	Unemployed	1	2	0	0	0	2			
	Self-employed	0	3	0	0	0	2			
	Student	4	17	1	4	0	3			
Mode of Communication	Sign language	4	24	3	7	3	8	9.13	10	0.77
	Lip-reading	1	1	0	0	0	1			
	Writing	0	1	0	0	0	0			
Income	Less than 10000	0	2	0	0	0	0	27.36	25	0.24
	10000-19000	0	2	1	1	1	1			
	20000-29000	0	3	0	1	1	2			
	30000-39000	0	0	1	0	1	1			
	40000 and above	0	1	0	0	0	0			
	No earning	5	18	1	5	0	5			

4.6.2 Hypothesis 2: There is no significant relationship between demand-side barriers and health-seeking behaviour of the respondents

The test of association result from the table indicates a non-significant association between the various demand-side barriers and health seeking behaviour. This implies that the individual demand-side is not statistically significant with the health-seeking behaviour of people with hearing impairment. Therefore, the researcher fails to reject the null hypothesis. This result suggests that the individual demand-side barriers do not influence the health-seeking behaviour of people with hearing impairment. The implication of this is that no matter the individual demand-side barriers, it does not affect the different levels of health-seeking behaviour of individuals with hearing impairment.

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Table 4.6.2 Association between demand-side barriers and Health-seeking behaviour

Demand-side barriers		Health-seeking behavior						Fishers exact	df	P-value
		Waited for symptom	Went to hospital	Medication advice from friend	Medication advice from family	Self-medication	Took herbs			
I do not have money to visit the hospital.	Yes	4	18	2	5	2	6	0.93	5	1.00
	No	1	8	1	2	1	3			
I find it difficult communicating with the doctor	Yes	3	15	2	3	2	4	1.63	5	0.97
	No	2	11	1	4	1	5			
Misdiagnosis	Yes	2	12	1	3	1	7	4.09	5	0.58
	No	3	14	2	4	2	2			
Family member do not encourage me to visit modern health facilities	Yes	3	15	1	1	1	2	6.95	5	0.20
	No	2	11	2	6	2	7			
I hide information in the presence of family member	Yes	4	16	1	3	1	6	3.63	5	0.66
	No	1	10	2	4	2	3			
No confidence in doctor's treatment	Yes	1	9	1	1	0	3	2.40	5	0.87
	No	4	17	2	6	3	6			

4.6.3 Hypothesis 3: There is no significant relationship between supply-side barriers and healthcare seeking behaviour of the respondents

Table 4.6.3 revealed the relationship between supply-side barriers and healthcare seeking behavior of the respondents. These barriers include attitude of service providers (0.16), unavailability of doctors (0.97), distance (0.90), drugs not available (0.89) and high cost of medical service (0.58). Result from the fishers exact analysis showed that the p-values for these variables are greater than 0.05. This implies that the supply-side barriers are not statistically significant with the health seeking behavior of people with hearing impairments, hence we accept the null hypothesis which states that there is no significant relationship between the socio-demographic variable and health seeking behavior of the respondents.

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Table4.6.3: Association between supply-side barriers and health-seeking behaviour of the respondents

Institutional/supply side barrier			Health-seeking behavior						Fishers exact	df	P-value
			Waited for symptom	Went to hospital	Medication advice from friend	Medication advice from family	Self-medication	Took herbs			
Attitude of service provider	Yes	2	6	1	5	0	2	7.26	5	0.16	
	No	3	20	2	2	3	7				
Unavailability of Doctor	Yes	2	11	1	4	1	5	1.63	5	0.97	
	No	3	15	2	3	2	4				
Far distance	Yes	3	16	2	3	1	6	2.24	5	0.90	
	No	2	10	1	4	2	3				
Required medicine are not available	Yes	1	8	2	2	1	3	2.32	5	0.89	
	No	4	18	1	5	2	6				
High cost of medical service	Yes	4	19	7	5	1	8	3.89	5	0.58	
	No	1	7	1	2	2	1				

Hypothesis 4: There is no significant relationship between Socio-demographic variables and coping strategies of the respondents

The results were found not to be significant across all the socio-demographic variables. It shows that religion of the respondents is not significant with their coping strategies. Fishers exact value (N = 80) = 5.29; $p(0.37) > .05$. Likewise, ethnicity was also not significant with the coping strategies of people with health impairment. Fishers exact value (N = 80) = 9.73; $p(0.87) > .05$. Also, the education of respondents was found not to be significant with the coping strategies of people with hearing impairment. Fishers exact value (N = 80) = 9.98; $p(0.84) > .05$.

In addition, the mode of occupation was also found not to be significant with the coping strategies of people with hearing impairment. Fishers exact value (N = 80) = 12.94; $p(0.58) > .05$ while mode of communication as a person with hearing disability is also not significant with their coping strategies. Fishers exact value (N = 80) = 9.54; $p(0.21) > .05$ and the income level of people is not significant with the coping strategies of people with hearing impairment. Fishers exact value (N = 80) = 21.17; $p(0.65) > .05$. Hence we accept the null hypothesis which states that there is no significant relationship between socio-demographic variable and coping strategies of the respondents.

Table 4.6.4: Association between socio-demography characteristics and coping strategies

Socio-demography		Coping strategies of the respondents					Fishers' Exact valuedf	P-value	
		family	friends	Sometimes	Hired	Sign interpreter			Others
Religion	Christianity	7	12	16	8	12	7	5.29 2	0.37
	Islam	2	3	2	6	2	3		
Ethnicity	Yoruba	6	10	13	10	9	7	9.73 6	0.87
	Igbo	3	4	4	1	4	2		
	Hausa	0	1	0	2	1	0		
	Others	0	0	1	1	0	1		
Education	Primary	1	0	3	0	2	1	9.98 6	0.84
	Secondary	7	11	11	9	8	7		
	Tertiary	1	3	4	4	2	1		
	Vocational	0	1	0	1	2	1		
Occupation	Employed	1	7	4	3	3	2	12.94 6	0.58
	Unemployed	1	0	3	3	1	3		
	Self employed	1	1	4	1	1	0		
	Students	6	7	7	7	9	5		
Mode of communication	Sign language	8	15	15	13	13	10	9.54 4	0.21
	Lip reading	0	0	3	0	1	0		
	Writing	1	0	0	1	0	0		

Table4.6.4: continued

Socio-demography		Coping strategies of the respondents						Fishers Exact value	P- value
		family	friends	Sometimes	Hired	Sign interpreter	Others		
Level of income	Less than 10000	0	0	1	2	1	1	21.17	0.65
	10000 – 19000	1	3	3	0	1	1		
	20000 -29000	1	2	4	3	0	0		
	30000 – 39000	0	1	1	0	2	0		
	40000 and above	0	1	0	0	0	0		
	No earning	7	8	9	9	10	8		

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1 Discussion

5.1.1 Socio-demographic Characteristics

Most respondents in this study are within the age range of 18-25 years. The reason for this could be that majority of the respondents are young adults who are also students in various institutions for the deaf within the Metropolis. According to Arulogun *et al.* (2013), this population can be found in elementary, secondary schools, vocational and residential homes. Majority of the respondents were Yoruba and this could be traced to the fact that the study area is located in the South-western part of the country where the dominant ethnic group is Yoruba. Most of the respondents are single, less than half are married and only a very few are divorced and widowed. Finding also shows that the majority of the respondents are unemployed, while those employed are low earners based on their average monthly income. This finding is similar with the findings in the World Report on Disability (2017) which revealed that many people living with disabilities experience adverse socio-economic outcomes when compared to people without disabilities and also experience lower employment rates. Majority of the respondents communicate through the use of sign language, only a very few communicate by reading peoples' lip and writing. This is in agreement with WHO report (2019) which revealed that the majority of people with hearing impairments often communicate through sign language. The respondents of this study are mostly Christians only few are of the Islamic religion. Most of the respondents had secondary school education, while only few had attained tertiary and are engaged in one form of vocational training or the other.

5.1.2 Health-seeking behaviours

Findings from the study show that the majority has been ill in the last 12 months and out of these, about half visited the hospital. This is in contrast with findings of Maddalena *etal.* (2012), which revealed that people with hearing impairments do not often seek health care services when necessary and have fewer interactions with the health system. A major reason

for this contrast in findings could be due to the fact that majority of the respondents indicated they have family members and friends who encourage them to visit hospitals when sick. These people help to ease communication problems between them and their care providers. In a study by Ubido *et al.* (2002), deaf women indicated they would use health services if help was available. However, findings by WHO (2018), revealed that people with disabilities seek care more often than people without disabilities. It was also found that few numbers of the respondents took herbs when sick, engaged in self-medication and sought advice from family member and friends. Out of those who visited hospital when sick, majority used government health facilities while only few used private health facilities.

It was also discovered in this study that majority of the respondents had ever delayed their hospital visit at one time or another because of a particular challenge and inability to communicate with their care provider was a major challenge among the respondents. This finding is similar to the study conducted by Tahereh *et al.* (2017) which shows that the communication barrier is a major challenge that restricts access to health information and services for people with hearing impairments. A major reason for this is because most health education and information on mass media are not presented in sign language, and medical training does not include sign language in the curriculum so as to equip students undergoing medical training with skills to communicate with their deaf patients. A high percentage of the respondents revealed that visiting hospital is the most expensive means of getting help in matters that relates to health while only few feel going to a hospital is a waste of time. A good percentage had positive experiences during their visit and will revisit the hospital if need arises.

5.1.3 Individual/demand –side barriers to accessing health care services

Previous studies have associated individual barriers and access to health care services, and it was discovered that a significant relationship existed between individual barriers and access to health care service. The finding from this study is in contrast with previous findings. This finding indicate that individual barriers such as lack of encouragement from family members, lack of finance to use health facilities, inability to communicate with care providers, knowledge of various services, issues of confidentiality, fear of misdiagnosis etc. exist among

the respondents but do not influence their decision to seek health care services if need arises. The major individual barrier as indicated by the respondents is financial barrier. Financial barrier exists among respondents due to their low economic status which may affect their ability to afford health care services. The World Health Organisation (2018), listed affordability of health services as one of the major reasons responsible for differences in health care services among people with disabilities in low-income countries. Their inability to communicate with their care providers and fear of misdiagnosis was also a major barrier among the respondents. This agrees with a study conducted by Kuenburg, Fellingner & Fellingner (2016), which revealed that a significant communication challenge exist between people with hearing impairments and their care providers. The major reason why language barriers exist could be traced to the fact that most health care providers are not trained on how to communicate with hearing impaired patients.

5.1.4 Institutional/ supply-side barriers to accessing health care services

This section addresses the challenges to accessing health care services by the respondents due to care providers or institutional challenges. Majority of the respondents agreed to the fact that these unpleasant situations exist in the hospital they have ever visited. This finding agrees with the study by Tsimpida *et al.* (2019) where 93% of deaf individuals reported barriers in accessing health services. Barriers which occur from the side of the care providers include unfriendly attitude of care providers to the respondents, unavailability of doctors when needed, inability to communicate with patients (language barriers), unofficial payments and patients waiting for a long time before seeing a doctor. Barriers which occur beyond the control of care providers include absence of professional interpreter in the hospitals visited, high cost of medical services, high cost of transportation to the health facilities, distance to the facilities, shortage of drugs and few numbers of physicians. A major supply-side barrier as indicated by the respondents in this study is the high financial cost of visiting health care facilities. The level of association between these barriers and the health-seeking behaviour of the respondents shows no significant association. This result is in contrast with previous literatures which revealed that these barriers affect the health-seeking behaviour of the respondents. A study conducted by Talukdar *et al.* (2018), revealed that various factors which include: the high cost of medical services, the inadequacy of health care services, physical

barriers to accessing health care facilities, poor knowledge and skills on the part of care providers prevent people with disabilities from seeking health care. Reasons for contrast in findings could be traced to the fact that majority of the respondents have resigned to fate as indicated from their coping strategies employed by the respondents. Also, the majority of the respondents employed strategies which help them to cope positively with these barriers.

5.1.5 Coping strategies

More than half of the respondents reported that they seek help from other sources sometimes. Other coping strategies employed by the respondents are going with friends or family members to interpret for them, seeking health information from the internet, going with a hired sign language interpreter and a making use of the interpreter provided by the hospital visited. Medical professionals and patients tend to rely on relatives or close friends of patients to interpret for them (Laur, 2017). Only a very few indicated that they do not visit hospitals again based on their past experience. No significant association between socio-demographic variables and coping strategies employed by the respondents. This finding is in contrast with the study carried out by Partida (2007) which states that effective communication in healthcare settings occurs when patients and physician communicate in the same language.

5.1.6 Implication of the study findings for Health Promotion and Education

The findings from this study have several implications on planning, development and implementation of health promotion and education programs on the barriers to accessing health care services and coping strategies of people with hearing impairments. It provides information on the various barriers to accessing health care services and coping strategies among people with hearing impairments in Ibadan Metropolis, Oyo State. It had been deduced from this study that barriers exist in both demand and supply side when accessing health facilities for people with hearing impairments. Addressing the problem of poor access to health care services among people with hearing impairment goes beyond people with hearing impairments. It requires a collective effort of all stakeholders in the health settings and beyond

To improve access, there is need for advocacy on policies and implementation of existing policies and laws that protects the rights of people with hearing impairments. Use of

appropriate communication technologies in healthcare settings, to provide equal right, universal health care protection, public awareness and political commitment and improved health service delivery.

Information and communication is very essential in health promotion, as it helps in improving health knowledge and equipping people with skills and knowledge to make informed decisions concerning their health. There is need to improve on the communication barriers that exist between health care providers and patients with hearing impairments. To achieve this, health care providers should be trained in sign language. This will equip them with skills on how best to deal with communication challenges of people with hearing impairment, help to promote equitable communication for people with hearing impairments and also address the issues of privacy and confidentiality encountered by people with hearing impairments when accessing health services .

People with hearing impairments have low health knowledge and are also ignorant of certain health information that are necessary to prevent diseases and promote health. Organizing videos in sign languages on certain health issues will help in providing people with hearing impairments them with key information and equip them with knowledge and skills necessary to prevent diseases and promote good health. There is need to create awareness on the health needs and challenges of people with hearing impairments so that they can get maximum support from their hearing counterparts.

5.2 Conclusion

This study explored the barriers to accessing health care and coping strategies of people with hearing impairments in Ibadan Metropolis. The results indicated that most of the hospitals do not have sign language interpreters to communicate with the deaf and in hospitals where these interpreters exist; the financial cost of employing their services is high. In order to cope with this challenge, majority of people with hearing impairments seek help from other sources, avoid healthcare settings or visit hospitals with their friends or family members who act as interpreters between them and their care providers. To some people with hearing impairments, the presence of a friend or family member is a breach of privacy and thus, they end up hiding vital information concerning their health from their care provider. Health education and

promotion strategies, training of medical personnel, laws and policies should be enacted and strictly monitored to address the problem of poor access to healthcare among people with hearing impairment.

5.3 Recommendations

The following recommendations are made based on the findings from this study:

- 1) Sign language should be included in the curriculum of health and medical trainings so that health practitioners can be equipped with relevant skills to communicate with hearing impaired patients.
- 2) People with hearing impairments should be empowered with skills so that they can be able to afford better health care services when necessary and also health education should be to increase their health knowledge.
- 3) Laws and policies which mandate presence of sign language interpreters in both private and public health settings should be enacted and strictly monitored.
- 4) Laws and policies which mandate information through mass media to be interpreted in sign language should also be enacted
- 5) People with hearing impairments should have equal rights with their hearing counterparts in workplaces, when seeking for employment opportunities and other organizations, they should not be discriminated against based on their disabilities.

5.4 Suggestions for further study

Based on the findings from this study, it is suggested that similar studies be carried out in other parts of this country, so that findings can be compared and appropriate interventions can be carried out.

Research is also needed to access the barriers to accessing health services among people with other disabilities.

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APPENDICES

APPENDIX 1

INFORMED CONSENT FORM

BARRIERS TO ACCESSING HEALTH CARE SERVICES AND COPING STRATEGIES AMONG PEOPLE WITH HEARING IMPAIRMENTS IN IBADAN METROPOLIS, NIGERIA.

Introduction

You are invited to take part in a research study. Before you decide whether to participate, you need to understand why the research is being done and what it would involve. Please take time to read or listen as I read the following information. You may talk to others about the study if you wish. Please ask me if there is anything that is not clear, or if you would like more information. When all of your questions have been answered and you feel that you understand this study, you will be asked if you wish to participate in the study and if yes, to sign this 'Informed Consent Form'. You will be given a signed copy to keep.

Purpose of the Study and Study Requirements

Dear Respondent,

My name is Mesagan Ibukunoluwa Comfort. I am a post graduate student of the University of Ibadan presently conducting a research study: Barriers to Accessing Health Care Services and Coping Strategies among People with Hearing Impairments in Ibadan Metropolis, Oyo State.

You have been invited to take part in the study because you are hearing impaired and also within the age of adulthood (18 years and above). If you agree to take part in this study, you will be asked to sign an informed consent form. You will also be asked to respond to the questions about the barriers to accessing health care services and coping strategies among people with hearing impairments. You will complete the questionnaire within 30 minutes approximately. There are no risks associated with this study and your participation will not cost you anything other than your time of answering the questions in the questionnaire. **You**

should not write your name in the questionnaire. All information collected will be treated as anonymous and will not be linked to you in any way. The information collected will be of benefit to health administrators, doctors and nurses on how they can ensure easy access to health care services to people with hearing impairments.

Participation in this research is entirely voluntary and you can withdraw at any time, but please note that some of the information that has been obtained about you before your withdrawal may be modified or used in reports or publications. These cannot be removed anymore, however, the researcher promises to make an effort in good faith to comply with your wishes as much as it is practicable. The researcher will inform you of the outcome of the research through journal articles. Your willingness to complete the questionnaire implies you have given consent to participate in the study. Kindly append your signature in the section below as a form of written consent to participate in the study. Thank you for your cooperation.

Statement of person obtaining informed consent:

I have fully explained this research to ----- and have given sufficient information, including about risks and benefits, to make informed decision.

Date-----

Signature-----

Name-----

Statement of the person giving consent:

I have read the description of the research and have had it translated into a language I understand. I have also talked it over with the researcher to my satisfaction. I understand that my participation is voluntary. I know enough about the purpose, methods, risks and benefits of the research study to judge that I want to take part in it. I understand that I may freely stop being part of this study at any time. I have received a copy of this consent form and additional information sheet to keep for myself.

Date-----

Signature-----

Detailed contact information including a contact address, telephone, fax, e-mail and any other contact information of the researcher, institutional HREC and head of institution:

If you have any question about participation in this research, you can contact the Researcher: Miss Mesagan Ibukunoluwa, Department of Health Promotion and Education, Faculty of Public Health, College of Medicine, University of Ibadan, Phone Number: 08101367469, e-mail: mesaganibukunoluwa@gmail.com

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APPENDIX 2

RESEARCH QUESTIONNAIRE

TOPIC: BARRIERS TO ACCESSING HEALTHCARE SERVICES AND COPING STRATEGIES AMONG PEOPLE WITH HEARING IMPAIRMENTS IN IBADAN METROPOLIS, OYO STATE.

My name is Mesagan Ibukunoluwa Comfort. I am a post graduate student of the University of Ibadan presently conducting a research study: Barriers to Accessing Health Care Services and Coping Strategies among People with Hearing Impairments in Ibadan Metropolis, Oyo State. In filling this questionnaire, your honest answers will be appreciated.

Local Government Area _____ Serial number _____

SECTION A: SOCIO-DEMOGRAPHIC CHARACTERISTICS

Instruction: Kindly respond appropriately to the following by ticking () in the space provided

1. Religion: Christianity () Islam () Traditional () Others (specify) -----
2. Marital Status: Single () Married () Divorced () Widowed ()
3. Age (in years as at last birthday) -----
4. Ethnicity: Yoruba () Igbo () Hausa () Others -----
5. Level of education attain: Primary () Secondary () Tertiary () Vocational ()
Others (specify)-----
6. Occupational Status : Employed () Unemployed ()
Self-employed , please specify _____
7. Method of communication: Sign language () Lip reading () Writing () Others ()
8. Average monthly income:-----

SECTION B: Health-seeking behaviour among people with hearing impairments

S/N	Statement	Yes	No
1	Rate your health Very good Good Fair Poor		
2	Have you been ill in the last 12 months?		
3	If yes, number of times		
4	What did you do when you were sick?		
5	I just waited for the symptoms to pass		
6	I went to the hospital		
7	I sought medication advice from my friends		
8	I sought medication advice from my family members		
9	I engaged in self-medication		
10	I took herbs		
11	Which of these health facilities have you visited in the last 12 months? Government Private		
	Have you had a hospital emergency visit in the last 12months?		
12	Have you ever delay your hospital visit because of any challenge?		
13	Specify the type of challenge: finance () Distance () Communication () others ()		
14			
15	Do you think visiting hospital is the most expensive means of getting help?		
	Do you think going to hospital when sick is a waste of time?		
16	How will you rate your experience during visit to the hospital good() bad ()		
17			
18			
19	Are you likely to revisit the hospital based on your previous experiences?		

SECTION C: Individual/ demand-side barriers to accessing healthcare services

S/N	Statement	Yes	No
20	My family members do not encourage me to visit modern health care facilities		

21	Financial costs of visiting healthcare is very high		
22	Most hospitals do not have professional sign language interpreters		
23	I would hide some information about my health from the doctor if a family member or friend accompanies me to see a doctor		
24	Do not know about the various of health services carried out in the health facilities		
25	My religion does not permit visiting modern health facilities		
26	I do not have confidence and trust in the doctor's treatment based on my past experiences		
27	I feel I may be given wrong treatment (misdiagnosis) since the doctors don't understand sign language Previous treatments have not been effective		

SECTION D: Institutional / supply-side barriers to accessing healthcare services

S/N	Statement	Yes	No
28	Do situations in the health facilities prevent you from visiting health facilities when necessary? Which of these below apply to you		
29	Attitude of service providers to patients is not friendly		
30	Doctors are not available when needed		
31	The health facility is far from home		
32	Required medicines are not always available		
33	There are no professional sign language interpreters in the hospitals		
34	High cost of medical services		
35	Waiting for a long time before seeing the doctor		
36	Too many unofficial payments to hospital staff		

37	High cost of using the hospital interpreters		
38	Limited hours of operation		
39	Few numbers of physician at the hospital		
40	High cost of transportation to the hospital		
41	Language barriers		

SECTION D: Coping with barriers to accessing healthcare services

S/N	Statement	Yes	No
42	Sometimes, I seek help from other sources		
43	I go to the hospital with my family members to interpret for me		
44	I get health information from the internet		
45	I get health information from my friends		
46	I accept things the way I see them		
47	I go with friends to the hospital to ease communication problems		
48	I use writing as a means of communication between me and the doctors		
49	I go to the hospital with a hired sign language interpreter		
50	I do not visit hospitals again		
51	The hospital providers sign interpreters to ease communication problem		

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