Lived experiences of adults with deafness when accessing healthcare services in Johannesburg, South Africa

A Master of Arts in Audiology Research Dissertation presented to:

The Department of Speech Pathology and Audiology

School of Human and Community Development

Faculty of Humanities

University of the Witwatersrand

2023

STUDENT NAME:

Alexa Reichenberg

STUDENT NUMBER:

1410504

SUPERVISORS:

Prof. Joanne Neille

Dr. Victor de Andrade

Declaration

I, Alexa Reichenberg, declare that **"Lived experiences of adults with deafness when accessing public healthcare services in Johannesburg, South Africa"** is my own original work. Where secondary material is used, it has been carefully acknowledged and referenced in accordance with university requirements. I understand what plagiarism is and I am aware of university policy and implications in this regard.

Signed,

12/02/2023

Alexa Reichenberg (Signature) **Date**

Acknowledgements

I would like to express my sincere appreciation and gratitude to the following people, without whom this dissertation would not be possible:

To my research supervisors, Prof. Joanne Neille and Dr. Victor de Andrade, thank you for your constant dedication, guidance, support, and knowledge. Thank you for guiding me through this research journey. Thank you for sharing your research expertise, for solidifying my passion for research, and for being the sturdy foundation for this project.

To my family, thank you for your endless support, guidance, and patience throughout the research process. I could not have gone on this journey it without you. Thank you for being a constant shining light, in the dim moments of the last two years. Mom and Dad, thank you for being my "rubber ducks" when I needed to reflect and debrief about this process. Brenna, I am forever grateful for your knack for academic writing. Gran and Gramps, thank you for constant encouragement, and phone calls to check up on the progress of this study. Jordan, I cannot thank you enough for your endless love and support. I love you all dearly.

To the staff and participants at the research site, thank you for your patience, openness, and willingness to participate. I truly hope that the completion of this study contributes to clinical practice and enhances the access to healthcare experience.

Abstract

Background and rationale: Access to healthcare is an acknowledged basic right for all. The harsh reality is that access to healthcare is not equal across all populations. In South Africa, the majority of the population accesses healthcare through the public healthcare system, including adults with deafness. Persons with deafness have the additional elements of possible barriers in communicating when accessing healthcare service, that are likely to impact how any healthcare service is utilised. More research is needed in the South African healthcare context, especially for adults with deafness. Therefore, this study aimed to explore the lived experiences of adults with deafness when accessing healthcare services in Johannesburg, South Africa.

Methodology: This cross-sectional study made use of an exploratory qualitative research design to explore which facilitators and inhibitors impact on adults with deafness accessing health care services. Sampling included a combination of non-probability, purposive and convenience sampling. The sample included only thirteen adults with diagnosed deafness, who attend the Speech Therapy and Audiology clinic at a specialized tertiary hospital in Johannesburg, South Africa. Participants took part in semi-structured interviews, and transcriptions then underwent thematic analysis.

Results: Results were presented under the pre-defined dimensions of the Theory of Accessibility (1981), and also applied to the Biopsychosocialtech model and International Classification of Functioning (ICF). It was found that participants are either dissatisfied or resigned to their access experience within the public healthcare system. Participants expressed that with aging, they access more hearing and non-hearing related healthcare services. Additional co-morbidities that come with aging also require support from family to ensure that access to healthcare is successful, such as handing over listening and hearing needs. Hospital infrastructure and acceptance of deafness from healthcare practitioners and support staff do not support the needs of adults with deafness.

Implications: The findings of this study emphasize the need for improved access to healthcare for adults with deafness, and more education for medical and non-medical clinical staff on how deafness can impact a healthcare service experience. The findings of this study may contribute to audiological service provision and advocacy for patients and the profession, through clinical training.

Key words: deafness, access to healthcare, South Africa, hospital, public healthcare, available healthcare, accessible healthcare, affordable healthcare, acceptable healthcare, accommodations in healthcare

Table of Contents

List of Tables

List of Figures

List of Appendices

Chapter 1: Introduction and Rationale

This chapter, *Background and Rationale*, provides the background information which led to the conceptualization of this current study. The motivation behind selection of the research topic has been illustrated, along with researcher positionality.

Access to healthcare is a basic right of every human being, as per the policy in section 27 of the South African Constitution (Constitution of the Republic of South Africa 1996), and as per Article 25 of the United Nations Convention on the Rights of Persons with Disabilities (United Nations, 2006, art. 25). The World Health Organization Constitution (1946) states that the highest standard of healthcare is a fundamental right to all humans (World Health Organization, 2017). Access to healthcare is characterized by quality, appropriate, sufficient, and timeous access to healthcare so that health outcomes are maximized for every person (Meade et al., 2015). It is, however, a reality that access to healthcare is not equal across populations, specifically for those with disabilities (McBride-Henry et al., 2023). Disabled people's experiences accessing healthcare services during the COVID-19 pandemic: a scoping review. BMC Health Services Research, 23(1), 346.. These disparities in healthcare access have seized the attention of healthcare providers, and healthcare advocacy communities globally. Questions raised by researchers aim to explore how adults globally access the healthcare services available to them when additional influencers, such as a body function differences or impairment, are present (Kuenburg et al., 2015). Research is therefore needed in the South African context, on how adults access their healthcare services – specifically adults with body function differences, such as deafness.

South Africa, like other countries, is diverse in its population relating to background, socio-economic status, language, religion, culture, race, amongst others (Neely &

Ponshunmugam, 2019). South Africa is also a country with significant historical background which influenced access to healthcare, such as the events which took place during the Apartheid era (Ngobeni et al., 2020). Included in these varied groups of people, are both able-bodied and individuals with disabilities, all seeking healthcare services in both the public and private sectors. With eighty-three percent of the population overall seeking healthcare through public services (Ngobeni et al., 2020), access to any healthcare service varies for many individuals, depending on location and finances (Neely & Ponshunmugam, 2019). Persons with deafness have the additional elements of possible barriers in communicating when accessing healthcare service, that are likely to impact how any healthcare service is utilised (Baratedi et al., 2022). Barriers in communication add additional considerations to healthcare consultations, such as delivery and understanding of healthcare information, question and answer sessions, and communication of symptoms (Kushalnagar, 2019). In order to determine and understand the communication barriers experienced by adults with deafness in the healthcare context, the rationale for this study became clearer.

The healthcare system in South Africa is structured according to spatial hierarchy, where specialty care is located primarily in urban areas, and primary care is provided at clinics in urban, peri-urban, and rural settings within the country (Neely & Ponshunmugam, 2019). This system is not unique to South Africa (Neely & Ponshunmugam, 2019). Postcode and residential systems are put in place internationally, to determine where public healthcare is provided and can be accessed by the general population in those area codes (Neely & Ponshunmugam, 2019). All individuals may be able to access the public healthcare system according to these spatial hierarchies, regardless of any body function differences such as deafness. Therefore, some individuals may have easier access, while other may experience challenges (Neely & Ponshunmugam, 2019). Persons with deafness have the additional circumstance of possible communication facilitators and barriers, despite their personal views

on disability, specifically relating to auditory and verbal communication. This is not necessarily unique to deafness, but can be applied to many other communication differences, such as speech fluency difficulties or language comprehension (Neely & Ponshunmugam, 2019). Access to healthcare is complex and goes beyond simply arriving at the service provider and making use of the required service (Meade et al., 2015). Specifically, within the general South African population, many barriers exist that limit an individual's ability to have their healthcare needs met. This is because the South African healthcare system is strategically designed to provide specialist services in more densely populated areas, thus limiting access to those unable to access these services (Neely & Ponshunmugam, 2019). Current approaches to healthcare access in South Africa are based on distance-based models, which are limited when addressing additional influencers when accessing healthcare services. Limitations include cultural, linguistic, generational, belief, and specific barriers caused by body function differences. While distance has been identified as the most prominent barrier to accessing healthcare, additional barriers that may impact the disabled population, and specifically the population with deafness are not emphasised (Neely & Ponshunmugam, 2019). Thus, research is needed to explore how disability and deafness is experienced, particularly in the South African context.

Globally, deafness is experienced across multiple age ranges, and may be attributed to many different causes. The World Health Organisation (2023) states that the global prevalence of deafness exceeds more than 1.5 billion people worldwide, which equates to nearly twenty percent of the global population. Data depicting the prevalence of deafness in the South African population is scarce, in both the public and private healthcare sectors (Joubert & Botha, 2019). Causes for deafness include hereditary, congenital, or acquired causes. Adults with either congenital or acquired deafness require identical healthcare services to those with normal or optimal hearing. Considerations for access to healthcare and deafness need to include provisions or accommodations for those that require additional support to fully understand and

access the same standard of healthcare (Joubert & Botha, 2019). Access to healthcare services in developing countries has sparked interest in the healthcare research community within the last ten years (Edoh et al., 2018). This is because technological advancements and increasing costs to maintain current healthcare systems have drastically changed since 2010. While access to healthcare has been a concern of healthcare researchers for decades, recent concerns are more focussed on the publics' use of healthcare and trends regarding facilitators and barriers when accessing desires services (Edoh et al., 2018). Concerns regarding the barriers to accessing healthcare services have become more apparent, as similarities have formed across multiple developing countries when researching access to healthcare barriers (Dizon et al., 2017). In addition to access barriers, access enablers have also been identified for specific populations, such as groups of mid-high socio-economic status and geographical location benefits. South Africa is one such country facing these healthcare access discrepancies, with some populations experiencing more barriers than others (Dizon et al., 2017). In addition to deafness in adulthood, the aging experience is an additional influencer to the access to healthcare journey. The Institute of Medicine of the National Academies (2008) states that in order to be classified as being part of the geriatric population, and adult is required to be aged 65 years or older. While not every participant in this study is above age 65 years, advancing age is a consideration, especially when adults approach the geriatric age.

The rationale for this study is that there is limited research available. Not only is research into the access to healthcare experience of adults with deafness scarce, but there is also a lack of research into the communication needs of adults with deafness within the South African healthcare context. In order to valuably contribute to the improvement of access to healthcare for adults with deafness, an in-depth exploration into their needs has presented itself. The World Report on Hearing presented by the World Health Organisation (2021) describes that challenges exist for the healthcare system when attempting to aid those with deafness. This

report stipulated that ear and hearing related healthcare can be strengthened through use of leadership and governance, financing, workforce, medical technology, provision for equal and quality services, and distribution of health information. These solutions can only be a reality through evidence-based practice and research. Service provision in the public healthcare sector can only improve when evidence is presented to warrant change, and thus, displaying the experiences of adults with deafness in this context will add to existing evidence. In addition to access to healthcare related research, the role of an audiologist in the healthcare setting is to provide assessment and treatment for those with deafness – but also advocate for the needs of those with deafness. The audiologist plays a key role in advocating for their patient's ability to access the healthcare services they require, which is why more research into the needs of adults with deafness within the healthcare context.

1.1 Researcher positionality

Researcher positionality refers to the researcher's view of the world, and the position they adopt throughout a research study, and its social and political influencers (Bourke, 2014). This concerns how the researcher may approach the research study, select participants, complete methodology, and report findings (Bourke, 2014).

I, the researcher of this study, am a clinical speech therapist and audiologist. I have worked in both the private and public healthcare sectors and have observed the difficulties that adults with deafness may experience when attempting to access healthcare services. As an audiologist, I have experienced the opportunity to work with, listen to, and empathise with these individuals' narratives of their experiences when accessing healthcare with deafness in adulthood. I have noticed gaps in the literature regarding the specific difficulties adults with deafness may experience with regards to their symptoms when attempting to access any healthcare service. Additionally, I have noticed the challenges experienced by healthcare

practitioners working cross linguistically and cross culturally, and how this impacts the access to healthcare experienced for patients with deafness. The challenges experienced by adults with deafness became apparent throughout my theoretical and clinical training, and needed to be explored further. This study aimed to address how deafness can impact access to healthcare services for adults, in South Africa. Additionally, objectives for this study were to explore the facilitators and inhibitors that exists for adults with deafness in South Africa, when accessing healthcare services.

It is essential to report, that the researcher has previous working experience at the research site and has conducted research at this site in the past. While this was not the primary influencer in the decision-making process for research site selection, exposure to the research site was essential to the methodology chosen as the researcher was familiar with the data collection procedures within the research site. Furthermore, the goal of this research study was exploring the lived experiences of adults with deafness in Johannesburg, South Africa, and this research site was able to allow access to that specific population at the time of this study.

1.2 Summary of chapters

In the chapters to follow, Chapters 2 and 3, namely the *Literature Review* and *Theoretical and Conceptual Frameworks*, which ground this study will be discussed. Background referring to access to healthcare globally, and specially in South Africa, will be described, along with the experiences of adults with deafness when accessing healthcare services. Following on, Chapter 4, *Methodology*, outlines the methodology of this study, which includes the research aims, sampling, data collection and instrumentation, pilot study, and analysis approach. Chapter 5, *Results*, presents the findings of this current study in relation to the primary aim and sub-aims. To relate finding of this current study to existing literature, and application of theoretical frameworks, Chapter 6, *Discussion*, integrates results and provides critical review of the current

literature. Lastly, Chapter 7, *Conclusion*, provides a summary of findings, suggestions for further research, as well as limitations of this current study.

Chapter 2: Literature Review

This chapter describes, and evaluates, the relevant literature for this current study. This chapter also uses extant literature to create an argument for the current study. Literature referring to access to healthcare forms the basis of this current study. Emphasis on the South African context has been explored. The experiences of adults with deafness who access healthcare services through the South African public healthcare system, has been provided.

2.1 Choice of terminology

For this study, terminology regarding hearing function is of vital importance. This is to ensure alignment with the social model of disability and hearing function. The following definitions needed to be differentiated (Hogan & Phillips, 2016):

1. Hearing impairment: Describes any degree of hearing impairment, ranging from mild to profound. This includes those that identify as Deaf, and those that describe themselves as hard of hearing. Hearing impaired implies deficit of the hearing system.
2. Hearing loss: Describes hearing function that was once optimal and was lost or degraded over time.
3. Deaf: Describes hearing with no or very little residual hearing function and includes those who identify with the Deaf community (to be written with a capital 'D').
4. deaf: Describes hearing function across the spectrum of severity, whereby hearing function can range from mild to profound. Individuals who identify as deaf do not necessarily identify with the Deaf community and often communicate with verbal speech (to be written with a lower case 'd').

For this study, the term 'deaf' is considered to be most suitable and will be used consistently throughout. While multiple definitions exist to describe hearing function, context in which a

chosen definition or term is used, hold different connotations (Dunn & Andrews, 2015). For this study, the term 'deaf' aligned itself with the social model of disability, and encompassed hearing function across the severity spectrum. People-first language is a linguistic prescription, or strategic choice of wording, that puts a person ahead of their diagnosis (Dunn & Andrews, 2015). By strategically placing the person before their diagnosis, it describes what the person has rather than what they are (Dunn & Andrews, 2015). To align with the social model of disability, people-first linguistic choices had been made. The term 'adults with deafness' or 'persons with deafness' had been chosen, as opposed to 'deaf adults', as the target population for this study are adults first, before their hearing function. The population chosen were human beings who are deaf, rather than deafness being their defining feature. Additionally, choosing this term allowed the researcher to explore lived experiences of adults with deafness when accessing healthcare services rather than suggesting differences in hearing function could be viewed as a deficit.

2.2 Perceptions of disability and deafness from the medical community

Disability is defined as the difficulty for the individual with a specific condition to do specific activities, access services, and participate within the world around them, as a result of any impairment of the body or mind (World Health Organisation, 2021). The International Classification of Functioning (ICF) stipulated that body function and impairment directly impacts an individual's ability to complete and activity and participate in daily life with additional personal and environmental influencers that may impact how life can be lived (Mitra & Shakespeare, 2019) (see ICF breakdown under Chapter 3, *Theoretical and Conceptual Frameworks*). Disability is more than just differences in body function that a person may have compared to what is considered the norm (Mitra & Shakespeare, 2019). Disability can encompass both internal and external challenges in participation in activities of daily living.

For example, access to ramps for wheelchairs as well as the type of wheelchair in specific environments will impact the degree of disability that different people may experience (Mitra & Shakespeare, 2019).

However, it is vital to note that how an individual accepts, accommodates, and lives with their body function differences will ultimately determine how they view disability in their own lives (Mitra & Shakespeare, 2019). However, just because an individual may not view their body function differences as a disability, it does not necessarily mean that the disability does not exists (Mitra & Shakespeare, 2019). When defining the term disability, it is essential to note that perceived disability varies from person to person, and thus access to healthcare services will also vary (Meade et al., 2015). Recent research has revealed that individuals with disabilities are not only more likely to have their healthcare needs unmet due to access limitations but are also more likely to use less healthcare services over time as a result of these experiences (Meade et al., 2015).

Individuals with disabilities were more likely to experience some form of barrier to healthcare, as compared to those without a disability because the healthcare system is not always equipped to manage the wide variety of conditions and severities, which may result in access challenges (Baart & Taaka, 2018). Additionally, those with disabilities were more likely to require access to healthcare overall. Those with disabilities may also require the care of others to ensure that their healthcare needs are met (Baart & Taaka, 2018). This is not dependent on region, but a common global experience, whereby those with disabilities relied on the aid of others to help them access healthcare services. Hearing difficulties are included in the general grouping of body function differences (McKinney et al., 2020).

Access to healthcare is not equal across populations, specifically for those with disabilities. Disability is a personal experience for each person with a body function difference,

which may be physical or mental (Kuenburg et al., 2015). Individuals with disabilities experienced additional challenges when accessing healthcare services, such as location or financial restrictions that are not necessarily experienced by those without a disability. These disparities in healthcare access have seized the attention of healthcare providers, and healthcare advocacy communities globally (Kuenburg et al., 2015). When discussing hearing impairment, the term often has negative connotations, as it implies that something is wrong with the individual with non-optimal hearing. Hence, the term deafness is often used by those that may experience deafness but do not necessarily align themselves with the Deaf community. The ways in which disability is viewed is essential to accessing and receiving healthcare services, and is differentiated below (Kazou, 2017).

The medical model and social model of disability are often used to define and differentiate views of body function and disability but are not used in conjunction due to their opposing views (Kazou, 2017). The medical model represents the historical understanding of disability. The medical model aims to describe disability through clear definition of medical condition, condition etiology, prognosis, treatment, and rehabilitation (Kazou, 2017). Thus, any restrictions to activity participation are a result of these factors. The medical model portrays disability as the individual's body and mind causing activity participation limitations (Kazou, 2017). The social model represents an externalized version of disability, in direct opposition to the medical model (Kazou, 2017).

The social model aims to reconceptualize the notion of disability in a modern world. It defines disability through locating the source of difficulty in activity participation, as a result of the external environmental barriers and restrictions that limit task completion. The social model aims to review medical labels when defining disability (Kazou, 2017). When addressing views of disability, deafness should be included. Depending on which model is chosen, the

manner in which deaf persons are treated will determine how they experience the world (Kazou, 2017). The medical model suggests that those that are deaf have a bodily impairment that needs to be fixed, without making accommodations in their external environment (Kazou, 2017). However, the social model will attempt to fix the disabling environment rather than the deafness to allow for optimal participation in daily activities (Kazou, 2017). In addition to the social model, a more specific model can be used to break down the different components of an individual's life. The biopsychosocial model allows researchers to explore how persons with deafness navigate their lives by analysing each subsection of the model (Bolton & Gillett, 2019). Highlighted under Chapter 3, *Theoretical and Conceptual Frameworks*, it can be seen how the Biopsychosocialtech model further drives the social model of healthcare (Bolton & Gillett, 2019), and how it can be used to identify facilitators and barriers to healthcare access for the deaf population.

The World Health Organisation defined disabling deafness as any hearing function greater than 35dB in the better ear (World Health Organization, 2021). However, this definition was not all encompassing, and now should be interrogated. There did not appear to be any consideration of configuration, type of deafness, or ability to perceive speech in this definition. Degree of deafness, by itself, is not disabling, but rather the environment in which the individual with deafness is expected to complete activities and participate to their full ability is disabling (Kushalnagar, 2019). For example, one individual with bilateral 35dB flat sensorineural deafness may have experienced greater difficulty participating in a medical consult where there is competing environmental noise in the waiting area, versus another individual with unilateral 60dB flat sensorineural deafness with complete silence in the waiting area. Determining the level of disabling deafness can only be determined by the person with deafness themselves, and this is entirely dependent on how they can participate in life with their deafness in specific environments (Kushalnagar, 2019). Kushalnager's study in 2019

aimed to determine the level of disabling deafness based on the experiences of persons with deafness in the United States of America, Brazil, the Netherlands, and South Africa. In addition, experiences differ worldwide. Two individuals with deafness with the exact same deafness in different parts of the world cannot be compared or contrasted in terms of disability, as one may experience specific tasks without difficulty while the other may struggle greatly (Kushalnagar, 2019). Thus, any individual with such disability may expect access to healthcare to be different to those with optimal hearing. However, within any population, those with similar deafness may view said deafness as being part of their culture and are not disabling (Kushalnagar, 2019).

It is known that deafness may impact social interactions, language use, language understanding, communication fluency, and participation in tasks of daily living (McKinney et al., 2020). Different degrees of hearing function, and perceived limitations will impact how social interactions occur. Disability can be experienced but isn't always guaranteed as individuals with deafness are all unique in their views of deafness and may identify with this differently. It is important to distinguish the difference between deaf with small "d" versus Deaf with capital "D". For this study, this impacted how an individual with a deafness view their impairment and how that influenced their healthcare experiences (see Chapter 6*: Discussion*).

2.3 Perceptions of disability and deafness by the Deaf community

The concept of deaf with small 'd' versus Deaf with capital 'D' is discussed, whereby the persons with deafness identify with either the medical or social model. This will ultimately define how they navigate their lives daily (Kattari et al., 2017). While this decision is not always intentional for all individuals, this decision could have been a conscious choice to identify with the Deaf community and used signed languages instead of verbal and integrated

into the community (Kattari et al., 2017). The notion that people who are 'deaf' would identify with the medical model, and people who are 'Deaf' would identify with the social model, is entirely dependent on the lifestyle choices of each person (Kushalnagar, 2019). Regardless, access to healthcare with deafness is a common concern experienced by both "deaf and "Deaf" persons alike (Kattari et al., 2017). The social use of language can be affected by deafness, which is necessary when seeking healthcare services (Haile et al., 2021). As this study aimed to address experiences of adults with deafness when accessing health services, both those in the Deaf community, and those that view their deafness as a disability needed to be included. Persons with deafness, and Deafness, may face significant difficulties when accessing healthcare, and these difficulties have thus become a public health concern (London et al., 2020). This is because persons with deafness could have experienced barriers communicating with their healthcare service providers through auditory verbal means (Withers & Speight, 2017). Documented inequalities included multiple factors that ultimately stem from difficulties experienced by a person with deafness, and Deafness, when communicating health related concerns to those with optimal hearing (McKee & Stransky, 2019). Thus, communication breakdowns occured (London et al., 2020). Examples included difficulty receiving and remembering auditory related healthcare information, difficulties decoding and interpreting healthcare information described verbally, and poor attitudes from healthcare practitioners to persons with deafness, resulting in power imbalances between those with deafness and their hearing healthcare practitioners (McKee & Stransky, 2019).

Members of the Deaf community view their lives as part of a distinctive and cultural community. They view themselves as part of a linguistic minority, with their deafness not regarded as a disability but rather as an alternative state of being (Malebranche et al., 2020). As per a study by Malebranche et al. (2020), it was found that those within the Deaf community, in the United States of America, do not have to be fully signing to belong to the community,

and that it is preferred by the community for others to never assume their preferred communication. Additionally, it was found that despite being proud of their Deafness and not viewing hearing function as a disability, poor healthcare outcomes have been experienced by the community for sexual and reproductive health, cardiovascular and mental health services (Malebranche et al., 2020). While deafness doesn't need to be classified as "disabling" to be experienced as disabling, there are common symptoms that can be experienced regardless of how disability with deafness is viewed (Beck, 2015). Common symptoms include vertigo, aural fullness, otalgia, otorrhea, and tinnitus. (Beck, 2015).

Individuals who view their deafness as an impairment that is disabling or limiting may not identify with the Deaf community and would use deaf with a small 'd' (Olusanya, et al., 2019). This is often regarded as a 'hidden disability' as it cannot be viewed by others. This can make the individual with deafness feel isolated from others, including their healthcare provider (Olusanya, et al., 2019). Multiple factors around the patient with deafness, regardless of type or degree of deafness, can impact their ability to effectively participate in the consult (London et al., 2020). However, this was not always the case. Persons with deafness or Deafness, despite how they identified with their deafness, could experience great successes in their healthcare journeys despite having some degree of deafness (London et al., 2020). Therefore, the term 'impairment' does not suit all those with non-optimal hearing despite encompassing the entire degree of severity and age. The choice to use the term 'deaf' is important. In order to emphasize that persons with deafness are not required to view their hearing function as an impairment, implies that their environment is the reason for disability (Olusanya, et al., 2019).

2.4 Access to healthcare services in South Africa

Access to healthcare is broadly defined as the degree of fit between prospective user of healthcare and the service itself (Saurman, 2016). Accessibility is only one of the five key

dimensions defined by Penchansky's and Thomas's Theory of Accessibility (1981) (Meade et al., 2015). Penchansky and Thomas (1981) developed the Theory of Accessibility, which specifies how effective and worthwhile access to healthcare can be achieved. Their framework discusses five dimensions, which all need to be achieved for a patient to efficiently access the healthcare service they desire. As this framework formed the basis of this study, the details of this framework can be found under Chapter 3, *Theoretical and Conceptual Frameworks.*

While this theory was developed in the 1980s and has been in use for over four decades, it is still being used in current research. This theory was used by AlDossary et al. (2017) to develop a telehealthcare planning framework. This study found that a structured framework can be created when providing telemedicine, as Penchansky's and Thomas's Theory of Accessibility (1981) aids in the identification and prioritization of the healthcare needs of the community (AlDossary et al., 2017). Penchansky and Thomas's Theory of Accessibility (1981) was also recently evaluated against other definitions of access to healthcare services when providing healthcare services to the elderly in China in a study by Di et al. (2020). Di et al. (2020) found that by defining and breaking down different dimensions of access to healthcare, barriers to accessing healthcare are more noticeable and can be directly addressed. Gaps in the literature have been identified. There is a lack of research regarding the South African population and how the Theory of Accessibility by Penchansky and Thomas (1981) can be used to identify access to healthcare facilitators and barriers. This study aimed to add to this research, with specific emphasis on the South African population.

An American-based study recently used the Theory Accessibility by Penchansky and Thomas (1981), to explore the audiological needs of their population in relation to available audiologists (Planey, 2019). This study found that by breaking down the dimensions of access to healthcare, patients requiring audiological services were experiencing availability and

affordability level. It was found that insurance schemes in the United States of America do not cover all hearing health related services, and finding available audiologists is in short supply (Planey, 2019). The need for more research in hearing health and access to healthcare is needed. Planey (2019) showed how this theory can be used for the population with deafness in the United States of America. Studies in South Africa, for the population with deafness , are needed as there is a lack of literature regarding this population, in this geographical area. By using existing frameworks, the theoretical application of well used theories can be tested for under-researched populations and locations, such as the Theory of Accessibility (Penchansky & Thomas, 1981). This study aimed to use the Theory of Accessibility (Penchansky & Thomas, 1981) to explore access to healthcare for adults with deafness in South Africa. Using the Theory of Accessibility, Bali (2018) described that barriers to healthcare access can be broken down into four distinctive categories, that often overlap for many individuals:

1. Geographical access: Despite reduction in fees required to access healthcare services once at a public healthcare facility, as compared to private facilities, travel costs increase as distance increases. The South African Labour and Development Research Unit at the University of Cape Town found that, in 2013, ninety percent of South Africans live a minimum of 7km away from their nearest primary public clinic. However, the same study found that while this distance is considerably short, the poorer the household, the further away from the clinic the patient would reside with less funds available to travel longer distances. Essentially, it was found that those that lived nearest to their public healthcare clinic were less likely to use their services, as the limited amount of space and type of service offered was not what was required (McLaren et al., 2013). This study highlighted that just because a public clinic was located within the desired distance, not all healthcare services can be accommodated at all clinic locations, especially in more rural areas. Thus, greater distances need to be travelled to access specialised services. It was also found that

those that happen to earn a higher income, in the case of the study males were found to be of higher income groups, are more likely to spend the money required to travel greater distances to access their desired service at a more favourable location (McLaren et al., 2013).

2. Availability of services: A study conducted in 2011 discovered that in order to access the desired healthcare service, personal choices must be made by the patient depending on what service is available, and where (Harris et al., 2011). The study found that 45,2% of patients used public transport, and 37% preferred to walk to avoid travel costs. Those patients who lived in more urban areas were more likely to access healthcare services via public transport than those that lived in more rural areas, as the services desired were more likely to be closer to place of residence (Harris et al., 2011). This emphasised the findings that 53,3% of patients in the public sector had to choose their healthcare facilities based on how close it was to their home, which resulted in foregoing their required service as it is not always available in a reasonable area (Harris et al., 2011).

In addition, it was found that referrals were often needed to access the healthcare service needed. In such cases, the nearest specialist may not be available in the area of the patient, due to lack of equipment, lack of specialists hired in specific areas and unequal distribution of funds to maintain specialised department in smaller clinics and hospital across South Africa (Goudge et al., 2009). For the referral system to work in a patient's favour, the process must be followed to completion. For some patients this could take a long time, which resulted in the available service never being accessed, resulting in patients feeling unempowered by the process (Harris et al., 2011). Availability includes more than the services available in the healthcare facility. Lack of ambulance services in low-income areas restrict access to services that are actually available. Patients are therefore unable to

access the available services when they have no means of travelling to that service unassisted (Goudge et al., 2009).

3. Affordability of services: There are multiple cost implications when seeking healthcare, which would limit one's access to desired services (Harris et al., 2011). This includes travel costs, frequency of visits to healthcare facilities, unreasonably long waiting times, medication costs and what the clinic or hospital can provide based on funds available to run the facility (Harris, et al, 2011). The most prominent factor of travel time and costs was identified as the biggest barrier when accessing healthcare (Visagie et al., 2015). A study conducted in the Western Cape, South Africa, showed that difficulties accessing healthcare services were directly related to finances, despite services being free of charge. It was found that long waiting times resulted in direct loss of income from lost time at work (Visagie et al., 2015). Healthcare is an expensive profession to work in, and provide (Meyer et al., 2017).

For the majority of the South African population, private healthcare is simply unaffordable, but more desired(Burger & Christian, 2020). It was found by Burger and Christian (2020), that accessing private healthcare is a choice, while still linked to the financial ability to make such a choice. The concept of upgrading to a more desirable healthcare practitioner or facility is not always a reality, and is therefore heavily linked to what can be afforded (Burger & Christian, 2020). It was also discussed that out-of-pocket costs are unavoidable and are most often spent on traveling to the healthcare facility (Burger & Christian, 2020). This required and unavoidable cost implications may heavily impact a person's decision to access healthcare services or leave their condition untreated. Leaving healthcare needs unmet because of affordability barriers is a worrying sign that patients feel that accessing the public healthcare sector is not worth the time or money involved.

The problem presented itself when a patient was not able to access healthcare services because it is simply unaffordable, especially if multiple visits were needed (Burger & Christian, 2020).

4. Acceptability of services: Patient-provider interactions pose another barrier when accessing healthcare services. Healthcare worker interactions and characteristics are influenced by age, race, gender, sexual preferences, language, and culture (Müller, 2017). This impacts the ability of the healthcare worker to provide a service, as it is the responsibility of the healthcare provider and staff to treat all healthcare consumers with respect, dignity and with mutual trust (Müller, 2017). This can create a barrier to accessing healthcare, like in South Africa, where a diverse mix of practitioners and patients exists. Other countries with great cultural and linguistic mixes, such as Brazil or India, may experience similar barriers (De Meyer et al., 2013).

Despite similar healthcare models and development of public healthcare globally, the South African healthcare system still stands out, as the South African public healthcare system functions as a demand driven supply-chain model (De Meyer et al., 2013). This means that allocation of healthcare professionals within public healthcare to specific institutions is not always in the control of the healthcare professional. Additionally, student practitioners are often working alongside the medical staff, during their clinical training. Challenges arose when patients were dissatisfied with the service they are given, as language, culture, race, ethnicity, teaching practices and degrees of professionalism vary across staff members (De Meyer et al., 2013). Healthcare professionals globally are expected to be responsible and flexible, in order to meet the expectations service provision, with additional stressors of rapid changes in economic sustainability of the country. It is an expectation of healthcare professionals worldwide, including those practicing in South

Africa, to be responsible for meeting the expectations of healthcare service users (De Meyer et al., 2013). Attitudes of healthcare professionals towards patient care can be influenced by any stressor not directly related to the patient, such as costs, risk of caseload overflow and emotional stress (Urban & Maboko, 2020). It was very likely that at some point in healthcare provision, a communication breakdown occurs between any of the parties involved in the healthcare journey, including the healthcare professionals, support staff, patients, and their loved ones (Burger & Christian, 2020). Common reasons for this included poorly described and accepted diagnoses in public clinics and conflicting attitudes of support staff (Goudge et al., 2009). A study by Burger and Christian (2020) found that acceptability was the lesser barrier experienced by those living in South Africa. In contrast, Harris, et al. (2011) found that more than just healthcare communication impacts acceptability as a valid barrier to healthcare access in South Africa. It was found that long queues, disrespect from hospital and clinic staff, dissatisfaction with services received, and breached privacy and confidentiality all impacted healthcare seeking behaviour. This made patients lose confidence in the public healthcare system, and in turn, access to healthcare was sought less frequently (Harris et al., 2011).

Goudge et al. (2009) found that favourable acceptability in healthcare in developing countries, such as South Africa, resulted in feelings of empowerment. The case study presented highlighted that when the patient and their family are empowered in their treatment, they are more likely to continue accessing healthcare services and educating their own communities. Harris, et al. (2011) discussed further that South Africans that were able to access private healthcare were happier with their decision and described an overall higher quality of care as compared to those in the public sector. This discrepancy highlighted how there are both subtle and obvious differences in the standard of care in public and private hospitals, with those in public healthcare settings experiencing poorer acceptability (Harris

et al, 2011). Goudge, et al. (2009) explained that the stigma of HIV, AIDS, and tuberculosis (TB) highly influences access to healthcare when acceptability is a factor. The negative attitudes of healthcare staff was deemed unacceptable and a waste of finances, as reported in a study by Visagie, et al (2011). It was further identified that favouritism and nepotism towards certain patients, stereotyping, language barriers and low morale of healthcare workers was also found to reduce the desire to access healthcare services in South Africa (Visagie et al., 2011).

2.5 Access to public healthcare services in South Africa

Within the South African context, public healthcare services are available and provided within a catchment system. The city of Johannesburg, part of the greater Gauteng province, in South Africa makes use of this system (City of Johannesburg, 2018). The catchment system allows for users of the public healthcare system to access their desired healthcare service in a hospital or clinic closest to their place of residence (City of Johannesburg, 2018). Not all healthcare services are available at every location, however the catchment system allows for a strict referral system to be implemented so that users of the public healthcare system receive services within a chain of hospitals or clinics, rather than travelling across geographical areas (City of Johannesburg, 2018).

Access to healthcare in South Africa, like many other countries, can be separated into generalized and specialized care. Different facilities are put in place to include specific healthcare services, based on location, availability of practitioners and need of services (Kwazulu-Natal Department of Health, 2021). This is not unique to South Africa, however the structures put in place in this country have been developed to provide specialized services in specific locations whereby equipment and finances are available to do so (KwaZulu-Natal Department of Health, 2021). Not all South African citizens are able to, or choose to, use

medical aid schemes. Therefore, private healthcare is not available to all individuals no matter the reason. Public and private healthcare are therefore separated. It is possible that healthcare professionals may practice in both sectors, depending on the service provided. Healthcare systems are separated into the following subsections, as described in Table 1 below (Kwazulu-Natal Department of Health, 2021):

Table 1: Types of healthcare facilities in South Africa:

Type of Healthcare Facility	**Description**	**Who Can Access**
Clinic	Provides primary healthcare services for 8 hours a day depending on community needs with no operating theatre.	People with or without medical aid schemes or private funding.
Community health centre	Provides primary healthcare services and is open for maternity and emergency care for 24 hours with no operating theatre.	People with or without medical aid schemes or private funding.
District hospital	Provides generalized healthcare services with referral systems run by general practitioners and nurses.	People with or without medical aid schemes or private funding.
Primary healthcare center	First level healthcare services that provides essential services, and some locations may have small operating theatres.	People with or without medical aid schemes or private funding.
Provincial tertiary hospital	Higher level healthcare with sub-specialist care with expert clinicians and operating theatres to support regional hospitals.	People with or without medical aid schemes or private funding.
Regional hospital	Higher level healthcare with referral system that provides sub-specialist and specialist care to support district hospitals, run by expert clinicians with teams and operating theatres.	People with or without medical aid schemes or private funding.
Specialized hospital	Higher level healthcare with referral system that provides sub-specialist and specialist care to specific patients requiring specific services.	People with or without medical aid schemes or private funding.
Tertiary institutions	Higher level healthcare with referral system that provides sub-specialist and specialist care with academic medical training for students in the province.	People with or without medical aid schemes or private funding.
Quaternary hospital	Higher level healthcare with referral system that provides sub-specialist and specialist care with operating theatres and provisions for organ transplantations.	People with or without medical aid schemes or private funding.
Private healthcare facilities	Any combination of primary, generalised, and specialized healthcare service depending on the institution where clinicians and experts are privately running their own facilities and providing private rates and services.	People with medical aid schemes or private funds that can directly pay for private services.

While the different types of services can be offered at different healthcare sites mentioned in Table 1 are clearly differentiated, a common standard of public service is required from healthcare professional, no matter the place of employment. The people first principle is directly translated from Sesotho to English, to mean the 'Batho Pele Principles'. The purpose of the approach was to prioritize the needs of the country's people and service with dignity and quality (South African Department of Social Development, 2021). The Batho Pele Principles are a national South African service delivery standard, which was created to encourage favorable healthcare services. Hence, all public healthcare services providers are required to practice these principles to avoid unintentional barriers to healthcare. Private practitioners in South Africa are also encouraged to follow these principles, as described in Table 2 below(South African Department of Social Development, 2021):

Table 2: Description of the Batho Pele Principles:

Batho Pele Principle	**Description**
Consultation	All people have the right to the highest quality consultation and should be given the choice of which services they would desire.
Standard of service	All people must be made aware of the quality of the service they will receive and what to expect.
Access	All people should have equal access to the service they desire and are entitled to receive.
Courtesy	All people must be treated with consideration and courtesy.
Information	All people must be given full, accurate and detailed information about the services they are entitled to receive.
Openness and transparency	All people must be told how provincial and national departments in the healthcare system work, who is in charge and how much it will cost.
Redress	All people have the right to complain, receive an apology, explanation and remedy should their promised standard of care is not met, with a positive and sympathetic response.
Value for money	All people should be provided efficient and economic services with the best value for money possible.

As described above in Table 2, the Batho Pele Principles speaks to putting the people of South Africa first, but in practice challenges in access to healthcare still exist. While the Batho Pele Principles do not directly state the specific barriers that could occur, it is inferred that if any principle is not upheld, a patient cannot access fair and quality healthcare. Barriers to healthcare are seldom isolated and are often experienced concurrently. Despite the goal to adhere to the South African Constitution, whereby the above-mentioned principles promote equal healthcare access to all individuals, this is not always the reality. A South African based rural study showed that persons with disabilities are more likely to experience barriers to healthcare as opposed to those without (Vergunst et al., 2017). The South African Constitution promised to promote safe, equal, and affordable healthcare to all citizens. In South Africa, combined access barriers lead to reduced access (Goudge et al., 2009). For the Batho Pele Principles to become a reality, healthcare researchers in South Africa need to explore the medical and social aspects that may be creating barriers to healthcare access for persons with disabilities (Vergunst et al., 2017).

Overall, these barriers have shown to impact women, children, elderly, and disabled populations in developing countries more than male, adult, able-bodied and financially secure populations (Bali, 2018). Additionally, health status influences the ability to earn an income. This encourages the question of how someone with poor access to healthcare is supposed to earn a living to continue accessing healthcare. In order to combat the above-mentioned barriers to accessing healthcare services, public healthcare services have been created, promoted and subsidized to allow a more equitable access. However, many individuals in a developing country are still left behind, even when such services are becoming available at significantly reduced costs (McLaren et al., 2013). Despite living in a post-Apartheid society in South Africa, major disparities in access to healthcare services are experienced regularly. This is true especially for those in lower socio-economic groups with high emphasis on race and culture

(McLaren et al., 2013). South Africa is known to have a high quadruple burden of disease, and the reality of such is that the challenge to access healthcare is more difficult for low-mid income families (Khoza-Shangase, 2021).

The reality is that very few healthcare systems in South Africa specifically, are equipped or organised to manage the high burden of disease. This includes conditions such as Tuberculosis, HIV, AIDS and non-communicable diseases (Goudge et al., 2009). In South African low-income and middle-income households, it was found that many individuals do not seek healthcare at all, or only do so when funds become available. This drastically changed the continuity of care (Goudge, et al., 2009). It was further found by Goudge, et al., (2009), that when treatment needs cannot be regularly accessed, then continuity of care is interrupted. As described in the Batho Pele Principles, as well as the Theory of Accessibility (1981), when there is one or more interruptions to the continuity of care, citizens are less likely to seek healthcare service or attempt to access any at all (Goudge, et al., 2009).

Despite all the barriers that exist in the access to healthcare journey for very many South Africans, studies have shown that there is still remarkable healthcare services being offered in dire circumstances (Penn & Watermeyer, 2018). The term “islands of good practice” described by Penn and Watermeyer (2018) highlight that there are remarkable qualities of care and communication in healthcare settings where resources are limited, and great potential barriers are evident. “Islands of good practice” refers to great examples of clinical practice, in what is seen as a pool of questionable examples of clinical practice (Penn & Watermeyer, 2018). The access to healthcare experience in South Africa can be enhanced by a sense of collaboration and an aura of cultural pride and safety (Penn & Watermeyer, 2018). Patients perceive better experiences in the public healthcare setting when leadership is present, attention to a broader care model is evident, continuity of care is provided, the atmosphere is welcoming and safe,

patients continue to be consumers of the healthcare service, community-based models of service are prioritised, creative management the environment is used, and long-term routine management is in action (Penn & Watermeyer, 2018).

2.6 Impact of aging on access to healthcare services in South Africa

The utilisation of healthcare services is not unique to any one specific age group, however different age groups may access different healthcare providers for specific reasons, and only at a specific stage in life (Institute of Medicine of the National Academies, 2008). Older adults, moving into the geriatric stage of life, are more likely to access healthcare services more frequently for chronic health conditions and conditions that typically develop later in life (Institute of Medicine of the National Academies, 2008). To be classified as being part of the geriatric population, and adult is required to be aged 65 years or older (Institute of Medicine of the National Academies, 2008). With aging, specific conditions are experienced that may not be experienced earlier in life. This includes, but is not limited to delirium, mental health decline, falls with injury, sensory impairments like hearing and vision loss, incontinence, malnutrition, and osteoporosis (Institute of Medicine of the National Academies, 2008). The elderly care policy in South Africa places a high emphasis on ageing and access to healthcare, but the primary healthcare system is not prepared or able to appropriately address the health needs of the aging South African population, especially for those living in community settings (Kelly et al., 2019).

Adults with Deafness, and identifying with the Deaf community who also primarily use signed language as their primary method of communication, also experience challenges when accessing healthcare services (Lesch et al., 2019). It was found in the United States of America, that adults with Deafness who form part of the Deaf community reported higher rates of high risk health-related concerns, thoughts of suicide, and domestic abuse – and that healthcare

services required to assess and treat these conditions were not provided in American Sign Language (ASL), resulting in poor long-term care and end-of-life-care (Lesch et al., 2019).

As the aging process progresses, it has been found that in northern regions of Europe and North America assistive living becomes more necessary for some individuals (Wilkowska et al., 2021). For many people no matter their age, the primary goal in life is to be included in activities and participate fully. The theoretical framework that best describes this, is the International Classification of Functioning (ICF) as an extension of the biopsychosocial framework (Wilkowska et al., 2021), which is further explained under the Chapter 3, *Theoretical and Conceptual Frameworks.* The concept of multiple co-morbidities occurring as a result of aging and chronic conditions can result in reduced functioning during tasks of daily living, activity attendance, and participation, without the assistance of another person. Aging is complex, and comes with losses and gains (Wilkowska et al., 2021). Older adults may lose spouses, family, and friends, as a result of death by old age, illness, or injury. They may lose independence, social interactions, or freedom of mobility. However, they may also gain interest in maintaining their health, trust in the care of others, and a work-free lifestyle (Wilkowska et al., 2021). Frailty and multiple co-morbidities, including deafness, may result in the desired or undesired utilisation of the aid of another person (Wilkowska et al., 2021).

Depending on the needs of the aging adult, the person designated with the role of care can be formally employed or not (Pickard & Glendinning, 2002). Formally employed caregivers are tasked with the contractual responsibility in aiding the aging adult or geriatric with activities of daily living, transport, social interactions, and designated medical care (Pickard & Glendinning, 2002). On the other hand, not every aging adult needs a formal caregiver to assist them. Some aging adults relied on the assistive care from a family member or friend, willingly or unwillingly (Pickard & Glendinning, 2002). Family member care is not

necessarily exclusively given to spouses and children of the aging adult, but can be designated to any family member able and willing to assist, such as a sibling, niece/nephew, or grandchild. Professional support, in the form of a paid caregiver, is therefore not the same as a companion the aging adult may know socially and is not necessarily paid to assist (Pickard & Glendinning, 2002).

With assistive care, there may be a reduction in autonomy when making healthcare decisions. When in the care of others, healthcare decision making sometimes fell into the hands of the people assisting (Moermans et al., 2021). A loss of independence occurs in the later years of life, and this could include making own decisions about health, finances, and activities of daily living (Moermans et al., 2021). The aging population may have experienced conditions that can result in a loss of autonomy and independence, such as deafness and needing to rely on another person to communicate healthcare needs to and from a healthcare provider (Smith et al., 2015). While this wasn't always intentional or avoidable, the aging adult receiving assistance may not have wanted decisions made for them or may have felt a sense of relief that someone else was caring for them. This can drastically change the outcome of healthcare consultations, especially when palliative care is the topic of communication (Smith et al., 2015).

A very important area of research focuses on caregiver burden, and the tools needed to support formally employed and familial carers, and the distinction between a paid caregiver and an unpaid family member (Leslie et al., 2020). In Canada, it was found that resilience and third-party disability may be experienced by anyone assisting the elderly directly correlates to the quality of care given (Leslie et al., 2020). For the purpose of this study, it was essential to differentiate between formally employed caregivers, and familial/friend carers. The differences in the type of assistive personnel can link to access of healthcare success for the adult with

deafness. The reasons for bringing a person to assist can be for hearing-related reasons, or aging related reasons, or both, and this needed to be explored. For this reason, the term caregiver was only used to describe results, if a formally employed caregiver ever assisted a participant.

As access to healthcare services is shaped by the needs of the patient, and appropriate physical access to their desired service, it is expected that the elderly population in South Africa may face additional challenges in accessing their desired specialized service (Kelly et al., 2019, Wilkowska et al., 2021). The elderly population in South Africa, may have reduced completion and participation in activities of daily life, as compared to the youth, and hence faced specific difficulties with access to healthcare service (de Andrade & Landman, 2022). This population was also likely to be residing in residential care facilities that cater to the needs of the elderly, including elderly adults with deafness (de Andrade & Landman, 2022). This included access to transport to travel to public hospitals and clinics, pension funding priorities, long waiting periods, and a lack of health provider expertise and experience on the intervention/management of chronic illness and geriatric conditions as the population ages (Kelly et al., 2019). This resulted in additional physical demands imposed on the elderly in the South African public healthcare setting, which is not only tiring, but uncomfortable and sometimes painful (Kelly et al., 2019).

The South African Social Security Agency (SASSA) provides social grants to South African citizens that require financial and social assistance for basic living expenses, healthcare and security (SASSA, 2022). SASSA's mandate states, as per the South African Social Security Agency Act (2004) and the Social Assistance Act (2004), that their goal is to "ensure the provision of comprehensive social security services against vulnerability and poverty within the constitutional and legislative framework" and "make provision for the effective management, administration and payment of social assistance and service" through these acts.

Within the SASSA grant categories, financial grants for the aging population are provided under the category of an "older person's grant" (SASSA, 2022). In order to qualify for this pension, the aging recipient must be over age 60 years, a South African citizen, not under another grant such as disability grant, must not be cared for in a state institution, and must currently reside in South Africa (SASSA, 2022). The aging SASSA grant recipient will receive monthly deposits of a fixed amount, to spend on basic living expenses as needed (SASSA, 2022).

Many elderly South African citizens currently rely on, or previously relied on, this limited financial support to sustain themselves for all of their needs, and need to budget accordingly (Nevondwe, 2010). Depending on the priorities and needs of the elderly pension grant recipient, funds could be personally allocated to where it is needed most. This impacted access to healthcare, as funds needed to access healthcare services will come from the SASSA grant (Nevondwe, 2010). In terms of access to healthcare services, funds may be personally allocated to transport to the healthcare provider, medications, sensory aid costs (such as hearing aid batteries and glasses), costs to open hospital files, and repair costs of damaged mobility or sensory aids. The South African retirement industry does not appropriately account for geriatric chronic health needs (Nevondwe, 2010). The study by Nevondwe (2010), found that the retirement funding from SASSA is unsatisfactory for the needs of the elderly. It was found that many people in the aging population making use of pension grants find it extremely necessary to use their financial savings to ensure that medical costs are covered, and covered as best as possible, which may leave little funds to allocate elsewhere (Nevondwe, 2010). Additionally, different medical costs are priced differently, including transport costs to the healthcare provider (Nevondwe, 2010).

A South African based study by Hasumi and Jacobsen (2014), reported a decline in use of assistive devices and chronic illness medication, long waiting periods, unavailable medications and unfriendly staff amongst the South African population in the public healthcare system, resulted in delayed healthcare seeking behaviour. This showed the need for an increase the acceptability of healthcare services in South Africa, especially for the geriatric population (Hasumi & Jacobsen, 2014). Kelly et al. (2019) found that patient-centred care is essential for the elderly population – and this is drastically impacted by poor communication between the healthcare service provider and the elderly patient, and can result in needs of the patient not being met. Furthermore, it was found that elderly patients did not feel educated on their diagnoses, and did not understand the medication instructions communicated, or their potential side effects (Kelly et al., 2019).

In addition to more visible conditions that come with aging, such as mobility limitations and assistive breathing apparatuses, presbycusis is an audiological condition that is directly related to aging and is not visible unless visible hearing aids are used (Govender & de Jongh, 2021). Presbycusis is defined as age related decline in hearing function (Govender & de Jongh, 2021). While age related deafness is not the only cause of decline in hearing function, it is a common diagnosis within the aging population. Age related deafness is known to impact the quality of life of the elderly population (Govender & de Jongh, 2021), however limited research within the South African context related to how adults with deafness, who were also aging, experience their access to healthcare services. therefore, this study aimed to investigate access to healthcare and deafness in the adult, and thus the aging population, in South Africa.

2.7 Impact of deafness on access to healthcare services in South Africa

Experiences accessing healthcare with deafness is unique to each person, and thus experiences may differ (Duncan & O'Neill, 2022). As not all individuals view their hearing function as a

disability, it can still impact how they access and experience healthcare services. In recent years, developments have been made to assist those with body function differences in their healthcare journeys, but this is not always related to hearing, such as specialist healthcare (Robles-Bykbaev et al., 2019). Access to information, hearing and listening to, and understanding, is essential to successful access and utilisation of healthcare services. deafness impacts communication (Duncan & O'Neill, 2022)..

A study by Oyewumi and Adigun (2013) found that specifically females with deafness who accessed reproductive healthcare services, displayed better attitudes towards sexual and reproductive health. As access for those with deafness was limited, poorer attitudes were documented (Oyewumi & Adigun, 2013). It was further discovered that lack of accommodations made by healthcare providers for those with deafness resulted in barriers of accessibility and acceptability. This study emphasised how implementing communication methods that can be accessed by the population with deafness, and thereby removing communication barriers, reproductive health plans will be followed (Oyewumi & Adigun, 2013).

It is essential to note that communication barriers are not one sided. Stevens et al. (2019) found that telephone use also contributed to communication breakdowns in the healthcare setting, as conversation with one person with deafness impacted the transfer and reception of information (Stevens et al., 2019). Communication barriers were also experienced by the healthcare provider, and can be experienced at any point of the healthcare journey with their support staff, patients and patient families, or carers. A Nigerian based study discovered that additional support for both the healthcare provider and user was needed (Arulogun et al., 2013). It was discovered that patients with deafness felt excluded from the consultation, even if it was for them (Arulogun et al., 2013). This is commonly experienced when communication

regarding healthcare in the consultation is limited to spoken and written language, and was also experienced by participants in a Ghanian based study (Senayah et al., 2019). The study completed in Ghana highlighted that persons with deafness did not find difficulty physically accessing their healthcare services, but did experienced communication barriers which made their access to healthcare experience challenging (Senayah et al., 2019). It is known that not all patients with deafness use spoken or written language, but rather graphics or sign language (Naseribooriabadi et al.,2017). Additionally, patients with deafness also felt that their confidentiality is broken when an interpreter is used for such intimate and personal consults regarding their reproductive health (Arulogun, et al., 2013). Despite how the person with deafness identified with their hearing function or with the Deaf community, these barriers were still faced (Arulogun, et al., 2013).

A recent South African based study by Masuku et al. (2021) explored the communication experiences of women with deafness when accessing public healthcare services in hospitals in Johannesburg. The study found that South African, adult, females with deafness feel excluded and experience access barriers when accessing healthcare services, with the primary barrier being communication with healthcare providers due to deafness (Masuku et al., 2021). This study showed that the adult females with deafness experience alienation, exclusion, discrimination, marginalisation, feelings of invisibility, reduced independence and autonomy of when accessing healthcare services (Masuku et al., 2021). This was due to communication barriers between the patient with deafness and the healthcare provider, resulting in compromised quality of healthcare, autonomy, and confidentiality (Masuku et al., 2021). It was shown that adult females with deafness felt that the negative attitudes of healthcare professionals are not accommodating, or accepting, of their needs (Masuku et al., 2021). Similar results were found in a study completed in Kenya by Mweri (2018), who found that the lack of Kenyan Sign Language (KSL) use resulted in broken patient confidentiality in

the healthcare context. Kritzinger et al. (2014) found that in South Africa, communication barriers and broken confidentiality in the healthcare context results in poor interactions in the healthcare consultation. Furthermore, when communication barriers exists between the healthcare practitioner and the patient with deafness, feels of confusions, agreeance, reduced independent decision making, lack of questioning in the consultation, overprotection's of healthcare needs, can be experienced (Kritzinger et al., 2014).

This relates to the Theory of Accessibility (Penchansky & Thomas, 1981), as it speaks directly to two dimensions of the theory, namely accommodation and acceptance in access to healthcare services. Although, Masuku et al. (2021) did not use this theory, but found correlating results. Masuku et al. (2021), highlighted the dire need for more research in the area of access to healthcare for female adults with deafness, in the public healthcare sector. They emphasised how more research is required, in order to collect and enhance evidence-based clinical care, especially for individuals with invisible disabilities, such as deafness (Masuku et al., 2021). Acknowledgement of this study is essential for framing the context of this current study, as it gave a deeper understanding of the emotions felt by adult females with deafness, in South Africa. However, this study aimed to address the access to healthcare experience for adults with deafness, of any gender, in South Africa.

Cross-linguistic aspects of communication in healthcare is a challenge, especially in South Africa. Cross-linguistics refers to the relations between different languages, dialects and modes of communication within a single individual. This often presents as an individual speaking one language while having leverage or attempting to understand and communicate with another (Middleton, et al, 2020). An example of this would be a person using Afrikaans as their first language, while communicating in English. Hearing difficulties add an additional cross-linguistic challenge, whereby degraded auditory signals have to be made sense of, to

communicate effectively. This could complicate the healthcare practitioner and patient communication, which can result in communication breakdown (Middleton et al., 2020). For example, a patient with moderate deafness, acquired in adulthood, who speaks Afrikaans as a first language, is now required to communicate with an isiZulu speaking healthcare practitioner, while combating degraded auditory signals, and keep up with the consultation. There can be serious repercussions when a patient with deafness is unable to understand their own healthcare consultations, as a result of poor health literacy available for this population (Naseribooriabadi et al.,2017).

The Health Professions Council of South Africa (HPCSA) provided guidelines regarding cross-linguistic healthcare practices. The practice guidelines published in 2019 by the HPCSA state speech-language therapists and audiologists in South Africa need to be knowledgeable, respectful and accommodating of culturally and linguistically diverse families and communities (Health Professions Councils of South Africa, 2011). Practice guidelines also stated that communication specialists, including audiologists, need to be responsive to cultural and linguistic background, while also providing evidence based care, to all consumers of their services (Health Professions Councils of South Africa, 2011). The Department of Health of South Africa (2011) described the duties of the speech-language therapist and audiologist to provide their services to all linguistic backgrounds. This did not mean that this comes without challenge, as not every communication specialist speaks all twelve official languages, including South African Sign Language (SASL) – which may further enhance communication barriers between healthcare practitioner and patient with deafness (Naseribooriabadi et al.,2017)..

Considerations for the patient is required, as deafness is likely to influence linguistics, which is why cross-linguistics must be remembered at all times during the consult (Health

Professions Councils of South Africa, 2011). Considerations should include resources, instruction and results in their language choice (Health Professions Councils of South Africa, 2011). The audiologist must remember core values of the social model in all their service provision to guide their practice and ensure that their work environment does not add any challenges to the consultation (Health Professions Councils of South Africa, 2011). This included linguistic differences on top of expected deafness. In order for the audiologist to fulfil their duties as a healthcare provider in South Africa, a conscious effort must be made to alleviate any difficulties the patient may have when attempting to control their own language, the language of the consult and their degree of deafness (Health Professions Councils of South Africa, 2011).

2.8 Access to healthcare for the population with deafness in South Africa during the COVID-19 pandemic

The COVID-19 pandemic changed the way humans interact and communicate with each other (Mckee, Moran & Zazove, 2020). The flow of communication was interrupted both in and out of the healthcare environment. The introduction of compulsory personal protective equipment (PPE), social distancing, and encouragement to avoid personal contact and opt for telecommunication instead, impacted the lives of many including the population with deafness (Mckee, Moran & Zazove, 2020). Adults with deafness therefore had to adjust to changes in communication methods, which were already impacted by deafness. Mckee, Moran and Zazove (2020) found that adults with deafness already struggled with effective communication in the healthcare environment prior to the COVID-19 pandemic. Specific challenges faced by adults with deafness during their access to healthcare journey during the COVID-19 pandemic included mandated PPE use in healthcare consultations, elimination of family members who would regularly assist with hearing and listening needs due to restricted amounts of people

allowed in hospitals, and drawn out access to healthcare due to aging (Mckee, Moran & Zazove, 2020). In addition to the introduction of PPE, compliance with wearing PPE was essential in South Africa in order to access desired healthcare services, or otherwise be denied access (McQuoid-Mason, 2020).

Disruptions to healthcare service delivery were experienced globally during the COVID-19 pandemic (Schwartz et al., 2021). Disruptions and adaptions formulated to accommodate these disruptions to service delivery were necessary – but did not necessarily appropriately accommodate those with disabilities even for those in well developed regions such as the United States of America (Schwartz et al., 2021).. Mckee, Moran, and Zazove (2020) found that in the United States of America, a well-developed country, adaptations to the communication needs of adults with deafness could be accommodated in the following ways: the use of clear face-masks, remote interpreters via video call, talk-to-text apps, telehealth consultations, written and visual imagery in the form of signage, and use of alternative and augmentative communication boards (such as i-Pad use). Considering the well-developed nature of the United States of America and the technological advances made for that population, the South African population was unable to make these same adjustments in all sectors of healthcare. Although telehealthcare was an option for some patients, via telephonic consult, online video consultation, or app use (David et al., 2020).

Since the onset of the COVID-19 pandemic, changes in healthcare system protocols have occurred in Sub-Saharan Africa. Healthcare service delivery protocols have been adapted globally to reduce infection rates, limit in-person contact and transform service delivery to combat increasing hospital admission rates while still providing the highest quality of care for all medical reasons (Alegbeleye & Mohammed, 2020). Individuals seeking healthcare services, both with and without the COVID-19 pandemic, have been expected to quickly adapt to these

changes worldwide (McKinney et al., 2020). In South Africa, changes to the healthcare system included delay in elective surgeries, medical professionals forced to make tough choices on who to treat first in crisis, closure of some departments in hospitals to redirect efforts to where it is needed, and switching to telehealth for all who have the resources available (McKinney et al., 2020).

As described in Chapter 3: *Theoretical and Conceptual Frameworks*, the inclusion of technology in the life of an individual impacts everyday lived experiences. Technology is one such aspect that has been included as an overall sub-category when describing the different elements which influence lifestyles choices and experiences (Myers, 2009). Telehealthcare is defined as the use of information, technology and telecommunication in healthcare service delivery, whereby the patient and practitioner are separated by distance and time but are still able to interact (Totten et al., 2016). The rise of virtual care was used as a direct response to the pandemic in the United Kingdom, hearing health included (Maru et al., 2021). The COVID-19 pandemic has shown the world how important communication is, and the potential isolation that can be caused by lack of communication (Maru et al., 2021). Isolation, while already exacerbated by physical quarantining and movement restrictions, is experienced on an even greater scale for deaf individuals (Maru et al., 2021).

Internationally, public health and safety recommendations expect people to wear masks to reduce spread of COVID-19, including deaf individuals (Maru et al., 2021). Many persons with deafness have expressed the following difficulties associated with face-mask wearing in general: muffled speech, blocked lip reading, covered facial cues, continuous requests for repetition, social isolation, and damage to hearing aids by mask strings (Maru et al., 2021). A recent study by de Andrade and Landman (2022) highlighted that communication for adults with deafness became challenging during the COVID-19 pandemic, due to the use of face-

masks and social distancing. It was found that the healthcare and additional hearing needs of elderly adults with deafness, who reside in care facilities, were not met during this time due to limited access to healthcare services and audiological services (de Andrade & Landman, 2022). Additionally, elderly adults living in residential care facilities were reticent to go to hospitals due to the of risk possibly contracting COVID-19 (de Andrade & Landman, 2022).

Maru et al. (2021) explain that patients with deafness in the United Kingdom, another well-developed country, had been experiencing many barriers when accessing healthcare services since the start of the COVID-19 pandemic. It was further reported that both patients with deafness, and healthcare practitioners, have identified the lack of accommodations that have been made for the population with deafness (Maru et al., 2021). Difficulties in accessing face-to-face healthcare were described as missed appointments due to not being able to hear their names called through a mask in waiting rooms and unclear communication of diagnoses through masks (Maru et al., 2021). Telehealthcare also resulted in access difficulties for deaf individuals such as: difficulty booking appointments over the telephone, difficulty organising and reluctancy to use technology for remote consults, difficulty hearing through a microphone on a telephone, tablet or computer, obscured facial cues and blurry lip reading (Maru et al., 2021).

South Africa, like the rest of the world, had been expected to alter their healthcare systems to accommodate restrictions from the pandemic in order to reduce spread of infection (David et al., 2020). While telehealthcare was a viable option of healthcare service delivery in developed countries, African nations were unable to easily make the switch to virtual healthcare. David et al. (2020) conducted a study which found that many challenges were faced by African countries when attempting to use telehealth. Challenges faced by patients in the study included poor internet connection, lack of education and promotion about telemedicine

and unstable electrical supply to countries such as South Africa (also known as load shedding) (David et al., 2020). Additionally, in South Africa specifically, telehealthcare is not always available in rural areas where public healthcare facilities are based (David et al., 2020). When considering how difficult it can be to make the switch to virtual health in South Africa, specific emphasis was highlighted by McKinney et al. (2020). McKinney et al. (2020) highlighted that individuals with disabilities were not able to access remote healthcare services, and experiences specific difficulties when accessing emergency departments during the peak of the pandemic. It was further highlighted that even those without disabilities had great difficulty accessing the healthcare they needed (McKinney et al., 2020).

The challenge for the South African population with deafness was the combination of changes in healthcare service delivery in general from face-to-face to virtual, mask wearing communication barriers and greater social isolation to follow restrictions to stay in lockdown levels as stipulated by the South African government (McKinney et al., 2020). It is known that deafness isn't always accommodated in healthcare in general, and already experienced social isolation can become exacerbated in nationwide lockdown conditions, including lockdown in South Africa (David et al., 2020). It is the duty of the healthcare provider to ease the environmental challenges the deaf individual may experience when using telehealth if accessible by both the patient with deafness and practitioner. This directly correlated with the social model, as deafness is not the problem but rather the COVID-19 pandemic and the response to adapt in the healthcare system. David et al. (2020) formulated clear and helpful communication tips for the healthcare practitioner for before, during and after the consultation, which included limiting background noise, facing the camera and zooming in, confirmation of audibility, use of text features on online video platforms, simple language use, monitoring rate of speech, constant clarification with the patient to check understanding and encouraging note taking. While the height of the COVID-19 pandemic has since passed since the execution of

this current study, the elements of clinical practice described by David et al. (2020) are still applicable when communicating with adults with deafness in the healthcare setting.

In order to complete this study at the time of data collection, restrictions during the COVID-19 pandemic needed to be considered. Access to healthcare has drastically changed globally, for adults with optimal hearing and deafness (David et al., 2020). To accurately document the access to healthcare experiences of the adult population with deafness, the COVID-19 pandemic was important to explore as experiences with mask wearing and telehealth can provide deep insight into communication during the pandemic in the healthcare setting and online (David et al., 2020). As this study aimed to explore all experiences at any timeframe, the COVID-19 pandemic was therefore included. Hence, to truly discover how adults with deafness function and navigate their healthcare consultations in South Africa, the intersections between culture, language and access to healthcare in general needed to be understood. The primary goal of this study was to explore the lived experiences of adults with deafness when accessing healthcare services in Johannesburg, South Africa. The goal was to add to these studies that explore primarily barriers that those with deafness experience when attempting to access healthcare services.

Chapter 3: Theoretical and Conceptual Frameworks

This chapter, *Theoretical and Conceptual Frameworks*, describes one conceptual framework and two theories, which ground this research study, namely the Biopsychosocialtech model, the International Classification of Functioning (ICF), and the Theory of Accessibility by Penchansky and Thomas (1981), respectively. The use of theory in a new study, in relation to existing literature, allows for the well-rounded nature of qualitative research to be displayed.

The theoretical framework of a research study describes the theory of which a research project is supported (Anfara Jr & Mertz, 2014). The theoretical framework aims to guide the research process by providing a basis to refer back to, to keep the study focussed. Within qualitative research, the theoretical framework is often expressed through models that have been developed, proven and adaptable to different research topics (Anfara Jr & Mertz, 2014). Qualitative research often aims to describe lived human experiences. In order to explain these subjective life experiences, and trends across different groups of people, a Biopsychosocialtech model can be used. For this study, a Biopsychosocialtech framework was a useful tool when guiding this research process. The Biopsychosocialtech model is defined broadly as an interdisciplinary model that addresses the connection between the biology, psychology, socio-environmental factors, and technology (Bolton & Gillett, 2019).

While the Biopsychosocialtech model is not new to the healthcare research world, it is still useful. Using the Biopsychosocialtech model, a deeper insight into lived experiences with regards to access to healthcare with body functioning differences can be addressed. Additionally, the interconnected features of the model enhanced the notion that psychological, biological and socio-environmental influencers cannot be isolated (Bolton & Gillett, 2019). Recent developments in the Biopsychosocialtech model now include an ethnic domain. As ethnicity refers to the state of belonging to a culture, racial group or nationality, it is essential

to include how ethnicity impacts overall health (Myers, 2009). This model may be described under the general social model, as it elaborates on the different social elements in an individual's life which may impact overall healthcare decision-making, healthcare seeking behaviour, and healthcare literacy (Myers, 2009). Additionally, with technology constantly changing and evolving over time, it is important to consider how access to technology impacts those in South Africa and those with deafness. The specifics of the Biopsychosocialtech model, with technological considerations, are detailed in Table 3 below (Bolton & Gillett, 2019):

Table 3: The Biopsychosocialtech model:

Overall health	Biological components	1. Age 2. Race 3. Gender 4. Physical health 5. Genetics
	Psychological components	1. Learning 2. Memory 3. Mental health 4. Coping mechanisms 5. Emotions and beliefs
	Socio-environmental components	1. Peer relationships 2. Family circumstances 3. Social support 4. Activities of daily living 5. Economic stability
	Ethnic components	1. Race 2. Cultural traditions 3. Religion 4. Sense of belonging 5. Stigma 6. Communal support
	Technological components	1. Wifi and internet access 2. Cell phone and telephone access 3. Cultural views on using technology 4. Financial implications 5. Online booking and payment systems 6. Age

While the sub-categories of the Biopsychosocialtech model have been described in Table 3, the constantly changing and evolving nature of the world requires changes to be made to this model over time. The COVID-19 pandemic has moved current lifestyles to an online realm. The new millennia has propelled the fourth industrial revolution into the forefront of the working, leisure and healthcare world. Telehealth is one example of how the medium of service delivery has been adapted. This influences the above-mentioned components of the biopsychosocial model, as overall health can now be addressed online. Thus, healthcare is accessible to the population virtually. Despite this, not all individuals including the population with deafness, have had easy and meaningful experiences accessing healthcare online (David et al., 2020). The COVID-19 pandemic had impacted the population with deafness by encouraging telehealth when it was not always functional. A knock-on effect can be experienced when the technological components of an individual with deafness's life is greatly required to completed daily tasks during the pandemic. It is possible that the rest of the biopsychosocial components of their life could be impacted too (Bolton & Gillett, 2019). While this is not unique to the population with deafness, overall health had been impacted by the COVID-19 pandemic whether or not a positive diagnosis of the disease was confirmed (David et al., 2020).

To more effectively understand disability from the perspective of the individual with body function differences, the affirmation model was developed (Swain & French, 2000). The affirmation model adopts a non-tragic view of disability, which strives to promote disability pride, positive social identities, both individually and in social contexts. Through positive vocabulary use and encouragement of non-tragedy attitudes of healthcare professionals, this model could be more widely used and taught (McIlroy & Storbeck, 2011). Directly linking to the social model of disability, the affirmation model is often used in direct contrast with other models of disability that highlight body function differences as a misfortune, specifically the

personal tragedy model (Swain & French, 2000). McIlroy and Storbeck (2022) explored the societal viewpoints of the needs of “deaf” versus “Deaf” in South Africa. For persons with deafness to receive their equal and deserved place in society, it has been shown that societal viewpoints of “deaf” versus “Deaf” needs to be more fluid and should begin to move away from a binary viewpoint of accepting and rejecting deafness on a social and emotional level (McIlroy & Storbeck, 2011). Research in South Africa has shown that assuming an individual with deafness needs to either proudly accept and identify with their hearing function, or resent their hearing function and view it as a tragedy, is too limiting when describing attitudes towards disability (McIlroy & Storbeck, 2011). Exploration into how healthcare professionals can better adapt their vocabulary is needed. Through non-tragic use of vocabulary, such as use of the terms ‘impairment’, healthcare professionals across all disciplines are encouraged to avoid categorising patients with deafness into “deaf” or “Deaf” groups, so that their access to healthcare is the same as their non-deaf peers (Swain & French, 2000).

In addition to the biopsychosocial model, the affirmation model, and the medical versus social models and example of the Biopsychosocialtech model, the International Classification of Functioning (ICF) can also be applied to this study. The medical versus social model aims to define opposing viewpoints on disability (Kazou, 2017). However, this model is limiting when attempting to explore lived human experiences based on impairment, and thus the ICF is a framework that encourages experience of individual people be addressed (Mitra & Shakespeare, 2019). For this study, it is essential that all aspects of the health condition were explored. The ICF is described in Figure 1 below:

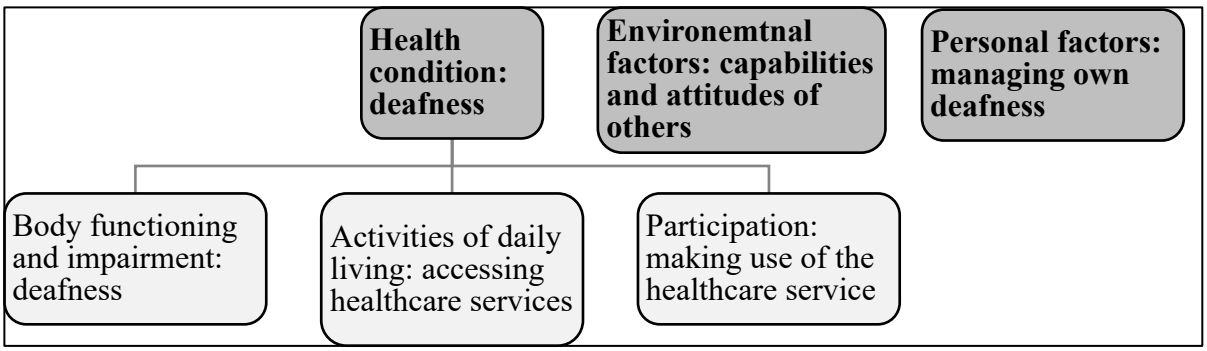


Figure 1: Breakdown of the International Classification of Functioning (ICF) (Mitra & Shakespeare, 2019)

Using the ICF described above in Figure 1, the term "impairment" is necessary to elaborate on. When discussing hearing impairments, the term "impairment" would historically align itself with the medical model. However, as per the definitions stated under Chapter 2, the term 'deaf' was chosen as it includes the whole spectrum of severities of hearing impairment, and does not exclude those that only acquired changes in hearing function in adulthood or those that were born with it. For this study, the social model was considered in order to explore lived experiences of participants, in their own lives and how their external environments or personal views of impairment guide their access to healthcare.

Penchansky and Thomas (1981) state that access to healthcare can be viewed from two distinctive positions. The first viewpoint addresses the actual use of and entry to the healthcare system, while the second viewpoint speaks to the factors that influence use and entry to the healthcare system. Thus, the specific dimensions formulated to appropriately define access to healthcare are availability, accessibility, accommodation, affordability, and acceptability (Penchansky & Thomas, 1981). In order to fully understand access to healthcare, these dimensions need to be explored, reasons for which are provided in the literature review. The five proposed concepts of access to healthcare have been explored in Table 4 below (Saurman, 2016):

Table 4: Theory of Accessibility by Penchansky and Thomas (1981),

Dimension	Definition
Availability	The supply and demand of a specific healthcare service desired. This includes how readily available a desired healthcare service is to those that require it. For example, a rural location may only have one audiologist with sufficient resources to service multiple large communities.
Accessibility	The location of the healthcare service. This includes the physical location of the healthcare service, in terms of reasonable proximity to the user, realistic travel time and appropriate safety provisions. For example, the healthcare service provided should be in an area where different populations may access.
Accommodation	The organization and functioning of the healthcare service practice. This includes the environmental adaptations required for all people to access the desired healthcare service. For example, a high-rise building would require elevators and ramps for those with mobility aids, as well as reasonable operating hours.
Affordability	The financial costs involved in the desired healthcare service. This includes careful consideration of the manpower and energy that the service provider can provide in relation to finances, as well as what the consumer can afford. For example, the cost of a hearing test would include the tests required and attention to what the patient can afford for the session.
Acceptability	The expectations and perceptions of the consumer of the specific healthcare service desired. This includes the attitudes of the healthcare service provider and the recipient of said service. For example, no discrimination towards a patient can be experienced no matter the culture, religion, disability, gender, or sexuality.

These dimensions described in Table 4 highlighted the possible barriers to accessing healthcare services an individual with any disability may experience (Meade et al., 2015). Thus, when any one of these factors were not fully met, access for those with disabilities became increasingly difficult. However, this can also be addressed from the opposite viewpoint. Table 4 displays that when all, or majority, of these dimensions have been adequately met, then the healthcare experience can be favourable (Allen et al., 2017). Using the Theory of Accessibility (1981), Biopsychosocialtech model, and the ICF, with specific emphasis on the social model, this study aimed to explore the lived experiences of adults with deafness when accessing healthcare.

Integration of the different dimensions of the Theory of Accessibility (1981) allowed the researcher of this current study to systematically break down the different elements of access to healthcare. Relating the Theory of Accessibility (1981) to the Biopsychosocialtech model allowed the researcher to understand the different interacting elements of an individual's life which may impact healthcare seeking behaviours. The use of the ICF encouraged the researcher to contextualise the study by aligning with the social model and highlighting how the surrounding environment is the disabling element in access to healthcare – rather than the body function of the target population. This study used these frameworks to discuss how symptoms of deafness affects how adults experience healthcare access, by discussing their experiences under the dimensions from the Theory of Accessibility (1981), while also highlighting activity completion and participation in their healthcare consultations.

Chapter 4: Methodology

This chapter, *Methodology*, outlines the qualitative research approach that was used to conduct this study, and the application thereof to the respective research question and aims. The research design, description of research site, sampling methods, and choice of thematic analysis has been described within this chapter. Ethical considerations, and trustworthiness of this current study have also been discussed.

4.1 Research question

What are the lived experiences of adults with deafness when accessing healthcare services in Johannesburg, South Africa?

4.2 Aims

4.2.1 Primary aim

To explore the lived experiences of adults with deafness when accessing healthcare services in Johannesburg, South Africa.

4.2.2 Sub-aims

1. To describe facilitators for adults with deafness which positively impact their experience when accessing healthcare services.
2. To describe inhibitors for adults with deafness which negatively impact their experience when accessing healthcare services.
3. To investigate the reported changes in healthcare access experienced by adults with deafness since the start of the COVID-19 pandemic.
4. To explore the ways in which the Theory of Accessibility (1981) relates to adults with deafness in Johannesburg, South Africa.

4.3 Research design

The research design for this study utilized an exploratory design. An exploratory research design aims to integrate qualitative methods and analyses, in order to explore the research question (Siedhoff, 2019). This research design best suits studies that do not have clearly defined frameworks or existing data, but rather open-ended possibilities and goals to understand specific phenomena in order to answer the research question and generalize responses (Siedhoff, 2019). This study was exploratory in nature, as in order to explore the lived experiences of adults with deafness, acknowledgement of open-ended responses, and deep interpretation of verbal responses from participants, was necessary. Exploratory research designs accommodate multi-method approaches and support descriptive and thematic analysis methods. Additionally, the exploratory design approach supports data collection and analysis that may be analyzed qualitatively but may require quantitative percentage reporting (Creswell & Clark, 2007).

Responses were reported if fifty percent or more of the participants expressed similar experiences – to encourage generalisation of responses. This study was also cross-sectional in nature, as all data collected were representative of the deaf adult population at one point in time, in South Africa rather than over an extended period of time (Setia, 2016). Qualitative research intends to identify and examine subjective human experience, and develop conclusions based on recorded data (Gentles et al., 2015). For this study, a qualitative approach was used primarily, with descriptive quantitative statistics to evaluate any numerical data. This study made use of interviews with participants that met the inclusion criteria of the study. Interview methodology was selected, as lived experiences from participants could be explained freely, without the need for written responses which may have limited response length and

detail. The qualitative nature of this study highlighted the emotional aspects felt by participants, that may have not been highlighted in written responses.

4.4 Description of research site

One tertiary public healthcare facility that provides audiological services to adults in Gauteng, South Africa, was chosen to be the research site. The chosen research site provides services to the mid to low-income sector of the population, in Johannesburg, South Africa (Gauteng Province Department of Health, 2018). This site is an academic hospital, and has both in and outpatient units, intensive care units (ICU) and allied healthcare departments (Gauteng Province Department of Health, 2018), and student clinicians as they receive their clinical training. This hospital provides healthcare services to the adult population. The medical services that this hospital provides include specialist surgical intervention, acute and chronic trauma, wound care, dedicated infectious disease treatment for tuberculosis and HIV, and allied health services (Gauteng Province Department of Health, 2018). For the purpose of maintaining participant confidentiality and anonymity, and compliance with POPIA regulations, the name of the research site has been anonymized. To receive healthcare services from this research site, patients are required to reside within the designated catchment areas that directly feed to this specific hospital. In addition to previous research experience, this research site was reflective of the adult population in Johannesburg and caters to a large catchment area and was thus chosen for this study.

For this current study, the chosen research site is a tertiary level hospital that services specific regions within Johannesburg, South Africa. Specific regions for this catchment include region B of the Johannesburg Municipality, and also extends to some parts of region C and D. The catchment areas are able to therefore include service provision to foreign patients, and patients from other South African provinces. Regions B, C and D form the large catchment

area for suburbs extending from Auckland Park to the west of Johannesburg, and some parts of Johannesburg southern regions (City of Johannesburg, 2018). In addition to the large geographical range, region B also possesses significant cultural history. Region B of the Johannesburg Municipality, during the Apartheid era, was home to a racial and cultural mix of South African citizens (Shiba, 2021). This is significant to this current study, as the historical relevance of the experiences of residences in region B, cannot be ignored (Shiba, 2021). This catchment area is geographically large, which is reflective of the adult population in that area (South African Doctors, 2021).

In relation to this current study, exploration into the access to healthcare experiences of adults with deafness in the public sector was explored because majority of the South African population accesses healthcare through the public healthcare system (Ngobeni et al., 2020). Additionally, to obtain a comprehensive understanding of a broad range of access to healthcare experience from a wide range of medical and allied specialties, exploring lived experiences in the tertiary institution setting was chosen. Access to healthcare for adults with deafness may have been experienced within multiple departments, with multiple healthcare practitioners across a wide range of specialties, which can be explored in a tertiary level hospital. Tertiary level institutions may also provide academic and clinical training to future healthcare practitioners, and also accommodates research studies within their setting (Kwazulu-Natal Department of Health, 2021).

Public healthcare was chosen, over private healthcare as most of the South African population accesses public healthcare, making this research study more applicable to the healthcare access context for majority of South Africans (Ngobeni et al., 2020). All participants participated in the study at the research site, and all chose to remain within the hospital for their interviews, rather than selecting an off-site interview location. Additionally, this site was

chosen, as the researcher has previous working experience at this facility, has conducted research at this site in the past, and was therefore familiar with the research procedure for this context.

4.5 Sampling

The sample size included thirteen adults with deafness, who met the inclusion criteria. Sampling of participants directly links to the research design chosen for a study (Miles et al., 2014). For this study, a two stage sampling technique, namely non-probability purposive and convenience sampling, was employed. Non-probability sampling allowed for selection of a sample based on a predetermined set of criteria.

Non-probability sampling allows the researcher to select a sample, rather than a random sample selection (Ray, 2012). Within non-probability sampling, purposive sampling is a subjective sampling method that relies on the researcher's judgement when selecting the criteria for the sample (Ray, 2012). Purposive sampling is a favorable technique in qualitative research, because it allows for identification and selection of a target sample that may yield rich information when resources may be limited (Etikan et al., 2016). Purposive sampling was chosen in addition to convenience sampling, as the sample for this study is not necessarily easily accessible by all researchers in different fields of study. Purposive sampling allowed the researcher to carefully select which participants match the inclusion criteria best. Participants for this study were selected through non-random and purposeful means. This was done using the sample selection criteria chosen by the researcher, in order to address the research question. Participants were recruited using direct communication to a public healthcare facility, through the resident audiologists. The sample chosen aimed to gather information from between 10-20 individuals who met the selection criteria. 10 to 20 participants were chosen, as the ideal sample

size for interview methodology is between 5 to 50 participants, but to achieve saturation at least 10 participants were needed (Dworkin, 2012). This study included 13 participants.

Convenience sampling is characterized as a sampling strategy which includes a population that is easily accessible to the researcher (Etikan et al., 2016). This type of sampling is useful in healthcare research, as often the researchers are healthcare professionals themselves and have the advantage of accessing participants within the field. This means participants sampled are representative of the ideal participant in the study, that the researcher can directly include because it is convenient for them to access at the time of the study (Etikan et al.,2016).

For this study, the target sample was adults with deafness. This study chose to specifically explore lived experiences of adults with deafness, in the specific location of Johannesburg, South Africa that access public healthcare services. Employing purposive sampling confirmed that participants for this study were accessible by meeting the detailed inclusion criteria. Convenience sampling ensured the researcher was able to access prospective participants at the research site specifically, within the Speech Therapy and Audiology Department – as linked to research question and physical access to prospective participants. This made the sample not only convenient to the researcher to access, but also purposely chosen to answer the research question. The following inclusion criteria was devised to define the sample group:

4.5.1 Inclusion criteria

All participants were required to meet the inclusion criteria in order to participate in the study, as mentioned in Table 5 below:

Table 5: Inclusion criteria for this study

Inclusion Criteria	**Rationale**
All participants were required to have any degree of deafness in one or both ears and aided/unaided, diagnosed between birth and time of the study, determined by an audiologist at the research site (public healthcare). However, if a participant was to attend an appointment for the first time at the research site, they were also given the option to participate after their appointment.	The study aimed to evaluate the lived experiences when accessing healthcare services for those with deafness confirmed by an audiologist. The study was not aiming to compare experiences between different degrees of deafness.
All participants were required to have already accessed or are currently accessing healthcare services.	The study aimed to explore the impact deafness may have when accessing healthcare services.
All participants were required to be an adult over the age of 18 to consent to participating in the study, as the subject matter was mature and required independence to answer. Participants with formally employed caregivers (such as nurses for the elderly) or family members/friends as caregivers could still participate in the study.	All participants were to be of legal consenting age to make their own healthcare decisions, without the assistance of a parent or guardian. Caregivers were allowed to be present if required but were not to participate on behalf of the participant.
All participants could be from or identify with any gender, sexual orientation, culture, or race group.	Gender, sexual orientation, culture, and race identity all influence healthcare seeking decisions and experiences.

The following exclusion criteria was devised to further define the sample group:

4.5.2 Exclusion criteria

Participants who meet the exclusion criteria were not able to partake in the study, as mentioned in Table 6 below:

Table 6: Exclusion criteria for this study

Exclusion Criteria	Rationale
Any participant with an undiagnosed deafness, or subjectively perceived deafness without confirmation. However, if a participant was to attend an appointment for the first time at the research site, they were also given the option to participate after their appointment.	The study aimed to explore the lived experiences of adults when accessing healthcare services with confirmed deafness. However, participants that did not yet have a confirmed diagnosis or intervention plan were still given the option to participate.
Any participant that did not reside in South Africa or sought a South African based healthcare service.	The study aimed to discuss healthcare services in South Africa only, rather than internationally. Participants needed to be able to speak and read English
Any participant with co-morbidities that impact communication other than deafness from an acquired neurological event, such as aphasia or apraxia post stroke. Participants with dental or jaw related healthcare concerns were still able to participate.	The study aimed to explore experiences of adults when accessing healthcare services with confirmed deafness only. Possibilities for future research can include participants with co-morbidities, excluding dental anomalies.

4.5.3 Participant recruitment

Once ethical clearance had been obtained, participants were recruited from one primary source – the Speech Therapy and Audiology Department waiting area, at the research site, on the days of data collection, as per the patients who were booked into the audiology clinic. Permission to conduct research was obtained from the site Chief Executive Officer (CEO), and head of the Speech Therapy and Audiology Department prior to data collection (See Appendices A and B). Participants were approached by the audiologist at the site to avoid coercion prior to introduction to the researcher. The researcher was then introduced to the participant by the audiologist, after the participant indicated to the audiologist at the research site that they were willing to participate. POPIA compliance ensured that patient information was not shared with anyone, other than the researcher. Participant name and date of birth were strictly kept

confidential. Prior to commencing data collection, inclusion criteria stated that participants would have had to have received at least one diagnostic assessment with a confirmed diagnosis. however, after the pilot study was completed, the inclusion criteria were expanded to adults that were accessing audiological services at the chosen research site.

As participants were recruited from the Speech Therapy and Audiology Department, all participants had accessed the audiologist prior to commencement of data collection. Due to the convenient nature of the sampling strategy selected for this sample, it was logical to access adult participants with deafness through the specific department that provides hearing related services, rather than recruiting participants from other departments.

Based on the inclusion and exclusion criteria for this study, a total of thirteen participants were sampled for this study, one of whom participated in the pilot study too. Thirteen interviews fell within the recommended 10-20 interviews recommended for saturation of responses (Dworkin, 2012). Saturation was reached through more than fifty percent of participants reporting similar responses. Table 7 describes the participant demographics which were collected:

Table 7: Participant demographics:

Gender	**Number of Participants**
Male	7
Female	6
Age	**Number of Participants**
50 – 59	2
60 – 69	4
70 – 79	6
80 – 89	1
Race	**Number of Participants**
African	3
White	4
Coloured	4
Indian/Asian	2
Language of Preference	**Number of Participants**
English	13
Other	0
Type of Hearing Aid Intervention	**Number of Participants**
Bilateral behind the ear (BTE) hearing aids (either already aided, or awaiting aids)	8
Unilateral behind the ear (BTE) hearing aid (either already aided, or awaiting aids)	3
Bilateral bone conduction hearing aids (either already aided, or awaiting aids)	1
Unilateral bone conduction hearing aid (either already aided, or awaiting aids)	1
Type of deafness ascribed by the participant	**Number of Participants**
Age-related deafness only	6
Work-related deafness and age-related deafness	2
Work-related deafness, with illness-related deafness (meningitis) and additional age-related deafness	1
Illness-related (unconfirmed – likely CVA) with age-related deafness	1
Childhood deafness	2
Noise-induced with age-related deafness	1
Spouse or Child Present in the Interview	**Number of Participants**
No spouse or child present at all	8
No spouse or child present in the interview room, but waiting outside	3
Spouse present inside the interview room	2
No formally employed caregiver at all	0

The demographic information was collected through verbal communication, documented in writing by the researcher as communicated by the participant – as described in Table 7. Racial terminology has been retrieved by Statistics South Africa Census for the year 2011 (STATSSA, 2011). It is essential to note that race also needs to include cultural and ethnic identities within each racial sub-group. Each participant may identify with their own cultural practices, and ethnic diversity, which in turn influences language expression. This also influences how the participant interacts with those around them (STATSSA, 2011), including the researcher during their interview. The participants from this study form both part of the geriatric population, as well as the adult population, for those younger than 65 years old. No participant requested to be referred to by a specific pseudonym.

4.6 Data collection process and management

Data collection was completed through in-person interviews. The questions asked in the interview encompassed the following: participant hearing history, communication modes and experience of accessing healthcare services (see Appendices C-E). Interviews are often used in qualitative research designs, as it allows for in depth collection and analysis of participants responses, which in turn allows for a deeper understanding of lived experiences (McGrath et al., 2019). Qualitative interviews offer rich and more detailed explanations of participants' subjective and personal experiences, that would otherwise not be fully explained in a questionnaire. Interviews allow for additional aspects of language to be included, such as facial expression and tone of voice, to add meaning to the dialogue collected (Majid et al., 2017).

The procedure required participants who were available and consented to participate in an interview, in person or online depending on the COVID-19 pandemic restrictions. At the time of data collection, COVID-19 pandemic restrictions stipulated that all people were to continue wearing masks within the hospital, continue to adhere to social distancing, and sanitise

hands on entry to the interview room. As of June 2022, wearing of face masks, and social distancing requirements were being re-evaluated and repealed. However, due to the nature of the COVID-19 pandemic, all restrictions on in person gatherings were still adhered to by the researcher and all participants. Face-to-face interviews were therefore prioritised. During the time of data collection, the Speech Therapy and Audiology Department at the research site was fully operational for out-patient services, and thus all interviews were conducted in person. Online interviews were not needed for this reason. All interviews were recorded for transcription purposes, with consent from each participant. Interviews were recorded via audio voice recording, using a portable voice-recording device, which allowed the researcher to speed up and slow down the digital voice recording of the participants.

The interviews consisted of both closed-ended questions and open-ended questions. Closed ended questions include a closed set of predetermined responses that the participant is required to choose the best fitting response for their own experiences (Schoonenboom & Johnson, 2017). Open ended questions require the participant to provide their own answers to predetermined prompts and questions (Schoonenboom & Johnson, 2017). The interview questions were developed by the researcher. Thus, instrumentation was developed to guide the interview, and was derived from a review of the literature in order to meet the aims of this study. This included the interview questions being typed out and provided to each participant prior to commencement of the interviews. The interview aimed to not exceed 30 minutes, however if the interview did run over time, the audiologist at the research site waiting for the participant was given verbal instruction to interrupt the interview.

As the Speech Therapy and Audiology Department at the research site schedules its patient bookings in their out-patient department on a first come first serve basis, participants arrived for their appointments and were given a specific waiting order. In order to ensure that

this order of arrival was respected and maintained, the interview aimed to not exceed 30 minutes so that the participant could re-join the waiting list in their assigned order after their interview. As the target population all have deafness to some degree, the following provisions were made to ensure that communication methods were considered:

1. Identification of communication needs for each participant, via direct verbal communication with participants who attended a face-to-face interview. Should a participant not feel comfortable communicating in writing, they were required to participate in a face-to-face interview, as opposed to online. Literacy challenges may occur for written formats, therefore participants who were fully comfortable to communicate in writing were offered this option. Participants with literacy challenges were not expected to use written communication if they choose not to, however no participant indicated difficulties with literacy and therefore no written communication in the interview was expected. No participant chose online interview options, and all opted for in-person face-to-face interviews. The following accommodations were considered:
    i. Face-to-face meeting at the public healthcare facility that the participant attends (with permission from the chosen sites). This was preferential, as the clarity of verbal speech is of a higher quality as compared to online through microphones. Additionally, a face-to-face interview allowed for non-verbal discourse cues to be observed directly, rather than through a screen. Non-verbal discourse included tonality of voice, and facial expressions. Acknowledgement of emotional state behind the participants' responses were to be analysed for overall context.
    ii. Hearing function was accommodated with written examples of the interview questions to provide clarity of exactly what is being asked. This was necessary if the interview space contained unavoidable background noise. In order to be prepared for this, a quiet room near the Speech Therapy and Audiology Department was requested

and used consistently, but back up written questions were still ready on stand-by. The goal was to avoid this, but provisions were still made.

2. Written copies of the interview questions were provided to the participants beforehand, which could be referred to throughout the interview. Paper based copies were provided for participants that preferred to answer the hard-copy in writing. All participants were present in person, and no participant made use of writing when answering their questions.

The following procedure described in Figure 2 was used to access participants at the research site, and collect data:

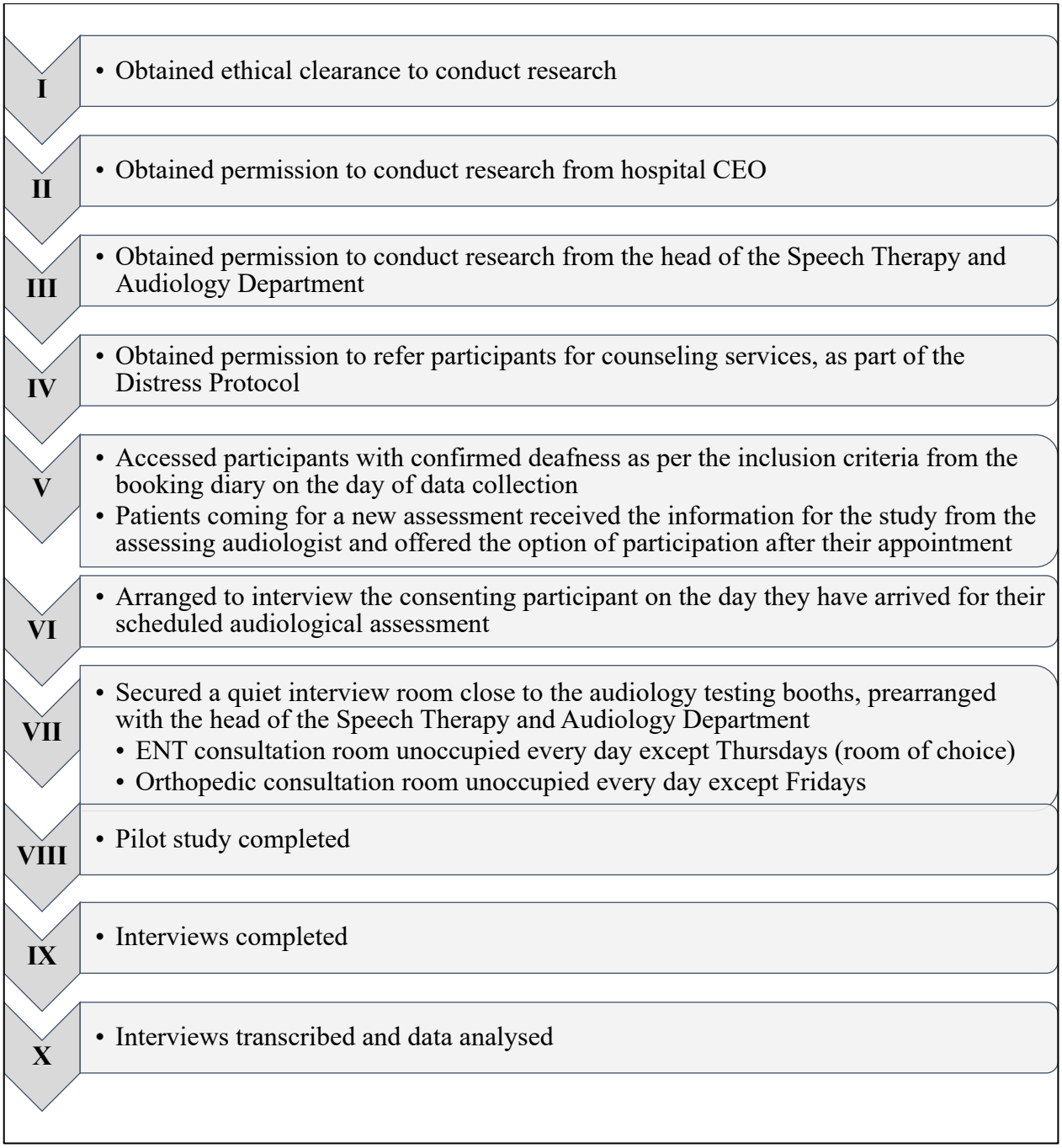


Figure 2: Data collection procedure at the Speech Therapy and Audiology Department at the chosen research site

Once interviews were completed, they were transcribed by the researcher onto a Microsoft Word document and saved to a password protected Google Drive. Even though the inclusion criteria required all participants to speak, read and understand English, any words expressed that were not English were appropriately interpreted in the context of the discussion.

All data collected were stored and saved in a secure location, to ensure participant anonymity and preserve all data for analysis once data collection is completed over time (Miller et al., 2018). The data collected for this study was stored on a secured laptop, owned by the researcher. All data was saved to a Google Drive, which could only be accessed by secured password created by the researcher. This ensured that all participant information was kept private. The only people who were able to access and view the data collected, were the supervisors of the dissertation. The researcher, and support personnel, have an ethical responsibility to ensure that all data collected is stored in a safe place to ensure the protection of participants even after the study was completed (Miller et al., 2018). In accordance with the University of the Witwatersrand regulations regarding postgraduate data management, data collected will be stored for 5 years and sensitive raw data was anonymised. After the 5 year period has ended, all audio recordings will be deleted, transcriptions will be deleted and shredded, and consent forms will be shredded.

4.6.1 Pilot study

The purpose of the pilot study was to assess the data collection procedure, including assessment of the suitability of the interview questions, interview room, and interview recording software. This included the validity, reliability and effectiveness of the instruments used (Majid et al., 2017). Testing the research methods chosen is essential to determine if data collection and analysis methods chosen will answer the research question. The pilot study also allowed for the researcher to amend the data collection procedure before the formal data collection takes place (Majid et al., 2017). The pilot study began once ethical clearance had been obtained from the University of the Witwatersrand Human Research and Ethics Committee (medical). The pilot study assessed the how the interview process will work for adults with deafness, as hearing function may have impacted how questions are heard, understood and answered. The

pilot study was conducted to determine if any additional accommodations needed to be made (Majid et al., 2017).

The participant who agreed to participate in the pilot study was selected based on voluntary participation offered to all prospective pilot participants awaiting their audiological appointments at the Speech Therapy and Audiology, at the research site, on the day of the pilot study. The pilot participant was provided with interview questions before the commencement of the interview, and then consented to the interview process. The interview was transcribed on the same day as the interview, to encourage better recall of the interview process experienced by the researcher. This was to accommodate for deafness in the interview, as non-verbal communication is essential to determine meaning. Should the need for amendments to the data collection procedure become apparent as per the pilot study results, the researcher was prepared to make those arrangements such as ensuring the noise levels remained subjectively low and raising voice volume as needed. At the end of the pilot study, the researcher ensured that the participant's opinions on the pilot study were recorded for amendment purposes. Checklists are used, so that the researcher can accurately identify which interview questions needed to be changed, and thus the researcher compiled an appropriate checklist (Majid et al., 2017). The pilot study for this research dissertation included the following aims:

1. To evaluate access to participants (booked in/consent/day and time)
2. To evaluate the suitability of closed-ended and open-ended questions (aimed for all participants to complete all questions developed)
3. To evaluate the involvement of an interpreter (effectiveness and suitability, if needed)
4. To evaluate the effectiveness of the audio recording software (continuous and loud enough)
5. To evaluate the full informed consent process

6. To evaluate the timing of interviews (aimed for 30 minutes, to adhere to the first come first serve waiting order protocol withing the Speech Therapy and Audiology Department)
7. To evaluate the referral to counselling services process (if needed)
8. To evaluate the suitability of the interview space (room/noise/privacy/ distance)
9. To evaluate the effectiveness of the transcription process (accuracy and time needed to transcribe)
10. To evaluate the implementation of the COVID-19 pandemic accommodations that needed to be made in the interview space (masks/distance/ windows)
11. To acknowledge and include the comments from participants on how to improve the interview process

Results of the pilot study highlighted that participants could easily be accessed through the booking diary on the day of appointment, either before or after their appointment with the Speech Therapy and Audiology Department. Different interview rooms, and out of research site interview options to encourage relaxation and ease, were offered to all participants. It was found that all biographical information from participants could be obtained with ease. Participant consent forms and information sheets required verbal clarification, which would then be included in all interviews going forward. It became apparent that the pilot participant was hesitant to communicate in the interview, despite hearing difficulties being accommodated. The participant expressed fear of answering questions. In order for more expressive, detailed and lengthier response from participants to be obtained, the researcher made the personal adjustments to avoid interview sessions feeling clinical and cold, by avoidance of rushing of questions and answers from both interviewer and participants.

The researcher also became more engaging in the interview to encourage casualness and relaxation. The researcher found that she needed to make participants feel reassured and at

ease, and that they would not miss their appointment with the Speech Therapy and Audiology Department. The researcher acknowledged participant feelings of tiredness, as they had been at the research site for hours by that time the interview started. This did not impact the quality of the participant responses. The interview audio recordings were clear, loud enough, and usable, and digitally enhanced to improve the sound quality for transcription purposes. The need for the distress protocol to be enacted did not occur. All COVID-19 pandemic precautions were followed as per the rules set out by the research site. This did not impact the quality of the interview. All audio recordings and transcriptions could be safely and securely on a password protected Google Drive.

The researcher was able to better amend the interview process to allow for more elaborate, and detailed responses from future participants. The benefit of the pilot study is that it acknowledges the adaptable nature of qualitative research and does account for continuous adaptations that need to be made as an interview process evolves (Leon et al., 2011). Good clinical practice in research encourages for the pilot study to be as informative as possible (Leon et al., 2011), and for this specific study it was evident than more than one pilot interview was not necessary to ensure that the appropriate amendments could be made, but also that data was not wasted. Despite all the adjustments to the interview process that needed to be made, all data obtained from the pilot interview was usable and was therefore included in the final data collection. As results from a pilot study are generally excluded from the complete sample, the responses from the pilot participant were valuable to the overall results.

4.7 Data analysis

The chosen method of data analysis needs to align itself with the type of data collected, to answer the research question, this includes all aspects of the data collection such as questionnaires or interviews (Braun & Clarke, 2012). As data analysis is defined as the process

of evaluating and interpreting raw data, the chosen analysis method also needs to support the type of research design. Qualitative analysis methods examine data by examining and describing phenomena, formulated by the causal flow of information, and drawing conclusions (Braun & Clarke, 2012).

4.7.1 Thematic analysis

Thematic analysis makes use of identified themes drawn from common patterns observed within the raw data, to explain results and ultimately draw final conclusions (Braun et al., 2018). Thematic analysis is a favorable method of qualitative data analysis, as it can identify patterns from rich data, which cannot be explained numerically. Thematic analysis is flexible and accessible to many researchers. This means that themes can be identified, and confirmed, so that the research question is answered. There is no need for specific equipment, or statistical formulae, to use thematic analysis and ultimately draw conclusions from the raw data (Braun et al., 2018). Furthermore, thematic analysis is a preferred method when attempting to decipher lived experiences, as themes can be created across multiple sets of answers from different participants that would otherwise not be exposed to each other or even have identical experiences (Braun et al., 2018).

To explore lived experiences of adults with deafness in Johannesburg South Africa, themes needed to be drawn, compared, and generalized in a deductive manner. This approach was also flexible as response lengths, depth and richness can vary across participants. Thematic analysis also worked well for this study, as the deaf population may have similar or completely different experiences when accessing healthcare, and thematic analysis allowed for the freedom and flexibility to deeply explore these responses. This method was chosen over others, as when analyzing responses from the population with deafness, many contextual and environmental changes had occurred between participants, such as external noise, pauses for repetition and

clarification, hearing and listening fatigue and moments needed for lip reading or auditory processing. Additionally, breaks for repetition and auditory processing was to be expected. Hence, thematic analysis was the preferred method of analysis to explore experiences of adults with deafness when accessing reproductive healthcare services. Thematic analysis for this study followed Braun and Clarke's (2020) recent six phases of qualitative thematic analysis, as seen in Figure 3 below:

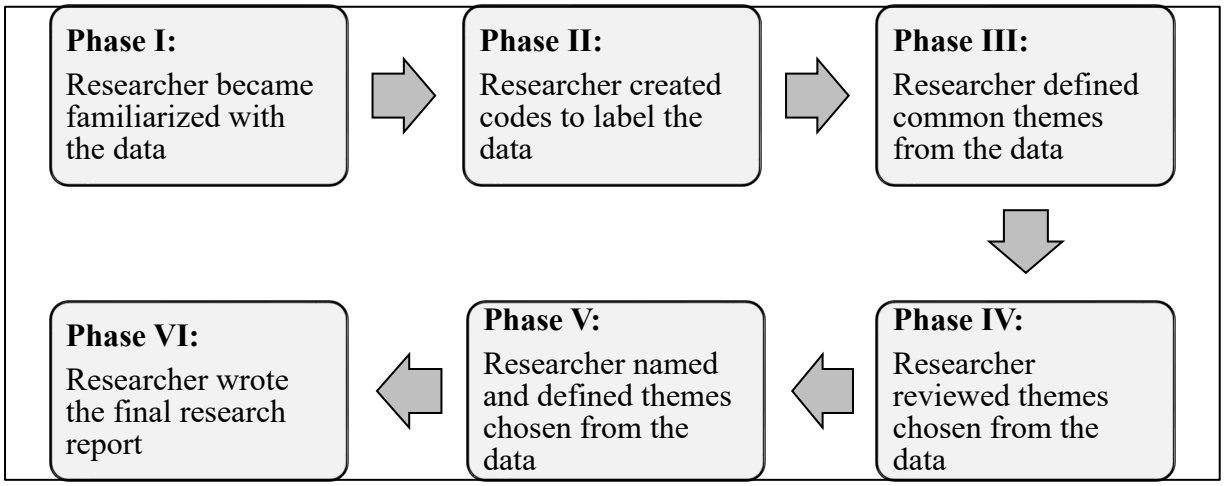


Figure 3: Braun and Clarke's (2020) six phases of qualitative thematic analysis

4.7.2 Deductive thematic analysis

Although Figure 3 describes the broad procedure for thematic analysis, within thematic analysis, results of a study can be analysed inductively or deductively. The primary difference between inductive analysis and deductive analysis, is that inductive analysis aims at developing new theory, while deductive analysis aims at testing existing theory (Azungah, 2018). In qualitative research, application of existing theories to current phenomena is completed to determine the appropriateness of already developed theoretical and conceptual frameworks (Azungah, 2018). Deductive thematic analysis, results in theoretically-based coding procedures, and therefore uses theory as the point of departure for development of all themes (Pearse, 2019). This current study made use of deductive thematic analysis specifically, as an

aim of this study was to apply current and aging theories to the lived experiences for adults with deafness when accessing healthcare services. This study made use of three theoretical and conceptual frameworks, namely the Biopsychosocialtech model, International Classification of Functioning (ICF), and the Theory of Accessibility by Penchansky and Thomas (1981). In order to appropriately draw conclusions from the data collected, deductive thematic analysis was used by deducing results, and the respective sub-themes, within the dimensions presented in the Theory of Accessibility (1981). Results were presented under each dimension, thereby applying theory to describe the lived experiences of adults with deafness when accessing healthcare services. Chapter 6, *Discussion*, further frames the results of this study in relation to existing theory.

Themes were derived based on common responses from participants and colour coded accordingly (see Appendix F). Once common themes became apparent, they were colour coded according to the different dimension described in the Theory of Accessibility (1981). Further descriptions of themes, and how the response from the participant related to overall dimensions in the Theory of Accessibility (1981), were added alongside specific quotations.

4.8 Ethical considerations

Ethical clearance was obtained from the Human Research and Ethics committee (medical) at the University of the Witwatersrand, under the protocol reference number M211132 MED21-11-004 (see Appendix G). Ethical considerations in all types of research are compulsory to ensure that all research sites, participants, and assistants are protected against unethical actions that could in any way compromise their safety, boundaries, identity, and trust (Arifin, 2018). For this study, the target population was vulnerable in healthcare contexts, as barriers to healthcare access were shown to be evident. To protect this population, this study was required uphold ethical research practice. The following ethical considerations, adapted from the ethical

principles stipulated in the Declaration of Helsinki (World Medical Association, 2001), were strictly kept throughout the research process for this study:

Autonomy

Autonomy refers to the capacity of an individual to direct their own choices, and such participation in a study. This includes the participant's ability to think freely, independently and without manipulation (Nusbaum et al., 2017). Considering that the target participants were all have deafness to some degree, written and visual aids will be provided to explain autonomy. For this study, participation was completely voluntary. If the participant wished to stop the interview process, and withdraw mid-interview, no questions were asked, and the recording was paused and deleted. This did not occur for any of the participants in this study.

Confidentiality and anonymity

Confidentiality refers to the deliberate omission of any identifiable information for all participants within a study. Anonymity is outlined as the identity of participants is not shared among other participants (Arifin, 2018). For this study, all information was strictly kept between researcher and supervisors. Participants were referred to be participant number, as indicated by the upper case letter 'P' and the respective number, for example 'P1'. Participants did not meet each other, nor were expected to share their responses. As all participants had some degree of deafness, they were not called by name to come into the interview room, as an increase in volume was most needed in the corridors of the research site. The research site, and all employees involved in granting permission to conduct research, and involvement in the distress protocol (see Appendices, have also been anonymised.

Informed consent

Informed consent refers to the participant receiving sufficient, detailed and understandable information regarding the study (Arifin, 2018). Informed consent needs to be given freely and without coercion, understand reasons for accepting or declining participation invitations and provide written consent (Arifin, 2018). For this study, all participants were provided with a participant information sheet detailing the purpose of the study. Any risks, benefits and additional aspects were explained to the participant. All participants were required to physically consent to the study, by signature and ticking the consent boxes provided on the form. All participant consent forms were collected in hard-copy, scanned to digital copy and stored electronically on the same password protected Google Drive. The Flesch-Kincaid analysis was used to assess the readability and appropriateness and ease of readability of the consent forms, study information and data collection materials. The Flesch-Kincaid analysis method provides a readability score from 0-100, with a higher score resulting in better readability of written material and appropriate level of comprehension (Solnyshkina et al., 2017). It is essential to acknowledge that the Flesch-Kincaid analysis is an American based measure, not a South African based tool of readability. Therefore, the Flesch-Kincaid analysis provides a more generalised measure of readability for the South African context (Solnyshkina et al., 2017). This was essential for the consent forms, participation information sheets and questions that were asked verbally but were provided in written form too.

The participants were deaf, and some relied on written materials to be able to consent to the study. As this population could be considered vulnerable, the researcher re-confirmed consent verbally, before and after the interview was complete. For this study, the participant information letter and consent forms received a Flesch-Kincaid analysis score of 61.4. This score correlated to a readability level of ‘standard’ or ‘easy to read’ and can be understood by

a teenager age 12-15 years old (Solnyshkina et al., 2017). The researcher was prepared for any participants that may not have been able to read the consent forms and information letter, and was therefore prepared to read the text to them verbatim and elaborate on which points required clarification. No participant verbally indicated that they could not understand what was required of them in order to consent to participation in this study. All participants were required to speak and understand the English language (1st language English not required), as all consent forms and information sheets were presented in English. To fully consent to participation in this study and complete the interview, the participant needed to speak and read English. Preparations to include interpreters were made if needed.

Protection of Personal Information Act (POPIA)

POPIA compliance is essential to the research process. POPIA is the South African data privacy law that enforces strict regulations regarding personal data, sharing of information and protection of records. The researcher is accountable for any breaking of regulations and sharing or information. Additionally, consent is defined as complete voluntary, informed and specific (Adams et al., 2021). For this study, all POPIA regulations were strictly followed and , as no participant information was accessed other than reported names and signatures, and reported date of birth, and reported race. This information was not shared. Personal participant information was not accessed by the researcher from the Speech Therapy and Audiology Department at the chosen research site, as participants were recruited from the waiting area. Ethical clearance from the Human Research and Ethics Committee (Medical) at the University of the Witwatersrand, under the protocol reference number M211132 MED21-11-004, acknowledged this participant access procedure. Any revealing personal information revealed in the interviews were deleted immediately (see Appendix K). Protection of participant responses is essential to the research process. Data protection, and safekeeping thereof,

enhances participant privacy (Arifin, 2018). This ensures responses are not leaked to non-participants or non-researchers outside of the study (Arifin, 2018). For this study, all responses were kept on a password protected computer and password protected Google Drive. This included recorded and transcribed responses. Participant privacy was ensured by access being denied regarding other participants responses. Should participants wish to receive the final research results, all participant information will be excluded.

Justice

Justice refers to the impartial selection of participants for a study. This includes the notion that no participant will be exploited, inconvenienced, coerced, or manipulated at any point of the research process (Kahn et al., 2018). For this study, no participant was exploited, inconvenienced, coerced or manipulated during the research process. The responses obtained were not guided or manipulated to achieve a desired response from the participants. All responses were digitally recorded and transcribed as they were narrated, therefore no data was altered to fit the benefit of the researcher.

Beneficence and non-maleficence

Beneficence refers to the balancing of risks and benefits of participating in a research study (Bufacchi, 2020). Non-maleficence means not causing harm to participants in a study. A careful balance of both of these ethical principles needs to be established throughout the entire research process (Bufacchi, 2020). Any risks and benefits involved with participating in this study were explained to all participants. Potential risks included emotional distress. All participants in this study were informed that the researcher does not have the authority or capability to make their access to healthcare experience easier or more convenient, nor was researcher an employee at the research site. As per the University of the Witwatersrand HREC Medical Risk level categories, this study fell under level 3 (low risk). Level 3 risk stipulates

the possible low risk of sensitive topics and questions that may have potential for emotional distress. To comply with HREC Medical guidelines, a distress protocol and counselling or support services was provided to participants, to ensure that all participants were appropriately accommodated, should any distress occur, a distress protocol is needed (Haigh & Witham, 2013). Using Haigh and Witham's distress protocol (2013) for qualitative data collection for interviews as a guide, the researcher of this study had created a specific distress protocol (see Appendices H-J). No participant required referral for counselling services by any of the agreeing psychologists.

Referrals and debriefing

Within the research process, participants may indicate the need for mental or physical support or medical assistance. The researcher has the responsibility to not ignore these possibilities, as participation in the study may reveal these facts (Kahn et al., 2018). All ethical considerations were explained to the participants prior to beginning the study. For this study, any participant who experienced physical or emotional distress would be referred to the relevant professional, however, no participant required such referral. Any participant who would want to receive results of the study was able provide an email address to receive results. Participants were able to enact their right to review that their responses are truthfully reported and that their information was not shared. Permission to refer participants to counseling services was obtained from the research site, specifically the out-patient Psychology Department. An extra external psychologist was also contacted, with permission given, to also refer participants to counseling services outside of the research site (see Appendices H-J). This psychologist offers counselling services to individuals within the same catchment areas as the chosen research site, with a distance of 4,4km and 15 minutes travel from the research site to the psychologist's practice location. Participants who felt distress or unease were given the option to withdraw

from the study at any point with no repercussions. The protocol was to follow referral to a public healthcare facility within the catchment of the participant that provided emotional and mental health services. This letter was submitted prior to ethical clearance, and accepted. Psychologists contacted agreed to be part of the Distress Protocol, however based on different terms (see Appendices H and I).

4.9 Trustworthiness and rigour

In order to ensure that the research question of a study has been answered truthfully, the quality of the study needs to be determined (Johnson, et al., 2020). Rigour refers to the quality of the research process (Johnson, et al., 2020). Rigour for this study have been ensured through application of the Trustworthiness, Auditability, Credibility and Transferability (TACT) Framework (Daniel, 2019). The TACT Framework is a multidimensional tool used in qualitative research to determine the rigour of a study, using a breakdown of different elements that constitute the validity of a study (Daniel, 2019). The TACT Framework is a popular choice of establishing rigour is social and healthcare studies, especially for studies that straddle both elements of healthcare and social behaviour (Daniel, 2019). The use of the TACT Framework for this study was chosen, as it allowed the research to systematically break down the elements of validity of this study. Figure 4 below describes the breakdown of the TACT Framework, and how it can be applied to qualitative research studies:

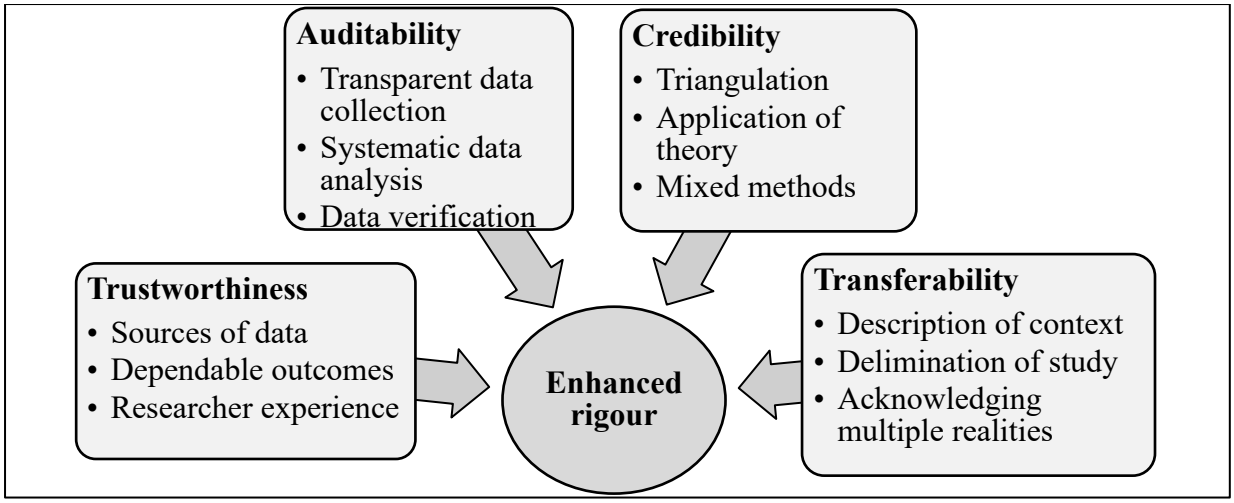


Figure 4: The Trustworthiness, Auditability, Credibility and Transferability (TACT) Framework (Daniel, 2019)

Using the breakdown of the TACT Framework in Figure 4, the researcher was able to determine the rigour of this study. The qualitative nature of this study, along with the personal expression of results, emphasised the need for the results of this study to not only be reliable, but also be truthful. The researcher used the TACT Framework to highlight the following ways in which rigour of this study was ensured:

Trustworthiness

Trustworthiness is defined as quality that underpins the research process and the relevance of the study, and confidence in research study's outcomes (Daniel, 2019). Trust in a qualitative study is earned when the researcher provides detailed accounts of their own experience, the systematic process of research methodology and analysis, and acknowledgement of biases (Daniel, 2019). The TACT Framework encourages the researcher to ensure that the data collected is trustworthy and honest (Daniel, 2019). For this study, the source of the data was obtained from one research site and one point in time. The research site was a credible tertiary academic hospital that provides healthcare services to the adult population in Johannesburg, South Africa. This data collection source was dependable for accessing the required

participants, and honourable to the terms of approval to conduct research at this site. Additionally, the researcher transcribed all responses verbatim, and quoted responses as needed.

The experience of the researcher is essential to the reporting of results and implications of the study (Daniel, 2019). In order to avoid untrustworthy results, the researcher is required to acknowledge personal biases towards the study and remove their personal expectations of the study's outcomes. By describing the personal journey through the research process, the researcher was able to avoid personal biases. Reflexivity in research is defined as the examination of the researcher's own beliefs, values, judgments, and experience throughout the research process, and how these elements may have influenced the research process and outcomes (Daniel, 2019). To be reflexive throughout this study, the researcher created a reflexive journal, to keep detailed expectations, feelings, and expectations. The reflexive journal was hand-written to preserve the human nature of the researcher's thought processes (see Appendix L for an excerpt from the reflexive journal).

Auditability

Auditability in the research process refers to the demonstration of transference (Daniel, 2019). Auditability involves the application of a systematic process for collecting, decision-making, analysing and interpretating data (Daniel, 2019). Audibility is crucial to the research process, as it holds the researcher accountable to create a consistent research process, that produces valid results. Additionally, showing how the researcher was directly involved in their own study further encourages audibility (Presseau et al., 2019). The TACT Framework describes two types of audibility, namely internal and external audibility. Internal audibility refers to the ability of the researcher to address any methodological issues throughout the research process, and clear description of research question and aims (Daniel, 2019).

The TACT Framework encourages the researcher to use systemic research methods, in order for the process to be consider valid (Presseau et al., 2019). For this study, the researcher selected an interview method, which is often used in qualitative research designs as it allows for in depth collection and analysis of participant's lived experiences. The interview method was designed by the researcher, and questions were selected to best answer the research question. Furthermore, an adjusted and documented pilot study, which critically evaluated the data collection process, was used to encourage internal audibility. It was confirmed during the pilot study, that the target population of this study is vulnerable, and their hesitations and fears to communicate in the interview needed to be acknowledged. Hesitations to communicate stemmed from fears of missing appointments, reporting of results to higher hospital management, and fear of being refused healthcare services. The researcher addressed these concerns by verbally assuring the participant that no appointments would be missed, and no healthcare services would be refused, as a result of participation in the study. The researcher adjusted their interview approach to make participants feel more at ease and ensured them that no direct responses could be traced back to any specific participant. Providing the participants with unconditional positive regard, allowed the participants to freely express their opinions and emotions.

The researcher of this study selected deductive thematic analysis as the most suitable method of analysis to best answer the research question, as the research question lent itself to this form of analysis. The strict coding followed a system of coloured keys, to determine the similar responses among participants to draw themes from (see Appendix F for an example of the coding process from the interview transcriptions). External auditability is traditionally carried out by the readers, examiners, and users of the research study (Daniel, 2019). External auditing occurs when the researcher's findings or conclusions are subjected to verification (Presseau et al., 2019). Examination by a qualified research board, or examination group,

results in the validation of the study's procedures and outcomes. For this study, external audibility was ensured through submission for verification to the Department of Humanities at the University of the Witwatersrand upon completion.

Credibility

In qualitative research, credibility is defined as the confidence, relevancy, congruency, and dependability in the truth of the research findings (Daniel, 2019). In order for a qualitative study to be considered credible, the study needs to reflect the researcher's intentions and those plans were grounded in theory and followed systematically (Presseau et al., 2019). The TACT Framework encourages the researcher to achieve credibility through use of verification of participant responses, when interviews are used as the method of data collection (Daniel, 2019). Engagement with the selected participants is crucial for a credible study, as surface level interviews would be unlikely to reveal consistent themes without assumptions. Methods of verification of results include member checking, the process of participants checking their own responses to allow for further clarification and elaborations (Presseau et al., 2019).

For this study, participants were provided the option of listening to their own recorded interviews, in its entirety or for specific questions, and provide further elaborations or clarifications as needed. However, less than half of the participants wanted to listen back to their audio recordings and elaborate further on their responses. Participants were also provided the contact details of the researcher should they request the final outcomes of the study to be shared wit, as well as provide elaborations on their responses if they wished. Triangulation is a crucial element of credibility in qualitative research (Daniel, 2019). Triangulation refers to the use of multiple data sources to develop a comprehensive understanding of the results obtained, and thus encourages convergence of the observable phenomena (Presseau et al., 2019). For this study, thirteen interviews were recorded, transcribed, and used for data analysis.

Thus, more than ten data sources were obtained, and similar themes could therefore be drawn from these responses.

Transferability

Transferability in qualitative research refers to the concept that findings from a study can be applied to other settings, groups of people or contexts (Daniel, 2019). While transferability is equal to generalization of responses, transferability involves describing a particular occurrence in the context of the study's goals, thus encourages the study's integrity (Presseau et al., 2019). To achieve transferability, a detailed description of the research process is needed. The methodology, participant demographics and behaviours, data collection instruments and procedures, plan for analysis, and results, all need to be well described (Presseau et al., 2019). This information needs to be readily available for another researcher to apply to another context and provide the confidence to report that the findings of the study can be transferred (Daniel, 2019).

For this study, all methodology, participant demographics and behaviours, data collection instruments and procedures, plan for analysis, and results have been documented. The interview questions used for this study have been made available for use in another study (see Appendices E-G). Additionally, as this study investigated the lived experiences of adults with deafness in a specific setting, the results of this study can be transferred to similar contexts for similar populations, such as adults with deafness in another research site or at a different point in time. In addition to simply reporting results of a study, acknowledgement by the researcher that results are based in reality, but also that multiple realities exist for different participants. The nature of lived experiences suggests that humans experience life differently, and while participants in a study may share similar experiences, people are unique.

Context heavily influences how people experience their realities, and thus for this study, it was acknowledged by the researcher within the reflexive journal that lived experiences are personal to each participant. Delimitations in research also need to be mentioned to enhance transferability. This includes documentation of the specific choices made by the researcher to ensure outcomes are achieved (Daniel, 2019). Acknowledging a study's limitations and highlighting the potential for further research is crucial to ensure that should the study be replicated in another context, or if a study evolves into exploring greater phenomena (Presseau et al., 2019). For this study, the limitations and implications for this study were clearly described (see Chapter 7*: Conclusion*)

Chapter 5: Results

This chapter presents the findings of this study. Using the methodology described in Chapter 4, results have been illustrated through use of quotations, descriptions, and allocation of themes. The context of this study is related to the research site, and the reported experiences of the participants.

The purpose of this study was to explore the lived experiences of adults with deafness when accessing healthcare services in Johannesburg, South Africa. All of the participants in this study included the participant who took part in the pilot study, as the data collected was usable, and further encouraged generalization of responses. Results were obtained directly from the audio recorded interviews, and interview transcripts. Thematic analysis dictated the coding of responses, as per Braun and Clarke's (2020) six phases of qualitative deductive thematic analysis. Themes deduced from this coding, with significant similarities across participant responses that could be reported. Additionally, thematic analysis was completed in a deductive manner, drawing from existing theory.

Throughout the interview process, participants displayed a wide range of emotions. It is important to note, that participants may have experienced both inhibitors and facilitators that may have negatively or positively impacted their experiences thus far. Participants were given the opportunity to express both positive and negative attitudes, as certain elements of one's experience may be positive or negative, or neutral. In accordance with ethical guidelines, University of the Witwatersrand standards and public hospital policies, all private information belonging to the participants were removed for analysis. The results of this study are presented thematically in relation to the Theory of Accessibility (Penchansky & Thomas, 1981), within the defined dimensions of availability, accessibility, accommodation, affordability, and

acceptability. Figure 5 describes the deduced sub-themes from the five dimensions of the Theory of Accessibility (Penchansky & Thomas, 1981):

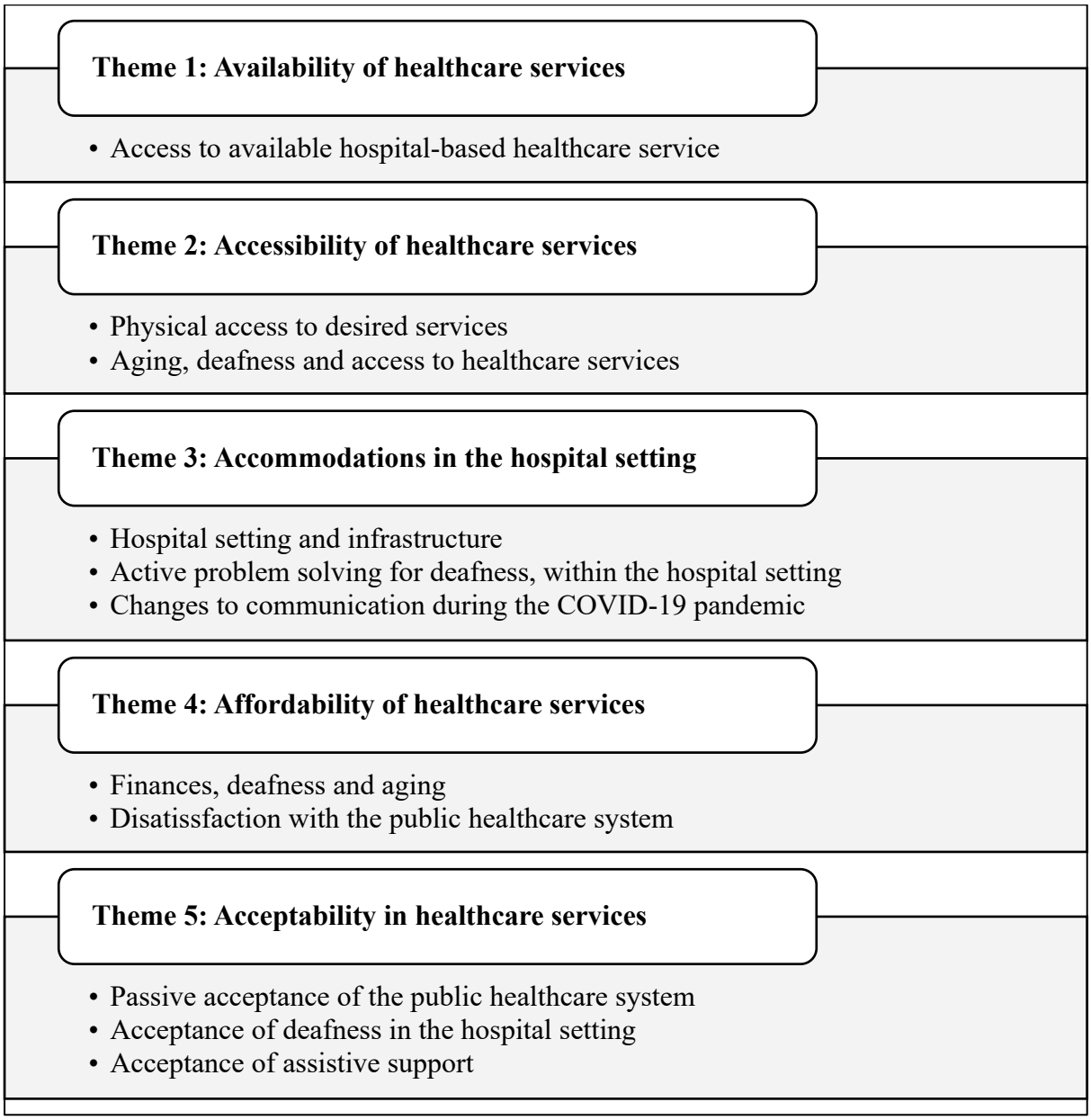


Figure 5: Themes identified within in each sub-aim

5.1 Theme 1: Availability of healthcare services

5.1.1 Access to available hospital-based healthcare services

In response to the interview questions, participants were required to indicate which healthcare providers or services they had accessed. The available healthcare service accessed could have

been access pre or post diagnosis of deafness, and pre or during the COVID-19 pandemic. Results found that participants access multiple healthcare services at the same time, for different needs, which can be seen in Table 8 below.

Table 8: Healthcare specialties accessed by participants before and after their diagnosis of deafness:

Medical/Allied Healthcare Provider Accessed	**Number of Participants** (Participants may have accessed more than one provider)
Audiologist	13
Cardiologist	4
Dentist	1
Ear, nose, and throat specialist (ENT)	3
Endocrinologist	1
Gastroenterologist	1
General practitioner (GP)	5
Gynecologist	1
Hematologist	1
Neurologist/Neurosurgeon	3
Oncologist	3
Ophthalmologist	3
Optometrist	1
Orthopedic surgeon	2
Pharmacist	12
Pulmonologist	2
Psychologist	1
Urologist	1
Ward/ICU admission	3

This information, presented above in Table 8, provided insight into the healthcare needs of the participants, in relation to their age and chronic conditions. This study did not aim to explore the actual healthcare services required by adults with deafness, but rather provide perspective into the healthcare needs of adults with deafness, when deafness is an influencer in healthcare seeking behavior. All participants were able to access the available audiological services, in addition to all other services listed above in Table 8. While not all available healthcare services

were necessarily accessed at the research site, all participants reported that they were not denied any services – however, there were lengthy waiting times to access the available services.

None of the participants reported that they were unable to meet with any of the available healthcare practitioners who they required access to, within any of the specific healthcare specialty's departments. However, participants did report that the public healthcare system is heavily pressurized due to lack of healthcare practitioners practicing their desired healthcare services, and there are not enough public healthcare institutions offering desired healthcare services. It was reported by P11, that the public healthcare system is under pressure to serve the population: "*its heavily pressurized* [public healthcare system] *...so that means there's not enough facilities to serve the population... so it goes back right at the foot of government."*

As the primary aims of this current study were not to explore the amount of healthcare services available to the adult population with deafness in the public healthcare sector, it became apparent from the reported results that adults with deafness are able to access their desired healthcare services within the public healthcare system – but do report that the available services are placed within an inaccessible healthcare system.

5.2 Theme 2: Accessibility of healthcare services

5.2.1 Physical access to healthcare services

For this study, access to healthcare services within the public healthcare environment was explored, specifically for hospital-based care at a tertiary level. The physical environment of the public healthcare hospital chosen for this study, in Johannesburg, South Africa was documented at the time of this study's completion. The physical environment of the research site may be subject to physical changes in the future, as infrastructure is repaired, upgraded, and reconfigured. Based on the different levels and types of healthcare services and

infrastructures, hospital-based services are not the only type of healthcare services available. Service provision is based on location, availability of services, and speciality of services. As this study aimed to explore hospital-based access to healthcare, experiences reported are indicative of this level of healthcare, as all participants received their audiological services within the hospital-based setting. However, exploration into the access to healthcare experiences of adults with deafness may have been accessed across multiple different healthcare settings, such as private healthcare or primary healthcare.

The results above highlighted that the most commonly accessed healthcare practitioners by adults with deafness includes audiological services, pharmacist, general practitioner (GP), the cardiologist, ear, nose, and throat specialist (ENT), the neurologist/neurosurgeon, the endocrinologist, the oncologist, the ophthalmologist, Additionally, to receive desired healthcare services, specifically audiological services, participants were required to follow the catchment system for the research site, otherwise hearing related services could not be received. This can be seen in the response provided by P5, who reported that in order to receive audiological services, following catchment areas to the research site Speech Therapy and Audiology Department was essential: *"I just came here* [to the research site]. *And then the one who attended to me* [audiologist], *she said there's something in my ear that's damaged."*

Following of the processes of referral within the catchment system for specific geographical regions was found to be essential, in order to receive desired healthcare services through the public healthcare system in Johannesburg, South Africa. While P5 did not complain about following the catchment system, the catchment system for the research site is large and covers three different regions of the Gauteng province. While exploration into the actual distance participants with deafness need to travel to access this specific Speech Therapy and Audiology Department was not directly explored, it is a consideration for many aging adults

who experience difficulties accessing transport. Attendance at a specific Speech Therapy and Audiology Department within a certain catchment through the unchanging public healthcare system, was an experience which participants were able to reflect on.

5.2.2 Aging, deafness and access to healthcare services

Within each interview, participants expressed that aging, and deafness, contributes to their access to healthcare experience. Participants reported that their access to healthcare experience is linked to their age, and having deafness is an additional element to their healthcare seeking behaviour and choices. Based on the biographic data (see Table 7: *Participant demographics*), the participants' ages ranged from 50-89 years of age. Participants consistently reported that aging, along with deafness, is a reality which they have to face when accessing desired healthcare services. While aging does not always lead to deafness of any degree of severity, for the purpose of this study deafness in adulthood was the target demographic. Hence, all participants experienced deafness, along with the nature of aging.

It cannot be said that participants in the age ranges 70-89 years old experienced any more challenges accessing their healthcare services than the participants in the age ranges 50-69 years. Based on the reported experiences of the participants, aging is a unique and individual experience for each adult with deafness. However, responses across the thirteen (n) participants displayed similar experiences when accessing healthcare services in Johannesburg, South Africa.

More than half of the participants felt that there are difficulties experienced when accessing healthcare services, and are a result of aging. Throughout the interview process, participants consistently reported that healthcare conditions are exacerbated by aging, and deafness is an added stressor to their experience. While aging can be a personal journey, multiple participants expressed similar challenges when accessing healthcare services. As the

most accessed healthcare providers, excluding audiological services, included the general practitioner (GP), ear, nose, and throat specialist (ENT), the cardiologist, the neurologist, the endocrinologist, the oncologist, the ophthalmologist, and the pharmacist, it was clear that participants may have accessed more than one healthcare provider to meet their healthcare needs. A mixed response from participants showed that accessing these healthcare providers was due to age related conditions, chronic conditions across the lifespan, and sudden illness or injury. All thirteen participants have previously accessed, or are currently accessing, healthcare services other than attending to their hearing needs, as stated in the biographical data.

Many participants reported that the effects of aging on the body impacts their access to healthcare experience, such as P6, who expressed his specific difficulties with aging and chronic conditions, with deafness as an additional co-morbidity: *"Yeah well, with the chronic illnesses, I have to see the doctor quite often. I haven't got transport and old age is a problem. My legs, my legs is a problem. Weaknesses in the leg. Hearing with a hearing aid, without them I can't hear. The hearing aid helps me very much."*

Decline in hearing function due to age was reported by ten of the thirteen participants. The diagnosis of presbycusis was shown to impact the access to healthcare experience, such as with P10, who reported her personal experience with aging and presbycusis. She expressed her experience in comparing her current hearing abilities in the healthcare consultation context, versus her experiences prior to age related deafness: *"You see, I'm so old now. I usually say what, what, what, what is happening to me, then they do* [medical doctors repeat their statements] – *yes I was, I was still hearing things* [at a younger age]".

It also became clear that adults with deafness identify with the access to healthcare challenges faced by other adults with deafness in the healthcare setting. This was seen in P11's response, when he spoke about observing the aging population and their own deafness: *"but*

yeah that- that has been a frustration not so much for me yet, but I can understand for the guys who're... more frail... less-less aware of what's going on around them. So, uh... yeah that's... and its- it's as you get older, so you need this [hearing aid] *more".* Through reported observation by one adult with deafness about fellow adults with deafness, this participant has described the difficulties adults with deafness may be experiencing but are not necessarily expressing.

From these responses, it can be seen how aging has influenced access to healthcare services. The aging participants reported that they often need to access more than one healthcare service for their multiple co-morbid chronic conditions (see Table 8: *Healthcare specialties accessed by participants)*, and that deafness becomes an additional co-morbidity that impacts how they can access their healthcare services. These participants expressed that because of aging, there are difficulties accessing healthcare services due to increased need to access their desired healthcare service due to the chronic nature of their condition, as well as manage their hearing related needs. Participants reported that their aging bodies contribute to challenges when accessing healthcare services. This includes reported mobility difficulties, sensory challenges such as loss of vision or hearing due to age, and lack of transport. P10 specifically expressed frustrations with the difficulties she experienced: "*Yes, making me feel old, yes of course. I didn't feel well you know* [mobility challenges, deafness, and increased frequency of illness related to age], *I said now I'm really not doing good. I bladdy don't like it, you know".* The voice of this participant displayed how her aging body was causing her frustration and grievance.

In addition to specific age-related access to healthcare difficulties, it can be seen that deafness itself also impacts access to healthcare. Participants reported that their deafness was a direct result of aging, and presbycusis was the diagnosed cause of their hearing difficulties.

Participants felt that deafness related to reduced awareness of sound related information around them, and that hearing amplification is necessary to stay aware in the healthcare service space.

Participants were asked to describe their access to healthcare experience within the hospital setting specifically. It was reported that the hospital environment does not appropriately accommodate the aging population, and that more visual and audiological support are needed. It was reported by P12: *"Yeah that would help a lot of the old people* [in reference to the remark from the interviewer clarifying if more visual aids in the hospital and microphones in waiting areas is what P12 is recommending]. *I mean a lot of older people that don't hear well, and people don't pay attention to them".* Participant 12 specifically highlighted the need for visual and audiological support. This quotation from P12 reports on the need for people in the hospital setting, patients and healthcare providers or support staff, to acknowledge the difficulties that the aging adult population with deafness may experience in the healthcare setting and help adapt the environment accordingly. P12 stated that other's do not pay attention to those with difficulties that cannot be seen, such as deafness. This observation made by P12 reports that the difficulties faced by the aging population with deafness is recognisable in the public healthcare setting.

5.3 Theme 3: Accommodations in the healthcare setting

5.3.1 Hospital setting and infrastructure

Accommodations for deafness also speaks to hospital infrastructure. Hospital infrastructure included the actual physical layout of the hospital, including waiting areas and pharmacy. Hospital infrastructure also included the organization and set-up of the hospital building, and the actual rooms in which patients access their healthcare services. Within the interview questions that participants with deafness were required to answer, all participants were required

to propose ways in which the public healthcare system could make their healthcare access experience easier or more meaningful for themselves.

Throughout analysis of the participants' responses, the sub-theme of the impact of the hospital environment on the access to healthcare experience for adults with deafness, became apparent. Adults with deafness consistently reported that the hospital environment contributes to their access to healthcare experience. Throughout the analysis process, it became clear that the complexities of healthcare access are directly influenced by the clinical environment that patients access their healthcare through. The healthcare environment, for the purpose of this study, has been separated into sub-themes of accommodations for deafness, acceptability of deafness within the hospital environment, and how participants problem-solve in hospital environment which they cannot directly alter.

Participants reported that they require, accommodations within the hospital environment. Specific accommodations required by adults with deafness included moderation of noise levels in the hospital, more visual support, and audiological support. Accommodations were required, as participants expressed that the environment in which they receive their healthcare services is not appropriate for adults with deafness. Therefore, the hospital environment inhibits the access to healthcare experience for adults with deafness. Participants elaborated that the hospital infrastructure does not accommodate for adults with deafness, specifically in particular areas of the hospital. These elaborations allowed the researcher to categorise specific statements made by the participants. The following examples describe the different accommodations that could be put in place within the hospital environment, to facilitate the access to healthcare experience, as reported by the participants with deafness:

1. Providing signage in consultations and waiting areas.
2. Recording the voices of healthcare practitioners during the healthcare consultation or appointment.
3. Implementation of silent waiting areas.
4. Loaning out hearing aids in wards and ICU

Participants further described that there is a lack of visual support within the hospital setting, and this impacts their ability to access their healthcare services. These participants described that having deafness decreases the use of one of their senses. Additionally, participants stated that reliance on their sense of vision is essential for navigating around the hospital and overcoming difficulties hearing in noisy parts of the hospital. This can be seen in the response from P8, who expressed the dire need for more research into how visuals and technology can be incorporated into the public healthcare system to better support adults with deafness, which further highlighted the importance of visual support as a need for adults with deafness. He stated: *"They can put up a screen somewhere where you can get they can get your name and they tap something on there and it will get your file number".* From this it can be seen that the current filing system does not accommodate the needs of adults with deafness effectively, as there is no visual and auditory support available.

Similarly, P12 further suggested louder intercom systems to better assist adults with deafness, as well as more visual aids. He stated: *"if you were to have a board that says number 75 to window H, that would help a lot of people. But if its digital, you can punch in number 75 to window H and when you've collected your stuff* [medications at the pharmacy], *they clear it".* From this response, possible solutions to the problem of lack of visual and auditory support for adults with deafness in the hospital setting, have been thought about by these adults with deafness. This can be further seen in the response provided by P11, who also commented on

the lack of visual signage to read in the hospital environment: *"I think probably notices* [pictures and signs]- *but notices get lost in a big environment"* Additionally, P11 reiterated how he often misses his name or file number being called out in the waiting area, simply because they couldn't hear the file clerk speaking, and stated *"if you can't hear, you'll miss it. And everyone else is now waiting for theirs and they couldn't really be bothered about you".* This remark highlighted that, while high levels of noise in waiting areas is present, assistance from others in the waiting area to help to hear a file name or number being called is not available.

Further reiterating his opinion, P12 explained the need for more visual support, and louder auditory support in the hospital setting: *"That could help as well. I mean a lot of older people that don't hear well, and* [hearing] *people don't pay attention to them. And the same with the volume on the intercom system that they're using around there. As I say the pitches is too high, you can't, I can't hear it. I know they're speaking. I can hear there's a noise going off but what is the cost of a little board putting up a number."* Throughout the interview process, it became clear that noise levels in the hospital setting are unfavorable, and uncomfortable, for adults with deafness.

Participants explained that noisy waiting areas throughout the hospital impacts their ability to access healthcare services, and thus more silent waiting areas are needed. As reported by P13, she commented on the high levels of noise in the waiting areas: *"I think that's very good* [silent waiting areas]. *If there should be silent, but then do you see a whole group of people sitting in the waiting room downstairs, of all nationalities, and the one nationality speaks louder than the next nationality? I mean, it becomes mind-boggling!"* Additionally, P7 also expressed, that it is essential to focus on your file number instead of the unavoidable noise in the waiting areas.

These responses reported by P8, P11, P12, and P13, highlight how adults with deafness require additional support, on both a visual and auditory level. Adults with deafness report that they need more visual support in the form of signs in the hospital setting in order to navigate their surroundings, as reliance on vision is a prominent experience for them. These participants expressed that if more visual support was provided, this would facilitate their access to healthcare experience. Additionally, more audiological support is required. Suggestions for decreased environmental noise in waiting areas and pharmacy, and increased notification noise (such as microphone use in the pharmacy) suggest that the auditory needs of adults with deafness are not accommodated in the hospital setting. While these visual and auditory needs have become present due to an environment which adults with deafness cannot control, and thus accommodations have been suggested.

5.3.2 Active problem solving for deafness, within the hospital setting

All participants were asked to propose ways in which they themselves make their healthcare access experience easier or more meaningful. All participants provided responses based on their own lived experiences and displayed their active problem-solving solutions that they employ when they access their healthcare services. Participants reported that having deafness results in difficulties access their healthcare services, however, making use of active problem solving allows for the outcomes of access to healthcare experience more favorable or successful. All participants provided one, or multiple, self-developed strategies or coping mechanisms, that they employ to make their access to healthcare with deafness easier or more meaningful for themselves. Participants that provided examples, did not display hesitation when expressing their problem-solving strategies, which implied that these practices had been tried and used already within the healthcare setting to enhance their access to healthcare experience. This could be seen in the experience of P7, who stated that he employs his own

increased volume so that he can hear his own voice, before anyone else requests that he raise his volume: *"Myself. Then I am talking hard. Then I am talking hard and then my sister, or somebody will tell me 'Why do you talk so hard?'"* Similarly, P8 reported that he tries to take control of his own healthcare consultations: *"I introduce myself and I take charge of the meeting because I understand exactly* [own healthcare conditions and symptoms]."

It was extrapolated from the data collected that participants reportedly were required to problem solve for themselves despite the presence of a family member aiding for the management of their healthcare needs, to ease their healthcare access experience and improve the quality of the experience. For example, P1 suggested that loan hearing-aids be provided to patients with deafness in the ward setting: *"Maybe they can give people hearing aids so that they can be able to to to to hear when someone is talking to them."* Another example of creating own strategies for coping with deafness in the healthcare environment was described by P8, who stated that he learnt to lip read over time: *"Something I mastered over the years from* [being] *a scholar, is that I could, I can lip read now."* In addition to these reported examples, the following different adjustments that participants made for themselves to ease their access to healthcare experience were reported, with supporting quotations elaborating each point in the paragraphs following the list below:

1. Bringing another person (family member) to the healthcare appointment.
2. Informing the healthcare practitioner about personal deafness and hearing abilities.
3. Requesting increased verbal volume from the healthcare provider.
4. Requesting the healthcare practitioner or hospital support staff member to move closer.
5. Ensuring hearing amplification is worn within the healthcare setting.
6. Relying on lip reading skills.

7. Requesting visual aids, written information, or voice recordings from healthcare practitioner.
8. Focusing with extra effort in the healthcare setting.

The active problem-solving strategies that the participants highlighted encompass auditory solutions, visual solutions, and cognitive solutions. Auditory solutions include bringing someone with to their healthcare appointments to attend to hearing and listening needs, informing the healthcare provider about personal deafness and hearing abilities, requesting increased verbal volume from the healthcare provider or hospital support staff member, requesting a shorter distance between the healthcare provider or hospital support staff member and the adult with deafness, requesting voice recordings from the consultations, and wearing of hearing amplification. Visual solutions include reliance on lip reading skills and requesting visual aids from the consultation. Cognitive solutions include the extra effort needed to focus on auditory and visual stimuli within the hospital environment. Participants consistently suggested that taking charge of their deafness in the healthcare environment and making their healthcare practitioners and support staff aware of their deafness, is essential for ensuring a successful access to healthcare experience. It is essential to note, that the same participants who tell their healthcare practitioner about their deafness, are the same participants who request for increased verbal volume from their healthcare practitioner.

Participants reported that divulging their hearing functioning, and requesting increased verbal volume, to their healthcare practitioner results in better reception of verbally expressed healthcare information. This can be seen in the experience of P1, who expressed that he needs to ask their healthcare provider and additional hospital support staff, such as desk clerks to increase their verbal volume: *"I ask them to speak louder so that I can hear them."* Likewise, P7 also stated that they also request for increased verbal volume, and requests for repetitions

from their healthcare providers: *"Sometimes, I hear them not lekker. Then I ask, "doctor what did you say?" Then I will say no my ears are not right."*

Some participants reported that simply verbalizing difficulties with hearing, is not enough to communicate their hearing needs to others in the healthcare setting. Such as P8 who explained his specific strategy that he uses in the healthcare setting to make healthcare providers, and additional support staff aware of his deafness: *"Sometimes you have to ask can you talk louder to that window and stuff and the guy's not hearing you're you have a hearing problem. So, I would recommend for anyone something that I done. I made myself a little sticker saying I've got a hearing problem. So, what I used to do is when I come to the reception, or someone show them that and say I've got a hearing problem talk loud and that helped me."* This can be interpreted as how adults with deafness have to adjust their own attitudes and overcome lack of accommodations within their own access to healthcare experience – and further emphasizes how the healthcare access experience can be improved by using own personal attitude adjustments and coping strategies, to encourage the success of the experience. In addition to ensuring that other people in the healthcare setting, such as a companion or the healthcare provider, it was revealed by the participants with deafness that they also need to support themselves in the healthcare setting to enhance their access to healthcare experience. Responses gathered from the interviews determined that responses involved personal efforts from the participants with deafness. This was seen in the consistent reporting of ensuring that hearing amplification is worn within the healthcare setting, reliance on lip reading be used, and extra efforts to focus on the healthcare setting be employed.

As P7 elaborated, he is required to make the extra efforts in the healthcare setting, by ignoring environmental noises in the waiting areas: *"then it bothers me, but I don't take note of the noise* [in the waiting areas] *and concentrate on yourself* [myself] [waiting for file in

waiting room].” In addition to concentrating on specific auditory stimuli in the hospital setting, wearing hearing amplification was a reported facilitator to the access to healthcare experience. This was highlighted by P11, who stated that wearing hearing aids is essential for boosting confidence in the healthcare setting: *“Ya its... again I suppose it's- it's your own confidence and being able to deal with the situation.”* Comparably to P11, P8 also expressed that wearing hearing aids provides the hearing amplification user with a boost in confidence to manage their deafness in the healthcare environment: *“That that's the height of the hearing aid it gives you that confidence as well. Gives you a very good confidence because you can respond spontaneously with hearing aids when you respond.”* Based on these responses, it can be seen that the reported utilization of hearing amplification makes a substantial difference to the access to healthcare experience for adults with deafness. The reported increase in confidence reported highlights the potential power imbalance between the patient with deafness, and the functioning of public healthcare system. The confidence boost that the participants reported, from using hearing amplification, shows that adults with deafness feel unconfident taking charge of their healthcare needs in the hospital environment when they cannot hear to their full potential.

The hospital infrastructure around the adult with deafness limits the access to healthcare experience, for adults with deafness. Employing problem-solving strategies allowed the participants to regain control of the healthcare needs, especially in the hospital environment which is not supportive of their hearing needs. Active problem solving from adults with deafness is needed to overcome the lack of accommodations within the actual hospital infrastructure and organization, as well as the lack of acceptability from the healthcare professional and hospital support staff.

5.3.3 Changes to communication during the COVID-19 pandemic

As this study took place during the state of emergency pandemic pertaining to the COVID-19 pandemic, it was essential to explore the access to healthcare experiences of adults with deafness in Johannesburg, South Africa during this time. Further enhancing the cross-sectional nature of this study, investigating the experiences of these participants in the middle of the COVID-19 pandemic, produced results that were indicative of this period. The cross-sectional nature of this study was not necessarily specific to the lived experienced of participants, during the months of data collection. Rather, the cross-sectional elements of this study were inclusive of lived experiences of participants from the start of the COVID-19 pandemic, until results were documented and analysed. These results were indicative of this population in the context of this research site, from the start of 2020. Furthermore, these results speak to the COVID-19 pandemic in Johannesburg, South Africa, and not another pandemic at a different point in time in another geographical location.

Participants described their access to healthcare experience during the COVID-19 pandemic, including how their deafness was affected during this time. Additionally, participants were required to comment on their experience communicating within the changing healthcare setting during the COVID-19 pandemic, with deafness as an additional co-morbidity. The following sub-themes emerged from the reported experiences of adults with deafness as they accessed their healthcare services during the COVID-19 pandemic. Participants expressed an understanding that the operating protocols within the public healthcare system had to change to accommodate the COVID-19 pandemic. Operating protocols refers to the standard procedures and management that govern hospital functioning, and the consistent encouraging thereof. Participants expressed that compliance with COVID-19 pandemic protocols, despite their deafness, was essential in order to still receive desired

healthcare services. Overall, participants expressed positive reactions to how the public healthcare system handled the required changes to hospital protocols throughout the COVID-19 pandemic, despite patients also having deafness.

Within the data collected, it was seen that acceptance of deafness from healthcare practitioners during the COVID-19 pandemic resulted in positive experiences. This was seen when P1 reported that his medical doctor showed acceptance of his deafness during the healthcare consultation: *"When I was talking to the doctor. He was coming close to me. Even if he was wearing those big things* [personal protective equipment – PPE required during close contact in the hospital setting to prevent transmission of COVID-19]*, he still came close."* Positive experiences with acceptance of deafness from healthcare practitioners was reported by P3, who commented that changes in healthcare protocols due to the COVID-19 pandemic did not impact the healthcare services they received and likened the access to healthcare experience to the experiences prior to the COVID-19 pandemic: *"It was different, but not so, because they* [medical doctors and nurses] *were just like normal but they were using the masks."* However, despite acceptance and accommodations made for adults with deafness in the healthcare setting during the COVID-19 pandemic, P4 elaborated that adapting to and complying with the COVID-19 pandemic regulations was essential, despite the decreased rate of services: *"Everything was just going you know a bit slow but it, it, it was really, the services was alright, was good. Yeah, you've got to adapt to the rules and regulations."*

Based on these responses, it can be interpreted that participants displayed consistent attitudes of acceptance of the changing operating protocols within the public healthcare system. Participants consistently reported that in order to still receive the services they required, even during the COVID-19 pandemic, compliance with the operating procedures in the hospital was necessary during this time. Participants acknowledged that the public healthcare system had to

respond to the COVID-19 pandemic appropriately, and thus changes to regular service delivery was expected. Participants reported that they adjusted their expectations with the public healthcare system accordingly and complied with whichever regulation was put in place to ensure that their healthcare needs were still met. However, participants did report that even though they complied with the COVID-19 pandemic regulations, and the adapted to the changes needed within the functioning of the public healthcare system, they still experienced some difficulties. Specific difficulties included the increased waiting periods due to public healthcare system backlogs, cancelling of their appointments with the Speech Therapy and Audiology Department at the research site, and challenges communicating with their healthcare practitioners.

The delayed access to audiological services during the COVID-19 pandemic was explained by P5, who reported that she had to wait longer than expected to have her hearing needs met during the COVID-19 pandemic, due to cancelling of out-patient services at the time: *"No. I was supposed to come during COVID. No. COVID already started. before that, I had an appointment. But then we* [Speech Therapy and Audiology Department at the research site] *cancelled it because of COVID. You know, when COVID just came out, it was so bad. Yes. So, then we cancel, we cancel twice."* Further elaboration about the backlog in healthcare services in the public healthcare sector as a result of the COVID-19 pandemic was provided by P8 who stated: *"Very slow* [healthcare services] *and there's a back backlog and it takes factories* [hearing amplification factories and imports] *closed. And then now then they reopened again and then they have to get through a whole bunch of hospitals. It's not just this hospital. That's what we picked up now that the backlog from the COVID has caused such a backlog that some of the pricing even change of the hearing aids, they skyrocket because what they they've done is, that's my personal opinion. I think they* [public healthcare system] *tried to recover on what they have and some of the places are still trying to recover from COVID where*

they they they aren't fully staffed because they had to lay off some staff, I think. Doctors as well. So, for for now, even just getting back on track I think we like still two years behind or on the oldest going forward because there's there's so much there's studies to be done! Now after the COVID has gone a little bit down the appointments has changed a little bit, but not that much. They still need to if you look at the waiting periods are still the same. If they can stay, I say that check-up if they can get that one sorted out." These reports highlight the participants' experiences navigating the backlog in audiological services during the COVID-19 pandemic.

Despite appointment cancellation, some participants were able to hear and understand the reasons why COVID-19 pandemic regulations resulted in cancellations. Such as with P9, who stated that he understood why his healthcare out-patient appointments were cancelled and was able to hear the cancellation notice due to some residual hearing function. He also expressed that they acknowledged the sincerity of the apologies of the healthcare practitioners: *"Ya so a lot of my appointments were cancelled. Ya but you uh... I wasn't completely hearing loss I could hear a little bit. I could understand they tell me where to come in that day and that's- they're* [medical doctors and nurses] *sorry about it and... they were very polite and everything."*

As participants elaborated on their access to healthcare experience during the COVID-19 pandemic, common responses concerning communication and wearing of PPE, both in and out the healthcare setting, become apparent. Personal protective equipment (PPE) refers to the necessary safety facial and body coverings to be worn by all providing and utilising healthcare services. At the time of data collection, PPE was worn by all patients over their nose and mouth, in the form of a protective face mask. All healthcare practitioners were required to wear facial and body covering of various degrees of protection, depending on the service they were

providing. In order to access desired healthcare services at the research site, compliance with wearing PPE was a requirement.

As all participants in this study were adults with deafness, with varying types and degrees of severity, consistent reports of challenges communicating with PPE were prominent. Despite the different degrees of severity and types of deafness, participants expressed negative feelings towards the wearing of PPE and attempts to communicate with others. Compliance with wearing PPE impacted the access to healthcare experience for adults with deafness. As while deafness was already influencing the ability to effectively communicate with healthcare practitioners, the additional wearing of PPE over the mouth further challenged the ease of communication between patient and healthcare practitioner. Participants specifically expressed frustration and difficulty communicating with healthcare providers using PPE, and also having deafness. Participants expressed frustration and difficulty communicating with healthcare practitioners when complying with social distancing, and also having deafness.

Difficulties communicating with their healthcare practitioners and wearing a face mask was reported by multiple participants, such as P5 who reported: *"You know, when COVID just came out, it was so bad. And with a mask then sometimes I couldn't hear then I had to* [ask to repeat louder] *again. That was the only thing. Then I sort of felt shy to ask again".* Additionally, P8 also explained the difficulties communicating with deafness and wearing of masks: *"What were what were the masks it was very difficult the time on the COVID started I never had my hearing aids so it was very very difficult and the COVID was actually a very scary time because when you are suffering with with hearing and stuff like that it is not of a benefit to anybody in the COVID time because they just care that if you say to somebody can you throw up your mask I can't what you say. It's like you asked him to commit suicide"*. Some participants reported that they felt frustrated with, and isolated from, others during their access

to healthcare experience, due to mask wearing and social distancing. This was the experience of P9, who reported that mask wearing with deafness in the hospital setting resulted in reduced desire to communicate: *"It felt me uh... like I was... closed up, I couldn't... express myself".* Feelings of frustration were specifically experienced by P11, who explained that wearing of masks in the hospital, and having deafness resulted in feelings of frustration when he was unable to communicate effectively: *"Masks have been thrown out and the lady says, "where's your mask?" and I said... what for? No, we have to have them in the- in here, which I understand... um... but its- it's frustrating, that's frustrating. The voice gets muffled coming through the mask."* P11 further elaborated that the ability to read lips was eliminated due to wearing of face masks: *"Having- having the mask on definitely makes it a little bit more difficult... especially some folk* [including himself] *have got the- the ability to... uh- hear and also lip read."*

These responses report the challenges adults with deafness faced in the healthcare setting, while wearing PPE. The participants consistently reported that wearing of face masks specifically impacted the flow of communication between healthcare practitioner and patient with deafness, especially regarding the transfer of healthcare information. Additional difficulties reading lips, due to obstruction view of the mouth when wearing face masks, was also reported. While no participant directly reported that deafness and wearing of PPE directly impacted healthcare decision making capabilities, the challenges reported by the participants highlight the possibility that healthcare decision making was not as effective.

In addition to results obtained regarding the aging process, deafness, and compliance with wearing PPE, participants expressed feelings of frustration and discomfort regarding management of hearing amplification devices, wearing additional sensory aids such as glasses, and wearing masks. Participants described difficulty wearing three objects behind the ears,

namely BTE hearing aids, optic frames/glasses, and masks with straps that went behind the ears. Additionally, concerns stressing damage to hearing aids was expressed by participants.

Feelings of worry, frustration and anxiety were felt by adults with deafness, such as P11, who reported concern for his hearing aid when removing glasses or PPE: *"With glasses on, with a mask on, you take mask or glasses off what happens to your hearing aid?"*. Similarly, P12 explained his irritation with wearing hearing aids, glasses, and PPE: *"Now you have all this stuff on your ears, and the glasses still and irritates starts, it starts to irritate you. I told my wife when I finish with this COVID I'm going to look like Mr Spock with the ears".* These emotions were felt by P13, who also reported her frustration with wearing too many objects behind her ears: *"I've got the mask. It's just frustrating. I'm wearing more than what I should on my face!"*

The responses from the participants above emphasise the feelings of frustration and irritation that adults with deafness feel, about wearing their hearing amplification, other sensory aids, and PPE. Difficulties complying with PPE wearing, and maintaining wearing of sensory aids, proved to be a challenging experience for adults with deafness. In addition to compliance with PPE resulting in challenges communicating with their healthcare practitioners, adults with deafness also reported the lack of teletherapy or telemedicine options in the public healthcare system during the COVID-19 pandemic. Participants reported an overall lack of telephonic consultation options with their healthcare practitioners. Participants elaborated that the use of consultations over email or text message was also not provided as an option for communication with their healthcare practitioners.

Adults with deafness reported that no teletherapy or telemedicine option was provided, such as the experience of P1, who reported that no telemedicine options in the form of telephonic consultation was used: *"We always speak in person. I never phone them*". A similar

experience was reported by P9, who also stated that no telemedicine options were provided to him either: *"It wasn't required to speak to the doctor or anything* [over the phone]."

Even though no teletherapy or telemedicine options were provided telephonically, P5 reported feelings of relief that no telephonic consultations were offered: *"No, over the phone I can't hear properly. No, it didn't change anything. I didn't like mind, like through COVID, I didn't mind going to the doctor for anything that I had to go to."* Elaborating further, P5 stated that she avoids telephone use in general, as deafness negatively impacts the quality of the communication as she cannot hear the person on the other end of the telephone call: *"No, whenever I had to go to the doctor or get her opinion. My daughter in law used phone, not me."* This experience was not unique to one adult with deafness, as P12 stated that communicating over the telephone is an unfavourable option due to deafness and was thus happy that no telemedicine options were provided, specifically telephonic consultation: *"Phone is still now a problem. The phone that I've got is not loud enough. Sometimes I don't hear the conversation* [with the medical doctor]."

Despite the lack of teletherapy or telemedicine options in this public healthcare system during the COVID-19 pandemic, participants reported contentment with lack of telephonic consultation options with their healthcare providers, as deafness impacted the use of the telephone. These participants expressed satisfaction that tele-healthcare was not prioritised for their needs, nor was it offered. Participants explained that talking over the telephone is a consideration that needs to be made when communicating, due to deafness and difficulty hearing over the telephone. These reports showed that while tele-healthcare was necessary during the COVID-19 pandemic, adults with deafness preferred in-person and face-to-face healthcare as it better suited their level of deafness, and the outcomes of their appointments in public healthcare.

Based on the reports from participants presented, compliance with the COVID-19 pandemic restrictions on socialisation, access to healthcare, and communication between healthcare practitioner and patient, impacted the access to healthcare experience for adults with deafness. Lack of accommodations for the communication needs of adults with deafness in the healthcare setting during the COVID-19 pandemic was noted. The ability to hear in the healthcare setting was restricted by PPE for adults with deafness. The lack of tele-healthcare options, PPE that hindered the ease communication, and overall compliance with changes needed in the public healthcare system during the COVID-19 pandemic, all impacted the access to healthcare experience for adults with deafness.

5.4 Theme 4: Affordability of healthcare services

5.4.1 Finances, deafness and aging

Within the data collected, participants with deafness, above age 65 years, stated that they used to be employed but are now retired, and half of these participants stated that they rely on pension grants from SASSA. Of these participants with deafness, none made use of private medical aids. Reasons for not making use of private medical aid schemes primarily included lack of finances available to do so. Participants shared that if the option to use private medical aid, and access private healthcare, was an option, they would use it. No participant directly stated that they make use of any disability grant from SASSA. Participants consistently expressed that they experience financial strain and rely on their available pension funds to access their healthcare services.

The participants expressed that the financial constraints that are attributed to no longer working and relying on pension grants, impacts their decision making with regards to their healthcare needs. Participants on pension grants from SASSA stated that affordability of hearing aid maintenance is a consideration when budgeting their monthly allowances. These

participants further stated that affordability of transport services to access their desired healthcare services is also a consideration when budgeting their monthly allowances. Additionally, participants stated that not having medical aid is the reason for using public audiological services. Such as, P7 who expressed that waiting for SASSA pension grants results in delayed access to healthcare: *"but I must wait now for pension and see the date is, I must wait for the third. If I get my pension, then I can buy* [hearing aid batteries, and medication]". Similarly, P12 reported that the cost of fixing his hearing aids is costly to him, and he hoped for assistance: "*No, well then the hearing aid came and then its fixed everything now I'm lost again, but let's see what happens today, maybe I'll be lucky.*"

Some participants reported that they would prefer to use private medical aid schemes, if the option was available and if they could afford it. The response provided by P6, who described that not having medical aid and using the public healthcare services available is his only option and is still costly, speaks to preferable private medical aid options. He further described their experience accessing healthcare services and paying for transport: *"No, but* [redacted name of medical-aid scheme], *medical aid so there's not much of a problem. Before when I didn't have the medical aid, the government hospitals were a very big problem. The medical aid doesn't cover this. But I couldn't come to the hospital. Well, I haven't got transport."*

It was reported that elderly adults with deafness, who earned money in their youth, use public healthcare much later in life. The reported experience provided by P13, who reported that she is currently using public healthcare services in her old age because of her consistent paying of tax earlier in life, speaks to earning money previously in life: *"I believe I've paid for it over time. Yeah, my husband and I both, we paid our income tax for years."* This report

highlighted that this specific participant felt as if she had financially contributed to the financial maintenance of the public healthcare system, by following tax rules in her youth.

Even though P8 is not yet old enough to be considered part of the geriatric population and does not yet qualify to be a pensioner on a SASSA grant, he expressed his observation regarding age related access to healthcare services challenges with deafness and being a pensioner in the public healthcare system with deafness and additional co-morbidities. Participant 8 described: *"90% of the of the pensioners that come here can't even make it to here because they have a problem getting here already. So, if they're using public transport or they need to get or get someone to get them here it's a problem already. If they come that day, they are just maybe an hour or two hours later they see they won't be able to be seen. They turn right around they'll try and use up the pension money to buy the batteries* [for hearing aids] *or they just leave the hearing aid you understand and becomes a problem like that".* This response from P8 shows that the difficulties access healthcare services for adults with deafness can be observed be others. However, P8 does identify with these difficulties, being diagnosed with deafness from childhood.

These responses report on the financial challenges that aging adults with deafness are facing, in the context for this study at the time of data collection and analysis. Understanding of the aging process, and deafness as an added co-morbidity, did not straightforwardly reveal prioritisation of specific healthcare needs, and direct allocation of funds to specific healthcare needs, as these participants were all attending to their deafness through their attendance at the Speech Therapy and Audiology Department. No participant stated that they were denied access their actual appointment at the audiology clinic at the Speech Therapy and Audiology Department at the research site, due to financial difficulties as a result of aging and deafness. However, allocation of pension grants from SASSA did influence their ability to get to their

appointment and maintain their hearing aids. Based on the information presented, adults with deafness report that they may experiences their access to healthcare in a different way, as compared to adults without deafness, and younger adults. While no participant expressed how these financial challenges influence their quality of care, the evident financial stressors experienced impacts their overall access to healthcare experience.

5.4.2 Dissatisfaction with the public healthcare system

Throughout the data collection process, it became apparent that attitudes towards the public healthcare system differed across responses from the participants. Participants reported mixed reactions to their access to healthcare experience through the public healthcare system in Johannesburg, South Africa. In addition, participants reported their experiences using various tonalities of voice, and facial expressions, to indicate their emotions when commenting on their experiences accessing the public healthcare system. Additionally, themes of vulnerability of the adult population with deafness in the public healthcare system became apparent. From the reported experiences, it could be determined that adults with deafness are reportedly dissatisfied with the functioning of public healthcare system. Throughout the interview process, participants consistently reported dissatisfaction with their access to healthcare services through the public healthcare system in Johannesburg, South Africa. Participants reported that healthcare practitioners and support staff within the public healthcare system are not accepting or accommodating of deafness.

Dissatisfaction with the attitudes of the nurses and support staff in the hospital setting was reported by P13: "*They can teach the staff to have more manners".* She further reported that the attitudes of her medical doctor, within the public healthcare setting, were unfavourable: *"I thought I told him* [medical doctor] *"You're a very rude person!".* Furthermore, P13 expressed her distain with the functioning of hospital wards and pharmacy: "*Going into a ward*

is a nightmare! The doctors are fine. You can go in when they used to come every six months for doctor to see, um, most times I had a right doctor. I never had a problem, but who's bad is like the clerks, getting your files. Um…Nursing staff and nursing staffs are not what they used to be."

5.5 Theme 5: Acceptability in healthcare services

5.5.1 Passive acceptance of the public healthcare system

Participants expressed passive acceptance of the functioning of the public healthcare system. Passively accepting their access to healthcare experience in the public healthcare system highlighted that participants are not necessarily dissatisfied with the healthcare services they receive but are not satisfied either. Rather, they are resigned to the functioning of the system, but were still willing to comment about it.

The response provided by P8, who reported that the public healthcare system is what it is and is unlikely to change, speaks to passive acceptance of the functioning of the public healthcare system: *"but that's the system, so that's normal".* The unchanging nature of the public healthcare system, for the needs of adults with deafness was also reported by P9: *"Ya, uh... you can't actually* [change the public healthcare system] *because there's too many people. And a lot of people the people can't… can't hear".* A possible reason for the current functioning of the public healthcare system was provided by P11, who reported that the public healthcare system is under too much pressure to serve the population, and thus impacts his access to healthcare experience: "*its heavily pressurized* [public healthcare system] *...so that means there's not enough facilities to serve the population... so it goes back right at the foot of government."*

Participants with deafness stated that healthcare services in general are in short supply for their needs, and the healthcare system is under pressure as a result. However, no participant was able to describe how to fix the pressurised system. Participants reported to have resigned to what they believe to be an unchanging public healthcare system that cannot meet all of their needs effectively. Overall, the access to healthcare experience for adults with deafness, is subject to the functioning of the public healthcare system. Adults with deafness are experiencing feelings of dissatisfaction, or passive acceptance, towards a system they cannot change to best have their needs met.

5.5.2 Acceptance of deafness in the hospital setting

The definition of acceptance within the healthcare context, is defined as the expectations and perceptions of the consumer of the specific healthcare service desired, which can be seen in Table 4: *Theory of Accessibility by Penchansky & Thomas, 1981*. This includes the attitudes of the healthcare service provider and the recipient of said service (see Table 4: *Theory of Accessibility by Penchansky & Thomas, 1981*). Acceptance of deafness within the healthcare environment directly relates to the attitudes of the healthcare providers and support staff within the hospital. Attitudes of healthcare providers and support staff included the interpersonal interactions between the participant with deafness, and the healthcare provider and support staff in the hospital, including desk filing clerks and pharmacists. Within the questions that participants with deafness were required to answer, all participants reported on their access to healthcare experiences based on their interactions with healthcare providers and support staff in the hospital setting, as deafness impacted their interactions.

Participants reported that the manner in which healthcare providers and support staff interact with, and accept adults with deafness, impacts the outcome of their access to healthcare experience. The attitudes of healthcare providers and support staff towards adults with deafness

was reported to be unfavourable by many participants, however some participants were satisfied with the attitudes of their healthcare providers and support staff in the hospital. Participants felt that their medical doctors were accommodating of their deafness by raising their voices without being degrading.

Participants reported that their medical doctors were aware prior to the appointment that deafness was likely, and visual aids (such as reported retrieval of written diagnosis and intervention plans, pictures, and communication with supportive family, friends, or caregivers) were provided. These participants reported that the more accepting attitudes of their healthcare providers and support staff resulted in accommodations being provided to better facilitate their access to healthcare experience. P3 reported satisfaction with the attitudes of their medical doctors, and the repetition accommodations provided by their medical doctor: *"The doctors? They were very good, and they were very patient. If I don't hear, they explain again for me. Sometimes I get angry, and they just cool me down."* Similarly, P1 and P2 expressed how the accepting attitudes of the medical doctor during their healthcare consultation was helpful in the healthcare environment. Participant 1 stated: *"when I was talking to the doctor, he would come closer to me. It was very helpful".* Participant 2 stated that their medical doctors raise their volume without being asked: *"Ya, the hearing, is it alright they can talk, they talk loud, umm slowly, then I can hear them."*

Similarly, P9 commented on the accommodations made by their medical doctors, in response to their deafness: *"look they* [medical doctors*] try and help you and understand you and all that. And you explain to them that you can't hear them... they tell you alright, they speak a bit louder and then you can hear them. They* [medical doctors] *gave me pictures and wrote things down and they recorded their voice!* [The nurses] *they must try and help them, make it easier for them".* This specific comment reported on how different professions show different

degrees of acceptance towards adults with deafness within the hospital environment. From this experience, it can be seen that the medical doctor displayed a different degree of acceptance of adults with deafness, as compared to the nurses. These remarks further highlighted the adapting attitudes of healthcare practitioners and support staff.

Additionally, participants also explained that healthcare practitioners needed to come closer, either on their own accord or by being asked to move closer to allow for better speech detection and recognition. Through interpretation these reported experiences, it can be seen that adults with deafness appreciate the accepting attitudes towards their deafness, within the hospital environment. However, not all participants expressed positivity towards the attitudes from the healthcare practitioners and support staff. Participants spoke directly to ideas that healthcare workers need to make the adjustments and accommodations for adults with deafness. Such as participant P6, who reported that their medical doctors' attitudes towards accepting deafness, was unfavourable when they realised the participant possessed deafness to some degree: *"*[the medical doctors] *really unfriendly and not very cooperative".*

The response from P12 further explained how when the doctors were not accommodating of his deafness during his stay in the ICU, and that the nurses would need to come closer and repeat what the medical doctor had said: *"the guys* [doctors] *on the other side* [foot of the bed] *I couldn't hear. The nurses knew I've got a problem* [deafness], *then they would come closer and tell me, listen we are going to change the drips or whatever".* Based on this experience, it can be seen that P9 and P12 experienced opposing attitudes from their healthcare team. Where P9 experienced acceptance of deafness from the medical doctors and not the nurses, P12 experienced acceptance of deafness from the nurses and not the medical doctors. The lack of consistency of positive and negative experiences interacting with the healthcare practitioners and support staff highlights the individual experiences of each

participant. However, it also emphasises that varying degrees of acceptance of deafness is experienced by this adult population with deafness in the hospital environment.

Participants also reported that the reason for poor attitudes from healthcare practitioners and support staff towards adults with deafness was due to lack of education about the deaf population provided to healthcare practitioners and support staff, in the hospital environment. Participants explained that education on deafness in adulthood, and specifically for the aging population, is required for hospital support staff to enhance their access to healthcare experience. Therefore, participants felt that the lack of education on deafness is adulthood inhibits their access to healthcare experience. This was noted in the response provided by P13, who stated *"They* [healthcare practitioners and support staff] *need to be better educated here in the hospital. Cause there's a lot of us. That our hearing is not as good as what it should be. They can teach the staff to have more manners".* This was further described by P11, who stated that dedicated staff is needed in the hospital setting who have been educated on deafness in adulthood: *"I can understand that they* [hospital support staff] *probably answer the same questions over and over and again because people don't know the... the whole workings of- of the department that you going to* [people who understand, empathise and are educated on deafness in adulthood*]. So, you come in here you... what do I do, where do I go? Dedicated people who- who are... more open to* [deafness in adulthood], *not get frustrated themselves because they've been answering the same question over and over a thousand times a day. I can understand their* [hospital support staff] *frustration... so it's... it- it's very difficult when you're dealing with these huge numbers of people that you have coming through this hospital, any government hospital."*

Participants explained that educating healthcare practitioners and hospital support staff on deafness in adulthood, would lead to improved access to healthcare experiences for adults

with deafness. In particular, participants expressed that educating healthcare practitioners and hospital support staff on deafness in adulthood could lead to louder and slower speaking voices of healthcare practitioners and hospital support staff, and shorter distance between healthcare practitioner and patient in the consultation room. Overall, it can be interpreted that the accepting of deafness within the healthcare environment is essential to the general access to healthcare experience for adults with deafness. The attitudes from all parties involved in access to healthcare in the hospital environment, impact the experience of adults with deafness.

5.5.3 Acceptance of assistive support

Participants reported that they require assistance from a spouse, child, or other family member to help manage their healthcare needs, as deafness impacts their access to healthcare experience. A mixed response from participants revealed that while many require assistance to manage their healthcare needs, attitudes towards this assistance differs. Relating their access to healthcare experience to their ability to hear effectively and participate in their healthcare appointments with respective healthcare providers, revealed that these participants accept the help provided. However, it was reported that some participants are comfortable and grateful to receive this assistance, while others are resentful and frustrated. Participants who were reportedly happy to accept and receive assistance with their healthcare management, reported that they are relieved and grateful to have this help. Assistance with healthcare management was described to include assistance with transport, management of appointment times and locations, as well as assistance during and after the appointment. Assistance was needed to aid with hearing and listening difficulties, memory difficulties, and logistical management. Participants expressed feelings of relief and comfort to hand over the responsibility of managing their own healthcare to a spouse, child or other relative, as trying to hear and remember the medical professionals was too confusing or stressful. Participants expressed that

accepting external help were willing decisions and aids in their healthcare access experience. Additionally, participants communicated that, without active assistance to cover hearing and listening needs in the healthcare setting, they would not be able to access their desired healthcare services. Even though based on the biographical data demonstrating that less than half of participants brought a spouse or child with them to their audiology appointment, more than half of participants expressed that they usually have a companion with them to enhance their access to healthcare experience.

This was seen in the response provided by P4, who reported that bringing his spouse to healthcare appointments is essential, as his spouse has to respond to the hearing and listening requirements that P4 would otherwise attend to but is unable due to deafness: *"My wife has to always come with me, and she got to listen to what they say. She was assisting me all along* [with hearing the doctor]". Likewise, P5 expressed that relying on family members is essential to their healthcare experience to ensure that their healthcare needs are met: *"My daughter in-law used to phone* [medical doctor] *for me. My late husband used to do everything, so I got used to that. It helps when someone is with me, sometimes I can't understand, and they explain to her. I'm not alone like now and my daughter in law or somebody's with me, Sometimes I can't understand, and they explain to me what you are saying".*

Adults with deafness reported that assistance from a family member is essential to improve their access to healthcare experience. Such as the experience reported by P9, who described that needing help from someone else, specifically for getting necessary medication at the hospital pharmacy is very necessary: *"That was bad* [experience receiving medication at the hospital pharmacy] *but I always have somebody with me, so they can hear my name".* Moreover, P10 reported that bringing their son with to the healthcare setting is necessary for assistance hearing and listening: *"Most of the time, he* [son] *comes with me. I used to come by*

myself, but now I need to come with my son. And if I'm not hearing well, I ask my child [to help]. *They are there for me, to help me if I'm not hearing something you know. I like them, they do things for me*". Feelings of relief and gratitude for the help received from a family member was specifically reported by P13, who expressed that the help received from their spouse is well received: *"He* [husband] *is my nurse! And if the roles were reversed, I would do the exact same. It is the best thing God could have given us."*

Positive responses towards accepting help from a family member to respond to the hearing and listening needs in the healthcare setting were recorded. These responses spoke to how these participants require assistance when accessing their healthcare services, and they are thankful for this help. Aging and deafness can be a stressor for adults with deafness, as described by the above participants. Participants who were accompanied specifically by a loved one, expressed more gratitude for their loved one, such as the experiences of P10 and P13. When assistance is provided and listening and hearing needs are eased by the assistance of someone else, it can be interpreted that the overall access to healthcare experience improved for those who willingly accepted and appreciated the help they received.

Conversely, some participants expressed that just because assistance is provided to them, and accepted, does not necessarily mean the participant's access to healthcare experience is positive. Participants reported feelings of anger and frustration towards divulging personal healthcare decision making and management capabilities to a third party, because of aging and deafness. The third-party decision-making members may have included a family member, the healthcare professional, and their team, or even hospital support staff. Participants reported that disclosing personal healthcare information, and therefore handing over decision making capacity, is not always wanted, nor appreciated. Participants expressed feelings of anger and

resentment to hand over the responsibility of managing their own healthcare to a spouse, child, other relative, and medical team, as the participant wanted to be included despite their deafness. Participants expressed that taking external help is not always willing decisions but also acknowledge that help is needed.

Participants communicated that divulging personal healthcare information to another person, even if the hearing and listening help is needed, results in feelings of reduced independence in their healthcare decision making capacity, and thus feelings of being ignored. Such as with P12, who expressed his experience with his medical doctors during his admission to the ward, while having deafness as a separate co-morbidity: *"We'll let me tell you one thing, wasn't out of funniness, but the doctor would stand at the bottom of the bed and talk to me, but then I wouldn't hear what he's saying and uhh, so I lodged a complaint out of my frustration. Yeah, out of frustration that the doctors are not telling me what's going on. And then the doctor came back again and the professor and said, uhh I was explaining to you everything. I said ya but I don't hear you, I don't hear you, so I don't know what you're talking about".* He further stated his opinion on including his spouse in his access to healthcare experience, due to aging and deafness: *"Well you rely on her, it's not a question of needing her, you rely on her to be there always as far as possible". Furthermore, while some gratitude is experienced, not all assistance with healthcare management is well received, as such with* P13, who reported that about handing over healthcare independence to her child is upsetting: *"Definitely to a degree, yes* [losing healthcare independence]. *It upsets me. I told her* [daughter], *don't do it."*

These responses report that just because assistance with managing healthcare needs is available, and accepted, aging adults with deafness do not all feel positive towards these interactions. Reliance on another person, because of aging and deafness, resulted in evident frustration from participants. This was specifically noted for with P13, who expressed gratitude

to her spouse, but frustration towards their child. General reports of loss of independence were prominent among participants who were frustrated with the assistance with their healthcare management. Additionally, participants reported feelings of being ignored by healthcare providers, as decision making would continue despite the hearing ability of the participant. Involvement in access to healthcare services appears to be a loss for these participants. This reportedly impacted overall participation in healthcare decision making capacity, which resulted in negativity towards assistance with healthcare management, despite accepting assistance.

Through understanding that aging, while not consistently related to deafness as there can be many different causes and timings of onset for deafness, it can be seen that aging and deafness does impact the access to healthcare experience concurrently. It can be seen that this population experiences challenges, and require assistance, in order to access their desired healthcare services. Investigation into the lived experiences of adults with deafness has highlighted the stressors that aging puts on the access to healthcare journey. Furthermore, observations made by participants highlighted that the challenges faced by adults with deafness when accessing their healthcare services is potentially recognisable by others, which leaves implications for clinical practice.

Chapter 6: Discussion

This chapter integrates the findings of this study with the existing literature and theoretical and conceptual frameworks which ground this study. The aims of this study were set to explore the lived experiences of adults with deafness when accessing their healthcare services in Johannesburg, South Africa. Results have been linked back to the current literature, as well as critically reviewed in relation to current, and aging theories.

The main aim of this study was to explore the lived experiences of adults with deafness when accessing healthcare services in Johannesburg, South Africa. Providing insight into the facilitators and inhibitors that influence the access to healthcare experience for adults with deafness, allows for an in depth understanding of the access to healthcare journey for this specific population. Previous studies have highlighted that access to healthcare is complex and that making use of a healthcare service extends further than arriving at the healthcare practitioner (Meade et al., 2015). There are many aspects involved in accessing to healthcare, and the experience of adults with deafness is essential to explore (Joubert & Botha, 2019). Adults with any degree or type of deafness require identical healthcare services to those with optimal hearing ability (Joubert & Botha, 2019). Thus, research into the access to healthcare experience for adults with deafness is needed in order to determine and understand the considerations needed in the healthcare setting for this population (Joubert & Botha, 2019). The results from this study indicate that there are significant facilitators and inhibitors, that influence the access to healthcare experience for adults with deafness in Johannesburg, South Africa.

It can be seen that although adults with deafness require the same access to healthcare experience as those with optimal hearing (Joubert & Botha, 2019), their experience requires greater consideration for their hearing and communication needs. In addition to the

communication needs of adults with deafness, the COVID-19 pandemic added more communication related stressors to the access to healthcare experience. Results from this study required integration with current literature, older literature, and the theoretical frameworks which grounded this study.

6.1 Critical review and application of the Biopsychosocialtech model, International Classification of Functioning (ICF), and the Theory of Accessibility by Penchansky and Thomas (1981)

Application and critique of theory drives the evolutionary nature of research (Anfara Jr & Mertz, 2014). In order for new theories and phenomena to become known, researchers throughout time constantly review old theories, rework current theories, and produce new theories.. In order to contribute to the field of research in the healthcare provision field, reflection on the theories chosen to govern this study was important. In review, this study made use of the Biopsychosocialtech model, International Classification of Functioning (ICF), and the Theory of Accessibility by Penchansky and Thomas (1981). The results of this study were analyzed deductively, in accordance with these theories. Deductive thematic analysis allowed for this study to be contextualized within existing theories, and how these theories could be applied to the lived experiences of adults with deafness when accessing healthcare services in Johannesburg, South Africa.

6.1.1 The application of the Biopsychosocialtech model

The Biopsychosocialtech model displays the connection between the biology, psychology, and socio-environmental factors within a person's life (Bolton & Gillett, 2019). Breaking down the different elements of an adult with deafness's access to healthcare experience, using the Biopsychosocialtech model (Bolton & Gillett, 2019), can provide insight into the internal motivations for seeking healthcare services. Myers (2009) found that overall health is made up

of biological, psychological, socio-environmental, ethnic, and technological components. The results of this current study found that specific components influence the access to healthcare experiences of adults with deafness. Results of this study found that age and physical health, within the biological subcategory (Bolton & Gillett, 2019), greatly impacts the access to healthcare experiences for adults with deafness. Adults with deafness find their access to healthcare experience challenging due to the effects of aging, the chronic conditions associated with aging and declining health, as well as deafness. The effects that the body has on access to healthcare for adults with deafness was greatly emphasised to be a contributing inhibitor to their overall experience. However, the psychological and socio-environmental components (Bolton & Gillett, 2019), in the lives of adults with deafness, aid in the access to healthcare experience. This current study found that psychological coping mechanisms developed by adults with deafness in the healthcare setting facilitates the access to healthcare experience. Adults with deafness not only create problem solving strategies for themselves to better cope in the healthcare environment, but also acknowledge that their deafness, aging and healthcare status impacts their experience and do not deny it. The socio-environmental components (Bolton & Gillett, 2019) in the lives of adults with deafness also facilitate their access to healthcare experience.

The majority of participants reported that relationships with family, and the social support provided by family, greatly aids their access to healthcare experience. Results of this study found that accepting help from family to cover listening and hearing needs in the healthcare environment, is essential to successful outcomes of their healthcare consultations. The communication needs of adults with deafness in the healthcare setting is often a challenge, as they often feel ignored within that context (Arulogun et al., 2013). Results of this current study agrees with this, as some adults with deafness reported that although familial assistance

is needed, accepting help is not always a willing decision as the loss of independence greatly impacts their access to healthcare experience.

Although it was not the aim of this current study to explore the impact of race, culture, ethnicity, or religion on the access to healthcare experience for adults with deafness, results of this current study found minimal expression of ethnic related components to the access to healthcare experience for adults with deafness. Results of this current study did not directly emphasise how cultural traditions, race, religion, or community impact the access to healthcare experience for adults with deafness. However, results found that adults with deafness, especially the older adults with deafness, relate to the stigma that deafness and old age impacts overall functioning in the community, and healthcare setting. Govender & de Jongh (2021) similarly found that age related deafness impacts the quality of life and overall participation in activities of daily living for the elderly population. Overall, ethnicity is an important subcategory of the biopsychosocial model that needs further research in the field of audiology, specifically highlighting aging and deafness.

The COVID-19 pandemic highlighted the technological advances needed in an evolving world, especially in healthcare service provision (Maru et al., 2021). Hearing health was also included in the use of remote technologically based healthcare services (Maru et al., 2021). The biopsychosocial model now includes a subcategory emphasising how technology impacts the lives of humans (Bolton & Gillett, 2019). Switching to telehealth for all who have the resources available became essential during the COVID-19 pandemic (McKinney et al., 2020). Results of this current study found that telehealthcare was not an option provided to adults with deafness in this public healthcare setting. Results found that while no adult with deafness was required to consult with their healthcare practitioner over the telephone to access their healthcare, they were relieved by this. As found by Stevens et al. (2019), the use of the

telephone by adults with deafness often leads to communication breakdown, as the transfer and reception of information, especially vital healthcare related information. The current study further highlighted that telephone use is not a preferred option of communication for adults with deafness, especially regarding their healthcare needs. Results of the current study emphasise how in-person healthcare consultation is favourable in the access to healthcare experience. A breakdown of how the Biopsychosocialtech model can be applied to the adult population with deafness as they access their desired healthcare services, based on the results of this study, have been presented in Table 9 below (Bolton & Gillett, 2019) (Myers, 2009):

Table 9: Application of Biopsychosocialtech model to the reported experiences of the adult population with deafness, as they access healthcare services:

Access to healthcare services for adults with deafness	Biological components	1. The effects of aging on the physical body 2. Reduced hearing function 3. Loss of physical independence
	Psychological components	1. The effects of deafness, and aging, on the cognitive functioning of the brain 2. The effects of deafness, and aging, on the emotional functioning of the brain
	Socio-environmental components	1. Willing acceptance of support for management of hearing and listening needs from family 2. Unwilling acceptance of support for management of hearing and listening needs from family 3. Participation in the healthcare consultation 4. Challenges communicating with deafness in the healthcare setting 5. Loss of social independence
	Technological components	1. Lack of telehealthcare options 2. Relief to not use the telephone for healthcare consultations 3. Use of hearing amplification devices 4. Making healthcare appointments using the telephone

Table 9 describes the ways in which deafness in adulthood impacts the access to healthcare experience. Using the Biopsychosocialtech model, breaking down the specific elements of an individual's life, using the predetermined sub-components, allows for a comprehensive understanding of how the different elements of life are impacted differently by deafness in this circumstance. Adults with deafness experience deafness biologically, as not only a reduction in hearing function, but also as a loss of physical independence, such as freedom of mobility, This impacts the ability to access healthcare using the physical body, including reduced hearing function in the healthcare setting. Table 9 describes that in addition to the biological components of deafness, the phycological components related to deafness also impact the access to healthcare experience. Adults with deafness experience a perceived decline in cognitive function as a result of aging and deafness, as well as a perceived decline in emotional functioning of the brain (Bolton & Gillett, 2019). This impacts the ability to access healthcare services, as memory, emotional regulation, reasoning, and sequencing are all suggested to decrease with age, and are also impacted by deafness (Bolton & Gillett, 2019).

An essential component of the Biopsychosocialtech model involves the socio-environmental aspects of an individual's life. Adults with deafness display conflicting feelings regarding accepting support from others, specifically family members, in the healthcare setting, with regards to their deafness. Adults with deafness are both willing and unwilling to accept this help from others, but accept it in any case – as the access to healthcare experience is too challenging without help from a family member to cover listening and hearing needs. This could also be seen in Table 7, by five participants who required assistive support from a family member on the day of their interview. Moreover, adults with deafness feel a loss of social independence with this acceptance of assistance, as they are no longer participating at perceived optimum in their healthcare consultations. The loss of participation in healthcare

consultations is also resultant of the communication breakdowns occurring between adult with deafness and the healthcare practitioner.

Reflecting back on Table 7, while onset and type of deafness was not a focus of this study specifically – the timing of onset and type of deafness and access to healthcare needs may affect the lived access to healthcare experience over the course of the participants' lifetimes. Depending on when the adult with deafness acquired their deafness, as well as what type of deafness is experienced – this may impact how the access to healthcare journey is experienced, and should be addressed in further research.

Another important component of the Biopsychosocialtech model involves the technological aspects of an individual's life, as technology is a constantly evolving and upgrading part of life, especially in terms of hearing function and hearing amplification (Bolton & Gillett, 2019). While adults with deafness are relieved to either have a family member handle telephonic conversations for them, and that telehealthcare was not a provided option for them to use during the COVID-19 pandemic in the public healthcare system, technology is an unavoidable aspect of life. While challenges do exists for adults with deafness using the telephone to make healthcare appointments, some aspects of technology are well embraced. The use of hearing amplification devices were eagerly welcomed by adults with deafness, with feelings of gratitude, relief and excitement. However, adults with deafness are also express feelings of worry regarding their hearing amplification technology. Adults with deafness are concerned regarding the cost of powering and maintaining their hearing amplification devices, as it is known that retired adults using SASSA pension grants have to prioritise their limited monthly funds accordingly (Nevondwe, 2010). Concerns about the cost of hearing amplification results in reduce use of aided and assistive technology, which is supported by Nevondwe (2010). Therefore, technology, and the use thereof for telephone and hearing

amplification use, is an essential component of the Biopsychosocialtech model for adults with deafness.

Table 7 reports on the type of hearing aid intervention required by the participants – highlighting that all participants would be required to make use of these elements of technology. The application of the Biopsychosocialtech model includes use of hearing amplification, and it can be seen that adults with deafness in the context of this study will all be making use of hearing amplification, and thus will be required to make the necessary lifestyle adjustments to use and take care of these devices, which comes at a cost. The cost of hearing amplification is a considerable element of access to healthcare, should the adult with deafness not be able to maintain the care and cost of their hearing aid devices.

Existing application of the Biopsychosocialtech model has not been used enough to comment on the experiences of adults with deafness, especially when addressing their needs in the healthcare setting. this current study contributes to the use of this model, as applied to the clinical practice setting. Overall, the biopsychosocial model is comprehensive enough to evaluate the access to healthcare experience of adults with deafness in Johannesburg, South Africa. However, more research is required to add to existing literature. Further investigation into how ethnicity and technology impact the access to healthcare experience for adults with deafness in different contexts is necessary.

6.1.2 The application of the International Classification of Functioning (ICF)

The ICF emphasises that participation in the experience of an activity is directly impacted by body function and impairment, with additional personal and environmental influencers which may impact how life can be lived (Mitra & Shakespeare, 2019). Existing knowledge of the ICF stipulates that the experiences of people with specific body functioning differences, can be broken down and better understood through application of this model (Mitra & Shakespeare,

2019). Application of the ICF to deafness has been shown in recent literature, however the application thereof has been more generalised to activities of daily living, rather than to access to healthcare specifically. This study aimed to use this theory to highlight the access to healthcare experience specifically and provide a more detailed understanding into this specific life experience. Applying the ICF to the lived experiences of adults with deafness when accessing healthcare services in Johannesburg, South Africa, is a useful tool to break down these experiences. From the results of this study, it can be seen that deafness in adulthood does indeed impact the access to healthcare experience. Figure 6 below integrates results found from this current study with the ICF:

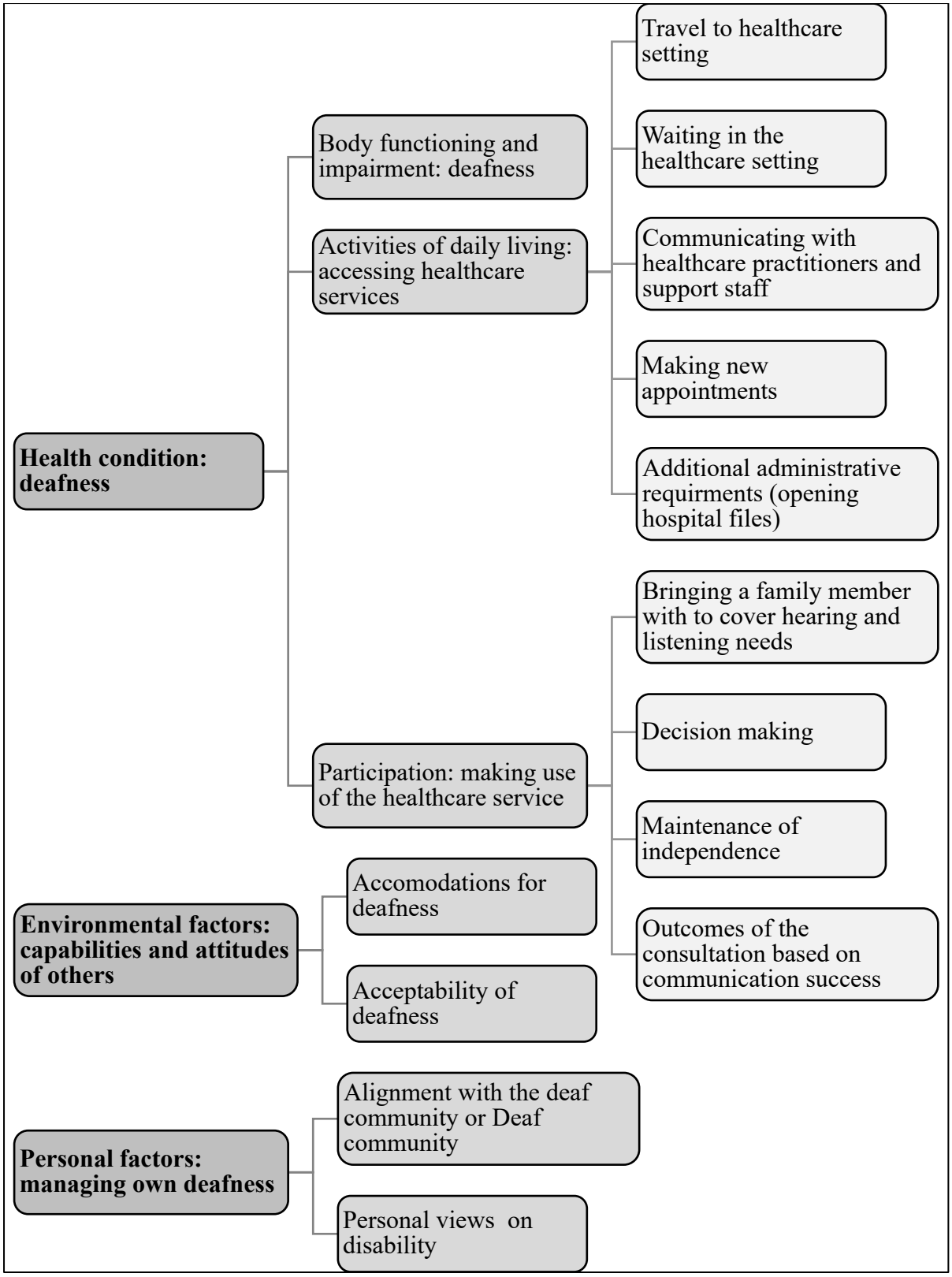


Figure 6: Breakdown of the International Classification of Functioning (ICF) (Mitra & Shakespeare, 2019) and the reported access to healthcare experiences of adults with deafness in Johannesburg, South Africa

Using the ICF to better understand the results of this study, the existing predefined sub-categories of the model can be used, as represented in bold in Figure 6. The overall category addressing the actual health condition which is deafness, is broken down further. The category of body functioning and impairment refers to the varying degrees and types of deafness that adults with deafness have. Adults with deafness expressed that their hearing function forms part of their access to healthcare experience, along with aging and additional co-morbidities. Although deafness in adulthood, as the defined healthcare condition, is not the sole cause of reduced activity completion, as aging and having other co-morbidities also plays a role, adults with deafness feel that their access to healthcare experience is impacted by their deafness. Results from this current study highlight that deafness is one such cause for reduced activity completion. Despite the multiple types of described hearing function, ages of adults with deafness, and type of hearing amplification used, experiences with their shared health conditions were similar.

The overall activity to be completed can be categorised as accessing healthcare services, but can be further broken down into: travel to the healthcare setting, waiting in the healthcare setting, communicating with healthcare practitioners and support staff, making new appointments, and any administrative requirements. For the participants of this study, all of the listed activities, as seen in Figure 6, need to be completed to access their healthcare services. Each activity is interwoven to create the full access to healthcare experience. Results of this study found that completion of these listed activities is reduced as a result of deafness in adulthood, which links to findings by Oyewumi and Adigun (2013), who found that deafness impacts communication. In order to complete activities in the healthcare setting, communication drives the consultation. The delivery of information and how the adults with deafness received information heavily impacts decision making, which is crucial in making choices regarding one's own body (Oyewumi & Adigun, 2013).

Relating back to the ICF (Mitra & Shakespeare, 2019), if the adult with deafness is unable to complete the steps needed in the healthcare setting due to difficulties communicating as a result of deafness, then the body function contributes to possible lack of completion of activity. This current study corroborates findings by McKee and Stransky (2019), who found that inequalities and difficulties experienced by an individual with deafness when communicating health-related concerns, results in inequalities in the healthcare environment. Furthermore, if unable to complete the activity required in the healthcare access journey, then the access to healthcare experience is therefore impacted by deafness. In addition to deafness, aging also impacts completion of activities in the access to healthcare experience.

Adults with deafness were only able to complete the activities needed during their healthcare access experience, if they were able to appropriately participate effectively, and this finding links to reported findings of Mitra and Shakespeare (2019), who stated that the ICF explains that participation in the activity is as essential as completion of the activity, and benefits of active participation in the activity include achievement of a more satisfactory outcome and social inclusion. Results of this study highlighted that adults with deafness find difficulty participating in the access to healthcare experience. Adults with deafness may have to hand over their hearing and listening needs, required in the healthcare setting, to someone else, commonly a family member. This impacts their overall ability to effectively participate in their own healthcare consultations, as communication needs are not met. Additionally, this impacts the decision making capabilities of adults with deafness, as they do not hear and participate in the information transfer from healthcare practitioner to patient.

Results of this study correlate to conclusions made by Moermans et al. (2021), as adults with deafness did report a lack of independence, and also found that decision making is essential for autonomy and independence in adulthood, especially when aging into the geriatric

population. Arulogun et al. (2013) found that adults with deafness feel excluded from their healthcare consultations and cannot participate effectively. Some adults with deafness, especially the elderly adults with deafness, find relief and comfort in their reduced participation in the healthcare setting, but some adults with deafness find this frustrating. It is essential to acknowledge that participation in an activity is important, but help is needed for adults with deafness, and not all adults with deafness feel content with this.

To avoid alignment with the medical model of disability, it is essential to note that the deafness itself is not the cause for lack of activity completion (Kazou, 2017). The social model of healthcare suggests that reduced activity completion and participation, is not at the fault of the adult with deafness, but rather a consequence of the unaccommodating surroundings (Kazou, 2017). Thus, the ICF suggests that additional environmental factors and personal factors, also impact the completion of activities and participation in an experience (Mitra & Shakespeare, 2019). The results of this study show that the hospital environment does not effectively accommodate adults with deafness. As the hospital environment is comprised of the physical infrastructure of the hospital/clinic, and the attitudes of the personnel in the hospital environment, it can be seen that adults with deafness need to navigate their surroundings to access their healthcare services. This study found that the hospital infrastructure does not accommodate the needs of adults with deafness, as increased uncontrolled noise volumes and lack of visual support, result in difficulties accessing healthcare services.

The varying attitudes of acceptance of deafness expressed by the healthcare practitioners and support staff in the hospital setting further impact the access to healthcare experience. Additionally, the impact of the COVID-19 pandemic had on the hospital environment and operating procedures, which was out of the control of the adults with deafness in the healthcare setting, further contributed to difficulties communicating with healthcare

practitioners. The unchanging nature of the public healthcare system was found to be a concern of adults with deafness, as their environment does not meet their needs and they cannot change their experience. Hence, the lack of participation experienced by adults with deafness when accessing their desired healthcare services was directly influenced by their environment. The evident dissatisfaction with public healthcare system by adults with deafness, is supported by Harris et al (2011), who found that individuals that make use of the public healthcare system in South Africa are losing faith in the system.

The ICF also describes the personal factors contributed to activity completion and participation (Mitra & Shakespeare, 2019). As personal factors refers to management of body functioning and navigation of environment (Mitra & Shakespeare, 2019), adults with deafness' perceptions of their own deafness will impact the access to healthcare experience. Results of the current study found that adults with deafness, specifically who do not identify with the Deaf community, do not view their deafness in a positive manner. Adults with deafness reported that their deafness adds challenges to their access to healthcare experience, and additional co-morbidities and aging, further emphasises these challenges. Participants from this study specifically align themselves as not being part of the Deaf community. Despite not aligning with the Deaf community, adults with deafness are dissatisfied with their personal healthcare access experiences, which is supported by Kattair et al. (2017), who reported that regardless of alignments with the deaf community or Deaf community, adults with deafness are concerned about their access to healthcare experience. Thus, results from this study found that adults that do not align with the Deaf community, and view their deafness as disabling in the healthcare context.

Overall, the ICF is a useful framework in breaking down and understanding the access to healthcare experience for adults with deafness. The results of this current study contribute

to the use of this model in the clinical setting, as it highlights the detailed needs of adults with deafness in this context. The context in which this study was completed highlights the need for further research in similar contexts throughout Johannesburg, South Africa. Additionally, the impact of aging on the access to healthcare is well researched, however, the South African experience should be further investigated. The ICF is a useful tool to understand the different elements that make up the access to healthcare experience.

6.1.3 *The application of Theory of Accessibility (Penchansky & Thomas, 1981)*

The Theory of Accessibility by Penchansky and Thomas (1981) has been applied to multiple contexts since its publication, however limited application to the adult population with deafness has been utilized based on the lack of published research. Additionally, application of the theory to the South African context has not been adequately explored. Theoretical application and clinical exploration of said theories forms the basis of evidence-based practice. The purpose of reviewing aging theories is to explore how they can be applied to current research, and thus influence better clinical practice. To address use of this theory's current application, the limited application of the entire Theory of Accessibility (1981) to adults with deafness in Johannesburg, South Africa needs to be questioned. The combination of lack of literature in the South African context, and for those with deafness, shows that the more research into the application of a forty-year-old theory needs to be completed.

While the Theory of Accessibility (1981) is well documented and applied in current research, specific application to the adult population with deafness in South Africa is useful, but also has limitations (Meade et al., 2015). This current study found that this aging theory has dimensions that are certainly applicable, and are very relevant, to the lived experiences of adults with deafness when accessing healthcare services in Johannesburg, South Africa. However, this study also found that some dimensions are more applicable than others. Based

on this limited application, it can also be seen that application of this theory is not specific enough to the needs of adults with deafness. Despite limited application, dimensions of this theory, namely accommodations and acceptability, yielded the most commonly related experiences among participants with deafness. Application of the Theory of Accessibility by Penchansky and Thomas (1981) to the results of this current study has been described in Figure 7 below:

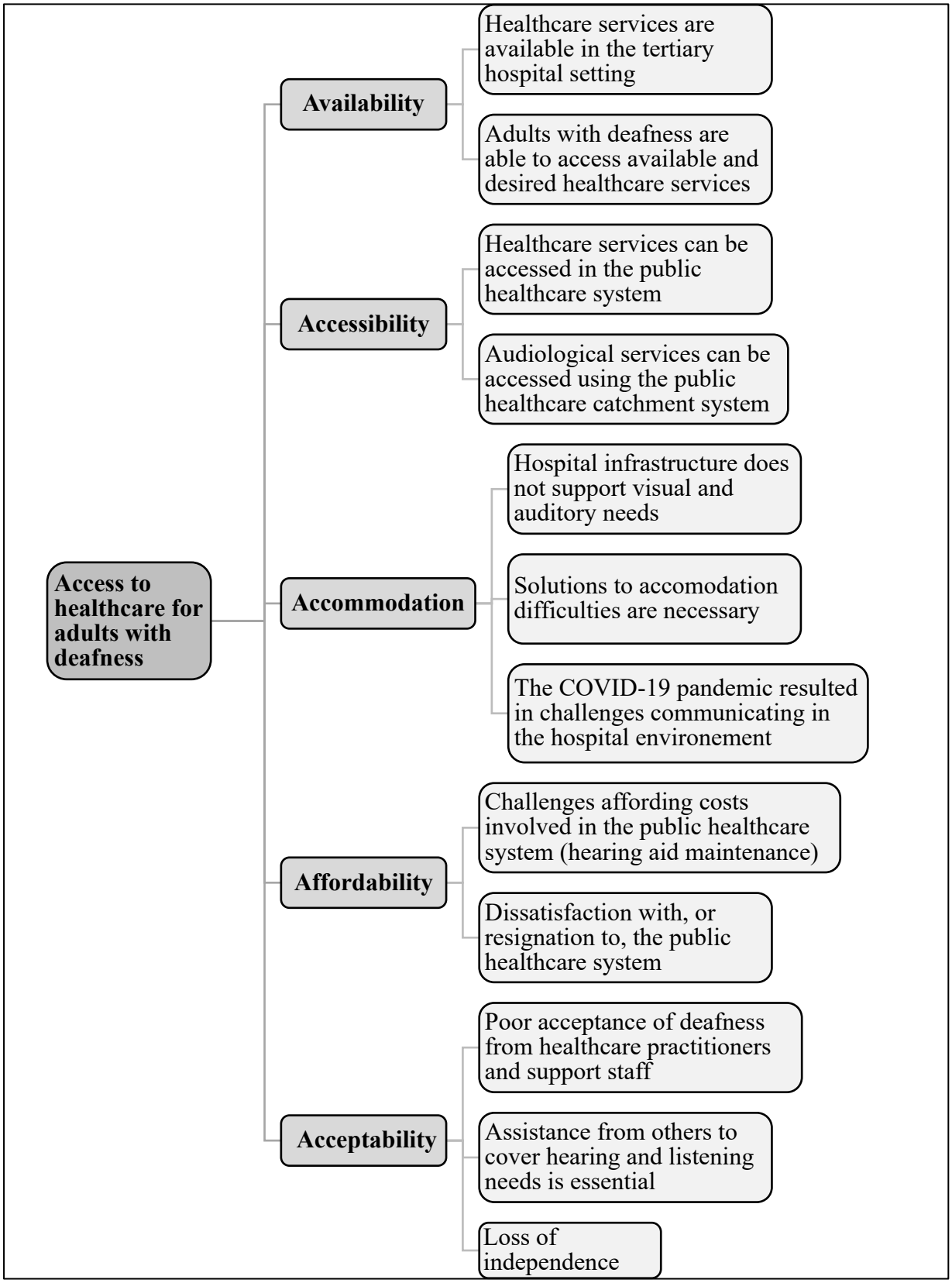


Figure 7: Breakdown of the Theory of Accessibility (Penchansky & Thomas, 1981) and the reported access to healthcare experience of adults with deafness in Johannesburg, South Africa

Three of the five dimensions mentioned in Figure 7, namely accessibility, affordability, and availability (Penchansky and Thomas, 1981), were only indirectly addressed by less than 70 percent of participants, which shows that the model is not specific enough to the needs of adults with deafness. However, despite adults with deafness indirectly commenting on specific dimensions more than others, this supports findings by Meade et al. (2015), who found that the dimensions of the Theory of Accessibility by Penchansky and Thomas (1981) all impact the access to healthcare experience, however not all equally for all people. This was shown in the results of this current study, as co-reporting of aging specific responses, complaints, or grievances with the public healthcare system in South Africa, and difficulties with deafness as an added consideration for this population, was highlighted. Within each interview, participants may have incidentally revealed their access to healthcare experiences within the specific dimensions from the Theory of Accessibility (1981). Figure 7 demonstrates that participants may have highlighted their experiences under more than one dimension from the theory, and how this was impacted by their deafness, or aging, or the COVID-19 pandemic, or a combination of these experiences. Comparably, Allen et al. (2017) found that when one or more dimensions of the Theory of Accessibility by Penchansky and Thomas (1981) are not adequately met, then the access to healthcare experience for any person is incomplete, and possibly unsatisfactory.

By acknowledging that the two dimensions of accommodation and acceptability being the most mentioned dimensions, with above seventy percent of participants mentioning either dimension, the full application of the entire model of the Theory of Accessibility (1981) should be reviewed. Adults with deafness spoke less about their access to healthcare experiences in terms of accessibility, affordability, and availability. Adults with deafness also speak to their experiences with aging, and the results thereof, when talking about affordability of services due to pension grants and retirement. Specific emphasis was placed on the costs that need to

be considered when budgeting for costs involved in hearing aid management and care. Adults with deafness also spoke about the public healthcare system in terms of its functioning in general, not just its aspects related to their deafness. This directly speaks to availability of services in general, and access to those services, in addition to specific facilitators or inhibitors participants experienced. The contribution of adults with deafness to these dimensions highlight that although healthcare services for adults with deafness in this specific catchment area are available, it does not mean that it is close to their home. Adults with deafness find challenges affording their healthcare services, despite the perceived affordable nature of the public healthcare system, as opposed to the preferred private healthcare options.

Based on how participants indirectly addressed the dimensions of accommodation and acceptability the most, in relation to their access to healthcare experiences, it can be seen that hospital infrastructure and the healthcare practitioners who provide services therein impact the experience the most. The importance that the healthcare partitioners have in the access to healthcare experience for adults with deafness has therefore been emphasized. The juxtaposed attitudes of medical doctors, and nurses, or support staff such as file clerks, further stress the mixed attitudes and levels of acceptability of adults with deafness in the public healthcare setting. Adults with deafness highlight that the attitudes and actions of healthcare practitioners and providers directly relate to the satisfaction of their patients.

It is essential to acknowledge that while the dimensions of accommodation and acceptability were addressed most frequently, there may be reasons for this. For example, the time allocated for each participant to complete the interview may have limited the probing of the remaining three dimensions of the theory – and participants chose to elaborate more on accommodation and acceptability as those dimensions may have appeared more important at the time. Another possible reason for less reporting on the remaining three dimensions may be

that the participants currently accessing their desired healthcare services at the research site specifically were less concerned about deafness and availability, accessibility and affordability due to the nature of their healthcare needs and the kind of services offered at the research site.

The infrastructure, organization, and protocols within the public healthcare setting do not support the needs of adults with deafness. Specific reference to uncontrolled noise levels, lack of visual support, and long waiting periods impact the access to healthcare experience. While these factors were expressed by adults with deafness, elements of the aging process made themselves clear. Older adults with deafness expressed that the noise levels and waiting periods were the most difficult aspect of accessing their healthcare services. It is essential to note that not only older adults with deafness may feel a lack of accommodation in the public healthcare setting, but also adults across all levels of hearing function and age ranges. This should be explored in future research studies.

Overall, the application of the Theory of Accessibility (Penchansky & Thomas, 1981), to the adult population with deafness, has not be adequately explored in the past. Results of this current study highlight that while this model has aged over time, some dimensions of the theory are more applicable than others – but can still be used to explore the experiences of adults with deafness when accessing healthcare services.

6.2 Challenges in access to healthcare services for the adult population with deafness in the South African context

This study is grounded in the fact that access to healthcare is a basic fundamental right of every human being across the world (World Health Organization, 2017). In review, Saurman (2016) and Meade et al. (2015) describe access to healthcare as the degree of fit between the healthcare service itself and the prospective user of these services, and that access to healthcare is characterized by quality, appropriate, sufficient, and timeous access to healthcare Studies

exploring deafness in adulthood in South Africa, a developing country, is lacking. Results of this study aimed to fill the gaps found in the literature, as South African based literature is scarce.

The challenges that adults with deafness experience when accessing their healthcare services, along the catchment system could be seen in this current study. The results of this current study are supported by the study completed by Goudge et al. (2009) who reported that in order to access the more specialised hospitals in urban areas, referrals are needed along the catchment chain. Goudge et al. (2009) further elaborated that for the referral system to work in a patient's favour, the referral process along the catchment chain must be followed to completion, however, this process is lengthy and very drawn out, and results in patients feeling unempowered by the process (Goudge et al., 2009). Adults with deafness, similarly to the rest of the South African population who use public healthcare services, have to wake up early to get to the hospital at a time when they don't have to wait as long in line, and by the time services are accessed it has been hours already. Adults with deafness also have difficulties accessing transport to get to their healthcare services, mainly for age related mobility challenges and financial limitations. As reported in *sub-section 6.2,* in addition to difficulties accessing transport services for whatever reason, the catchment area for this study is large and thus travel time is still needed, which implied increased costs for adults with deafness living in the further edges of the catchment regions. Results from this current study support the older study by McLaren et al. (2013), specifically seen in *sub-sections 6.2 and 6.4*, which highlights that transport costs, and distance from the public hospital, is a concern for adults with deafness, especially for the more elderly adults with deafness.

As reported in *sub-sections 6.1 and 6.3*, adults with deafness are required to travel and wait long hours in the public healthcare system, which is especially draining for the more

elderly adults with deafness. Adults with deafness made clear that the public healthcare system is highly pressurized, and thus it is understood that long waiting hours are to be expected in waiting areas which do not accommodate their needs. The reported grievances and acceptance with long waiting times, as reported by adults with deafness, support findings by Visagie et al. (2015), who also reported that difficulties accessing healthcare services were directly related to finances of patients, as loss of income was a common experience due to the need to be at the public healthcare institution for long hours to combat long waiting times.

Adults with deafness also notice the high demands placed on the public healthcare system, which services such a high number of population, as seen in *sub-sections 6.1and 6.4.* Additionally, the powerlessness that adults with deafness feel in the highly pressurized public healthcare system can be seen. These findings directly link to results found by Goudge et al. (2009), over ten years ago, who also found that patients who use public healthcare in South Africa feel powerless within the system, and that the healthcare services in a particular location may not be available in the area, due to lack of equipment and healthcare practitioners, as well as lack of finances.

Furthermore, the desire to obtain private medical aid felt by adults with deafness, in South Africa, is not realised due to the financial strain experienced. This finding is supported by Burger and Christian (2020), who found that accessing private healthcare is a choice that is heavily linked to the financial ability to make such a choice, and that upgrading to private medical aid is a desired but unattainable reality faced by the majority of the South African population.

Overall, it can be seen that access to public healthcare is challenging for adults with deafness, due to cost, location and availability of services. Relating back to the literature showed that this is a common experience for the greater South African population. Results

from this study re inclusive of the greater South African population who make use of the public healthcare system.

6.3 The impact of aging and deafness on the access to healthcare experience

Majority of adults with deafness who are accessing healthcare services are diagnosed with presbycusis, along with other causes for their deafness. However, in addition to age related hearing decline, the additional elements of aging further contribute to the access to healthcare experience for adults with deafness, as reported in *sub-section 6.1*. Furthermore, aging adults with deafness attend multiple clinical departments in the public healthcare system, specifically in the one tertiary academic hospital and research site. This result is supported by Wilkowska et al. (2021), who found that multiple co-morbidities occurring at the same time as a result of aging and other chronic conditions can result more frequent hospital visits. Aging in general adds challenges to the access to healthcare experience for adults that also have deafness as an additional co-morbidity. Besides the challenges communicating with healthcare practitioners as described in *sub-sections 6.2 and 6.3*, discomfort with loud environmental noises, and lack of visual support in the hospital environment, the effect that aging has on the body and finances was a reported concern by adults with deafness. Aging adults rely on support from others for financial assistance, mobility assistance, cognitive assistance, and transport assistance. Results of this current study relate to Pickard and Glendinning's (2002) findings, which highlight that aging adults require assistance from others in the access to healthcare journey.

With aging, comes the resignation of personal management of healthcare needs. Aging adults with deafness either felt comfort and relief, or frustration, to hand over hearing and listening needs, while others were frustrated and felt the loss of independence, as described in *sub-section 6.5.* This finding is supported the findings from the studies completed by Moermans et al. (2021) and Smith et al. (2015), who reported that decision making capabilities

for aging adults with deafness unavoidably decreases when assistance from others is provided, resulting in reduced autonomy in healthcare decision making resulted in a loss of independence.

The reality faced by adults with deafness, is that aging inhibits the access to healthcare experience. It was found that aging adults with deafness are not as mobile as in their youth, and that travel to the hospital and spending the day in the hospital environment is challenging. The effect that aging has on their bodies is tiring and effortful, especially in the hospital environment where long hours are spent in noisy and uncomfortable clinical settings, as reported in *sub-section 6.2.* These findings are supported by the outcomes reported by Kelly et al (2019), who found that the additional physical demands imposed on the elderly in the South African public healthcare setting, is tiring, uncomfortable, and sometimes painful.

Older adults with deafness, in South Africa, rely heavily on SASSA pension grants to access their healthcare services, and need to prioritise how they ration their allowances from their SASSA pension grants, which includes purchasing hearing aid batteries, and repairing hearing aids. It was found that this cannot always be prioritised as limited finances from SASSA pension grants need to be allocated to all aspects of life and not just healthcare expenses, as described in *sub-section 6.4,* and can be supported by findings by Nevondwe (2010) found that many elderly South Africans rely on this limited financial support to sustain themselves. Results from this current study correlate to the findings of Nevondwe (2010), as depending on the priorities and needs of the elderly pension grant recipient, funds may be personally allocated to where it is needed most. For some elderly adults with deafness, prioritising maintenance of hearing function is not always possible.

Overall, the aging process has been shown to impact the access to healthcare experience for adults with deafness. While aging is an unavoidable fact of life, the challenges faced by the

elderly adults with deafness need to be accepted and accommodated in the healthcare context. The needs of aging adults have been highlighted in the literature, and this current study adds to this information – especially for the aging adult population who also have deafness as an added co-morbidity.

6.4 Communication and deafness, in the public healthcare environment during the COVID-19 pandemic

The communication needs for adults may be challenged by deafness (Robles-Bykbaev et al., 2019). As not every adult with deafness identifies with the Deaf community (Malebranche et al., 2020), it is important to explore how deafness in adulthood can still impact the access to healthcare experience (Robles-Bykbaev et al., 2019). The contribution of this current study to the communication needs of adults with deafness highlights that communication needs were not met during the COVID-19 pandemic. Like Oyewumi and Adigun (2013) found that access to information via auditory means, and effective communication of healthcare information, is essential for decision making and making choices regarding one's own body, this current study displayed that in order to take autonomy of healthcare needs, adults degraded deafness experienced challenges during this time – such as mask wearing resulting disrupted auditory signals through speech. Similarly, to Malebranche et al. (2020), this current study found that despite views on hearing function and disability, poor communication in the healthcare environment between adults with deafness and their healthcare practitioners resulted in poor access to healthcare outcomes.

Communication during the COVID-19 pandemic changed for all people, as facial coverings, social distancing and telecommunication was required to maintain the health and safety of the greater population (Mckee, Moran & Zazove, 2020). Results of this current study are supported by results found by Mckee, Moran and Zazove (2020), despite their study

referring to adults with deafness in the United States of America, as challenges communicating in the healthcare environment was also experienced by adults with deafness in South Africa. Exploration into how modes of communication needed to change during the COVID-19 pandemic in the public healthcare environment for adults with deafness in South Africa showed that communication was difficult overall, but with some positive facilitators that eased the access to healthcare experience, as seen in *sub-sections 6.3 and 6.5.*

Adults with deafness found particular difficulty with auditory-verbal communication. It was found that adults with deafness, while compliant with the use of PPE, still struggled to communicate. Being compliant with PPE mandates was necessary to receive access to healthcare services in South Africa, as similarly reported by McQuoid-Mason (2020), that non-compliance with PPE wearing in South African healthcare institutions could result in being denied access. Adults with deafness, in Johannesburg, South Africa complied with the COVID-19 pandemic PPE regulations and mandates. As described in *sub-section 6.3*, in order to access their desired healthcare services, adults with deafness had to wear PPE despite their deafness and resultant challenges communicating.

Adults with deafness found that communication while using PPE was challenging. Adults with deafness found that muffled speech, obscured lip reading by face-masks, social distancing from the healthcare practitioner, and consistent need for increased verbal volume and repetitions, were the most challenging aspects to their communication needs, as described in *sub-section 6.3*. Similarly to Maru et al. (2021), this current study aimed to uncover these challenges, in a time when modes of communication globally were changing (Mckee, Moran & Zazove, 2020), both in and out of the healthcare environment. As supported by Maru et al. (2021), this study found that adults with deafness expressed that wearing of face-masks was the most difficult aspect of communication with PPE. This highlighted how PPE impacted

auditory-verbal communication for adults with deafness. It was found that blocked lip reading, muffled speech, covered facial expressions and cues, social isolation, continuous requests for repetition, and damage to hearing aids by mask strings, were the most challenging aspects .

Existing challenges to communication for persons with deafness were exacerbated by unavoidable noise, and lack of visual support, in the hospital environment. Adults with deafness found that they were unable to effectively hear in the waiting areas, and this impacted their access to healthcare experience. Noisy waiting areas resulted in information presented auditorily, such as calling of file numbers, resulted in adults with deafness files being missed. Noisy waiting areas resulted in hospital files being missed when called thus delaying the access to healthcare services, and lack of support from hospital support staff and from other patients in the waiting areas. Furthermore, lack of effective communication regarding collection of files in noisy waiting areas, for the deaf population, resulted in feelings of being ignored and lost. The lack of visual support in the hospital environment also highlighted that the reliance on the sense of vision is common for adults with deafness. When visual signage is not provided in the hospital setting, adults with deafness have less sensory information to rely on, to access their healthcare services, which has been illustrated in *sub-section 6.3*.

Adults with deafness need to wear their hearing aids, as well as their PPE, to effectively communicate in the healthcare setting. Adults with deafness were definitely worried about damage to hearing aids, and wearing of face-masks during the COVID-19 pandemic highlighted this stress. As described in *sub-section 6.3*, adults with deafness in South Africa making use of SASSA pension grants were specifically worried about allocating funds to cover damage to hearing aids should they occur. Maru et al. (2021) and Nevondwe (2010) support these findings, as they similarly found that adults with deafness were particularly stressed about damaging their hearing aids while wearing face-masks that looped around their ears. The aging

adult population with deafness is likely to make use of additional sensory aids, not just hearing aids. stated that sensory aid costs fall within the limited funds allocated through SASSA grants. This also included costs to repair sensory aids, and it is known that the SASSA grant system does not appropriately account for all the healthcare costs needed for the deaf and aging populations in South Africa (Nevondwe, 2010). Adults with deafness who also wear visual sensory aids, such as glasses, are also expected to cover these costs, which the study by Nevondwe (2010) also found. Damage to hearing aids during the COVID-19 pandemic was exacerbated by face-mask wearing, particularly for masks that looped around the ears, and has been elaborated on in *sub-section 6.3.*

In addition to stress towards damage to hearing aids when communicating while wearing PPE, aging adults with deafness also find difficulty wearing all their sensory aids at once with their required PPE. Adults with deafness feel uncomfortable wearing hearing aids, glasses, and PPE face-masks. The overwhelming nature of having too many items on the face impacted the access to healthcare experience for adults with deafness. This further highlighted in *sub-section 6.3*, as PPE wearing impacted communication, as comfort also impacts the flow of communication. As Hasumi and Jacobsen (2014) and the Institute of Medicine of the National Academies (2008) reported that assistive devices are needed by the aging population, including sensory aids like glasses and hearing aids, this current study also showed that adults with deafness may wear more than one sensory aid to attend to vision loss and deafness.

Despite all of these challenges communicating during the COVID-19 pandemic in the healthcare setting, adults with deafness did experience some positive facilitators that eased their access to healthcare experience. *Sub-section 6.3 and 6.5* describe the specific actions by the healthcare practitioners resulted in the burden of ineffective communication for adults with deafness being lifted. Adults with deafness experienced communication barriers during the

patient-practitioner interaction, which was similarly found by Müller (2017), who reported that patient-practitioner interactions are essential to the communication of healthcare related information.

Positive facilitators to the access to healthcare experience for adults with deafness were experienced when healthcare practitioners showed their acceptance of deafness towards their patients. Healthcare practitioners who were accepting of deafness moved closer to their patients with deafness despite social distancing. Healthcare practitioners also raised their verbal volume to increase reception and comprehension of healthcare related information when presented verbally. Not only did healthcare practitioners who were accepting of deafness provide visuals to their patients with deafness, they were also more patient overall. Acknowledging the communication challenges that adults with deafness were experiencing during the COVID-19 pandemic in the healthcare setting, showed that acceptance of deafness is essential to inclusive clinical practice, which was further elaborated on in *sub-sections 6.3 and 6.5.* In agreeance with Goudge et al. (2009), when healthcare practitioners are accepting of deafness, they are more likely to adjust their approach to communicating healthcare related information to their patients with deafness.

Overall, it can be seen that adults with deafness experienced difficulty communicating already, prior to the COVID-19 pandemic. The COVID-19 pandemic only exacerbated these communication challenges by adding PPE and changing the protocols within the public healthcare setting. Compliance with PPE was not only a requirement, but essential in order to receive healthcare services. Thus, the communication challenges experienced by adults with deafness only grew during this time. However, the acceptance of deafness shown by healthcare practitioners during this time benefitted adults with deafness, as accepting behaviour is known to improve the access to healthcare experience.

Reviewing the responses from adults with deafness, it was noticed that compliance with COVID-19 protocols and regulations does not necessarily relate to acceptance. Acceptance would imply that the participants with deafness willingly submitted to the changes in operating procedures. Rather, participants complied for the sake of their own healthcare needs, and acknowledged that should they not comply, the possibility of not being able to access their desired healthcare service was imminent. Based on the responses from the adults with deafness, it can be seen that the operating procedure changes required in the public healthcare system to deal with the COVID-19 pandemic, resulted in delayed meeting of healthcare needs. Nevertheless, adults with deafness still had their hearing needs met despite the delay in appointment scheduling. Overall, compliance with changing protocols allowed for the participants with deafness to not only attend their appointment at the Speech Therapy and Audiology Department, but also attend other clinics within the hospital.

6.5 Finding the good in the bad, when accessing public healthcare services

Access to healthcare barriers have shown to impact vulnerable populations in developing countries, such as in South Africa (Bali, 2018). As adults with deafness in this study can be considered a vulnerable population, it is essential to describe all elements of their access to healthcare experience, including both positive and negative interactions. Adults with deafness, while experiencing challenges and inhibitors to their access to healthcare experience, also experience some good elements of the journey. The concept of “islands of good practice” by Penn and Watermeyer (2018), has been used in healthcare research to describe exceptional cases of what can be described as finding “the good found in the bad”. There are instances when facilitators to the access to healthcare experience become clear, despite what can be described a challenging experience (Penn & Watermeyer, 2018), such as with this current study. An island of good practice found in this current study were described as positive

interaction with healthcare practitioners who displayed acceptance of deafness, and made the necessary adjustments to their clinical approach during these consultations. (Kushalnagar, 2019),

When reviewing the results of this current study, adults with deafness experience many challenges in their access to healthcare experience, as a result of their deafness. Adults with deafness particularly find the lack of accommodations in the healthcare environment to inhibit their access to healthcare. Specifically, the hospital infrastructure does not support the needs of adults with deafness, as waiting areas are too loud and there is an evident lack of visual support throughout the hospital setting. Additionally, as described in *sub-sections 6.3 and 6.5*, adults with deafness found that there is an overall lack of acceptance of deafness from healthcare practitioners and support staff. The lack of education in general about deafness in adulthood has resulted in poor attitudes from healthcare practitioners and support staff.

Reporting on the experiences of the adult population with deafness in the South African context is essential, especially since above eighty percent of the general population make use of public healthcare. Burger and Christian (2020) and Ngobeni et al. (2020) found that accessing private healthcare is a financial ability and also a choice for those who can afford it, as upgrading to a more desirable healthcare practitioner or facility is not always a reality for the majority of the South African population. Similarly, the findings of this study add to the discussion regarding finances, and public versus private healthcare options. Besides deafness being a possible cause for vulnerability in the public healthcare setting, adults with deafness are also relying on the public healthcare system due to age and finances. If adults with deafness were able to make use of private medical aid, it would be a preferred choice, as described in *sub-sections 6.2 and 6.4.* Age, finances and deafness, especially when combined, all inhibit the access to healthcare experience.

Despite the negative experiences of adults with deafness when accessing healthcare services, results from the current study were not all negative. Some positive facilitators were revealed in the access to healthcare experience for adults with deafness, and can be seen as "islands of good practice". This current study found that despite these evident challenges experienced by adults with deafness in the healthcare setting, adults with deafness experienced "islands of good practice" from their healthcare practitioners in specific circumstances. This can be seen when doctors provided visuals to their patients with deafness and increased their verbal volume when communicating, Supporting this result, as described in *sub-section 6.5*, Penn and Watermeyer (2018) found that specific remarkable elements of clinical practice can be found in the public healthcare setting, where resources are scarce and barriers to access exist Healthcare practitioners and support staff who accommodate and accept adults with deafness showed to improve the access to healthcare experience. and this is supported by Penn and Watermeyer (2018), who stress the importance of communication in the healthcare setting as an "island of good practice", if executed well.

In addition to the adaptations made in the healthcare environment by healthcare practitioners and support staff, adults with deafness need to facilitate their own experiences. The active problem solving strategies employed by adults with deafness to improve their access to healthcare experience can be seen as a strength of the population, despite their vulnerability and challenges in the healthcare environment. Even though adults with deafness find their access to healthcare experience challenging at times, the strategies that they use in the healthcare setting eases the inhibitors. Adults with deafness often need to employ more than one problem solving strategy to improve their access to healthcare experience. For example, adults with deafness who independently request increased verbal volume form their healthcare practitioner, are the same adults with deafness who make their deafness known to their healthcare practitioner. Another example is adults with deafness who bring a family member

with to cover hearing and listening needs, may also still make full use of their hearing amplification despite the help of another person. By creating their own facilitators to the access to healthcare experience, which have been described in *sub-sections 6.3 and 6.5*, adults with deafness are able to better access their healthcare services in a system they believe is unchanging.

Adults with deafness are either outright dissatisfied with their access to healthcare experience, or are resigned to a system they cannot control or change, as evident by the reported desires to use private medical-aid schemes, and reported negative experiences with healthcare practitioners. This further emphasises that acceptance of an experience does not directly relate to willingness or desire to accept. Acceptance of an experience is therefore different to resignation to an experience. This highlighted in *sub-sections 6.4 and 6.5*, which describes the vulnerability of adults with deafness in this context. This study showed that adults with deafness are more resigned to the public healthcare system than accepting of it. Acceptance would imply that adults with deafness have a choice in the process of their access to healthcare experience, however, this is simply not the case.

The hesitation to voice their true opinions on the public healthcare system out of fear of not receiving the healthcare services needed, showed how users of the system are subject to the system, as supported by Goudge, et al. (2009). If adults with deafness are fearful to express their views on the public healthcare system, they are essentially voiceless and their grievances cannot be heard, as evident in the pilot study where the pilot participant was reluctant to report her experiences out of fear, and also evident by her short response length. Goudge, et al. (2009) found that patients feel unempowered in the public healthcare system. Results from this current study also highlight this vulnerability and powerlessness felt by adults with deafness in the public healthcare system. Through processes ensuring trustworthiness of results, the researcher

of this study had a duty to the participants, to reassure them that their reported experiences would not be communicated directly to higher hospital management, and that no identifiable information would be linked to them. Acknowledging the vulnerability of adults with deafness in the public healthcare system, allowed the participants to voice their true opinions once reassured, as ensured through trustworthiness and rigour.

Results of the current study found that vulnerability is indeed experienced by adults with deafness, and also further emphasises the vulnerability of this population. Similarly, Masuku et al. (2021) and Arulogun, et al. (2013) found that adults with deafness experience, exclusion, feelings of invisibility, reduced independence and autonomy of when accessing healthcare services. Communication barriers between the patient with deafness and the healthcare provider, results in compromised quality of healthcare, autonomy, and confidentiality. The breach of confidentiality, is especially recognised when someone else in needed in the healthcare consultation to cover hearing and listening needs. Results of this study showed that some adults with deafness are not comfortable including family members in their healthcare consultations, which correlates to the findings by Masuku et al. (2021). This perceived uncomfortable breach of healthcare confidentiality experienced adults with deafness is supported by the study by Arulogun, et al. (2013), who found that the adult population therefore becomes vulnerable when the standards of ethical healthcare are broken, so that effective communication can occur in the healthcare consultation to try accommodate deafness. Despite accommodations for deafness and acceptance of deafness in the healthcare setting being a clear "island of good practice" (Penn & Watermeyer, 2018), breaking confidentiality of patients with deafness is a clear challenge.

Therefore, it can be seen that the experiences of adults with deafness when accessing healthcare services may be overlooked but is an area of clinical training that requires more

theoretical application. Application of pre-existing models and theories are able to describe these aforementioned experiences, however it is essential to remember that the personal experiences explored are grounded in reality – and are the actual lived experiences of human beings. There are commonly shared challenges experienced by the adult population with deafness, irrespective of varying degrees of severity of deafness and diagnoses. However, despite reported inhibitors to their access to healthcare experience, such as lack of acceptance of deafness, and lack of accommodations made for deafness, there are also perceived facilitators. Reporting on the strengths in their experiences is able to encourage continued good clinical practice.

Chapter 7: Conclusion

This chapter provides a summary of results obtained, and the presenting limitations found for this current study. Implications for future research, clinical practice and training, have also been provided. Overall conclusions regarding the relevance of this current study have been described.

7.1 Summary of Findings

This study explored the lived experiences of adults with deafness when accessing healthcare services in Johannesburg, South Africa, brought to light an array of experiences. The use of a qualitative approach revealed that adults with deafness experience both facilitators and inhibitors in their access to healthcare journey. In addition to the general access to healthcare experience for adults with deafness, the COVID-19 also impacted the journey. Results from this study highlighted that access to healthcare for the adult population with deafness in Johannesburg, South Africa, is influenced by multiple elements ranging from needs of the aging to needs for more effective communication.

Adults with deafness experience facilitators which improve their access to healthcare experience. These facilitators include involvement of a family member when attending healthcare consultations to cover hearing and listening needs, as the burden of managing one's own healthcare with deafness as an added co-morbidity is too great. Additional facilitators include the accepting attitudes some healthcare practitioners exhibit in the healthcare environment. Through acceptance of deafness, the communication needs of adults with deafness improved. Additional facilitators to the access to healthcare experience for adults with deafness includes the active problem solving and coping strategies employed by adults with deafness in the healthcare setting to ease the stressors of communication. Problem solving

strategies includes Informing the healthcare provider about personal deafness and hearing abilities, requesting increased verbal volume and repetitions from healthcare practitioners, reliance on lip reading, use of hearing amplification, and use of visual aids.

Adults with deafness also experience inhibitors which detract from their access to healthcare experience. These inhibitors include the effects of aging. The impact of aging on the adult population with deafness has physical, emotional, and financial implications. Aging adults with deafness experience discomfort in the healthcare setting due to mobility challenges, and sensory loss such as deafness and vision loss. Adults with deafness are consistently aware of their financial limitations to travel to their healthcare services, purchase hearing aid batteries, and budget accordingly. Inhibitors to the access to healthcare experience for adults with deafness also includes the lack of accommodations made to the public hospital infrastructure to better assist those with deafness. Specific lack of accommodations includes noisy waiting areas, and lack of visual and written support throughout the hospital environment.

Furthermore, the lack of understanding of deafness, and how to communicate to persons with deafness, by healthcare practitioners and support staff in the public hospital environment results in feelings of isolation, and frustration by adults with deafness. For some adults with deafness, a specific inhibitor to the access to healthcare experience includes the involvement of another person in the healthcare consultation to cover listening and hearing needs, as a loss of autonomy, independence and confidentiality is experienced. Adults with deafness also feel that poor acceptability of deafness exhibited by healthcare practitioners and support staff in the public hospital environment is due to an overall lack of education about deafness in adulthood for those that work in the healthcare field.

The COVID-19 pandemic further challenged the communication needs of adults with deafness as they accessed healthcare services. Adults with deafness were required to comply

with use the use of personal protective equipment (PPE) in the healthcare environment, in order to receive access to healthcare services. Compliance with face-mask wearing resulted in difficulties lip reading, recognition and comprehension of muffled speech, and reduced visual facial expression use. Additional challenges experienced by adults with deafness while wearing PPE was the concern for the safety and damage to their hearing aids when wearing face-masks. The added frustration for wearing multiple sensory aids, such as glasses and hearing aids, resulted in more discomfort and stress. Adults with deafness may be dissatisfied with their access to healthcare experience or reigned to the public healthcare system, and simply take the services they can receive. This was specifically seen in reports from participants stating preference for private medical aid use or reported grievances with the services they do receive in public healthcare. The vulnerability of this population can be seen in the imbalance of facilitators versus inhibitors in the access to healthcare experience.

Overall, the use of existing models and theories aided in the exploration of the lived experiences of adults with deafness when accessing healthcare services. The Biopsychosocialtech model provided insight into the different components of the lives of adults with deafness, in relation to how deafness impacts access to healthcare, by providing specific examples of how deafness influences other body, social and technological functioning in the context of accessing healthcare. The ICF further elaborated on how facilitators and inhibitors in the healthcare access experience are exacerbated by external environmental factors, such as the accommodations made in the healthcare setting, and acceptance of deafness by healthcare practitioners. This further highlights element of the social model, which describe that deafness itself is not the cause of disability in healthcare access, but rather the surrounding social and environmental elements of healthcare access result in reduced participation by adults with deafness. Lastly, application of the Theory of Accessibility (1981) has not been used recently to describe the access to healthcare experience for the adult population with deafness and has

also not been used recently to describe the access to healthcare experience in South Africa in the public healthcare system. The Theory of Accessibility (1981) can be used to describe the access to healthcare experiences of adults with deafness in Johannesburg, South Africa, however, specific dimensions of the theory, such as accommodation and acceptability in healthcare access, are more applicable to their experiences. That is not to say that the remaining dimensions are not essential, namely availability, accessibility, and affordability, in healthcare access. Experiences in all dimensions were addressed, but with more challenges and successes being expressed in the dimensions of accommodation and acceptability in healthcare access.

7.2 Implications

In order for the lived experiences of adults with deafness when accessing their healthcare services to be understood further, more research is needed. Exploration into different aspects of communication needs by different populations will only contribute to the overall understanding of those with communication challenges in the healthcare context.

7.2.1 Policy development

Ensuring equal access to healthcare, as described in Chapter 2*: Literature Review*, is the fundamental right of all human beings, which included adults with deafness. The Batho Pele Principles, while specific to equal access to healthcare, needs to be modified to be more specific to the needs of adults with deafness. The Batho Pele Principles stipulate that equal access to healthcare can be achieved through provisions made to accommodate physical access to healthcare but is not specific enough to the communication needs of patients. The communication needs of adults with deafness are currently not being met according to these principles. Equal access to healthcare services, including equal access for adults with deafness, needs to be inclusive of their communication needs. The specific principles of consultation,

information, and transparency (as described in Table 2*: Description of the Batho Pele Principles*), require more specific modifications to better accept and accommodate deafness.

7.2.2 Future research

Research into the lived experiences of adults with deafness when accessing their healthcare services should be further explored. Inclusion of more than one research site in a future study will enhance the generalization of experiences for this specific population. By including research sites across South Africa, the lived experiences of the greater adult population with deafness can be explored. Inclusion of different types of healthcare institutions will also highlight the similarities and differences experienced by adults with deafness in different access to healthcare contexts. Comparisons in experiences can therefore be derived.

More research is needed to create educational materials on deafness in adulthood to be taught in the healthcare context, specifically for healthcare practitioners. Educational materials and resources will be focused on the communication needs of adults with deafness, rather than the identification and diagnosis of deafness. Educational materials are not created from nothing, and thus evidence is needed to best describe the needs of adults with deafness in the healthcare context. For educational materials to be made, a dedicated team of audiologists is recommended to further explore access to healthcare for adults with deafness across South Africa. Inclusion of research from across the country will better encapsulate the needs of adults with deafness and will be more generalizable to public clinics and hospitals. These resources should be taught in clinical training for healthcare practitioners, in order for more acceptance of deafness, and accommodations made for deafness, to become a reality.

Research into the access to healthcare experience for adults with deafness in the private healthcare sector is also recommended. Exploration into the different needs of adults with deafness in the healthcare setting does not need to be exclusively separated into public and

private healthcare, as experiences may actually be similar. Further exploration into the communication needs of adults with deafness in the private healthcare setting will add valuable information on how to further improve the access to healthcare experience for all adults with deafness. Future research into the different needs of adults with deafness in the healthcare setting can also include the impact of cultural traditions, race, religion, or community on the access to healthcare experience.

Future research can also explore the access to healthcare experiences of children with deafness, and the involvement of their family and caregivers. The lived experiences of children should not be disregarded just because they are minors and require assistance to access their healthcare services. The needs of families of children with deafness is a topic worth exploring, as the needs of a familial unit versus one adult will highlight different needs that can also be accommodated in the healthcare setting.

Yet another implication made evident throughout this study, was that noise levels in the hospital setting is an dimension of audiology that should be explored. Exploration into noise levels in closed areas, such as churches and schools, is explored in research. However, more research is needed into the noise levels in the healthcare setting is needed, specifically for the population with deafness, but also for those with optimal hearing function.

While in the year 2020, the South African Sign Language Charter 44 (SASLC) was released by the Pan South African Language Board (PANSALB) in response to Section 6 of the Constitution of South Africa addressing the use of all official languages in any context, only three of the nine pledges state that SASL interpreter services need to be provided in the healthcare setting (Pan South African Language Board, 2020). This policy does not make provisions for adults with deafness who do not use SASL as their primary language. Further research into policy development highlighting equal access through healthcare setting

modification to better accept and accommodate the needs to adults with deafness who may not speak SASL, is needed. Through the use of education on deafness in adulthood, and further research into the needs to adults with deafness in the context of access to healthcare services, can policy development be enacted.

7.2.3 Clinical training and practice

Clinical training

An important implication that arose from this study was that audiologists have a duty to their patients with deafness, and to improve their access to healthcare experience. It was made clear throughout this study, that in order for the public healthcare system to better accept and accommodate the needs of adults with deafness, and more specifically the aging population with deafness, education on deafness in adulthood needs to be developed and promoted to all those that work within the field of healthcare. Audiologists need to develop and provide this education within the greater public healthcare context, as although this study took place in one setting at one point in time addressing the needs of adults with deafness, these experiences could be true for adults with deafness in more than one context.

Educational materials need to be developed, by audiologists, based on evidence outlining the diagnosis and intervention process for deafness, and the interpersonal interactions that adults with deafness experience. Educational materials should focus on providing health related services to the population with deafness, and should therefore be targeted towards healthcare practitioners. The literacy level of educational materials is recommended to be presented at the academic level of a qualified healthcare practitioner, and can be separated according to roles and specialities within the public healthcare system. Educational materials do not necessarily have to relate to treatment related to hearing function and deafness, but should rather focus on communication with patients with deafness and how to socially engage

and provide health related information in effective ways to this population. As deafness is more than a clinical diagnosis, the needs of the deaf and Deaf communicatees need to be highlighted. It should be made clear to the public healthcare system that not all adults with deafness view their condition as a disability. Furthermore, the modes of communication used by adults with deafness need to be taught. This included verbal speech, signed language, use of written language, and how hearing amplification is used. In addition to educating those who work in the public healthcare context, education on the personal lived experiences of adults with deafness also needs to be taught in the higher education setting. Educating audiology students, signed language students, and even psychology students at university level will potentially increase awareness of deafness in adulthood and how this impacts communication between people. Through education, the vulnerability of adults with deafness in the healthcare context may decrease.

Clinical practice

Adults with deafness highlighted throughout this study raised their concerns, and some suggestions have been presented in Figure 8, for improved accommodations which should be implemented in the public healthcare setting, to better enhance their access to healthcare experiences:

Accommodations needed in the hospital environment for adults with deafness	Providing signage in consultations and waiting areas
	Recording voice of healthcare practitioners during the healthcare consultation or appointment
	Silent waiting areas
	Loaning out hearing aids in wards and ICU

Figure 8: Examples of accommodations reportedly needed in the hospital environment, to facilitate the access to healthcare experience for adults with deafness

Implications which were made clear during completion of this study, as seen above in Figure 8, were that physical and behavioural changes need to be made within the public hospital setting. It was implied throughout the study that hospital infrastructure does not accommodate the needs of adults with deafness, and this will not change unless higher management in the hospital is made aware and tangible changes are made. Clinical practice needs to improve to better suit the needs of adults with deafness, by linking supportive physical environments and more accepting and accommodating clinical practice. In order for more visual signage to be put up on hospital walls, provisions for audio recording of healthcare consultations, for microphone use in pharmacies to be implemented, and for the file retrieval system in waiting areas to be more efficient, hospital management needs to be informed that these changes are necessary and desperately needed for the adult population with deafness. Only once these changes have been highlighted and actually implemented, the potential for the improved access to healthcare experience for adults with deafness can be seen.

Implications for improved clinical practice from audiologists was also implied in this study. In order for the communication needs of adults with deafness in the healthcare context to become known, audiologists need to actively promote their services. The actual needs of adults with deafness when accessing healthcare services cannot be met if diagnosis and management of deafness is not appropriately achieved. Following of evidence-based practice will only enhance the quality of care received by adults with deafness. Additionally, not only does following of evidence-based care promote ethical service delivery, but it also highlights how deafness can be a prioritised healthcare service, especially for the aging population with multiple co-morbidities. The role of the audiologist incudes counselling and preparing patients with deafness for feelings of anger, isolation, and vulnerability. Counselling for patients with deafness can also include structured sessions of aural rehabilitation focussed on communication strategies to promote personal assertiveness and confidence in the healthcare setting.

Furthermore, audiologists need to advocate for their patients with deafness in the healthcare context, as audiologists have the skills and training needed to enact their responsibility to support, provide coping strategies, and encourage tangible change in the healthcare setting. Advocacy for policy change to suit both the Deaf community, and adults with deafness who are not part of that community, is necessary to encourage equal rights to healthcare.

In addition to educating healthcare practitioners and making changes to the healthcare setting, inclusion of family-based practice is also essential. Through inclusion of the whole support system available to the adult with deafness, can their needs in the healthcare setting be better known and addressed. Through educating those individuals closest to adults with deafness, especially those who accompany and assist them in the healthcare setting, adults with deafness may be able to participate in their own healthcare decision-making more effectively. Challenges also exist for healthcare practitioners who do not have exposure to ear and hearing based healthcare services – and would thus have less experience in how to effectively communicate with the adult population with deafness. Thus, widespread implications for education on deafness in adulthood is necessary in all clinical healthcare settings for all healthcare practitioners, no matter the type of clinic.

It is essential to note, that suggestions for accommodations for deafness in the healthcare environment did not necessarily have to be feasible at this time, as these are recommendations from participants. An example of this would be controlling noise levels in the waiting areas, as no suggestions were provided by any participant on how to effectively solve the problem of high levels of noise in the hospital environment. Another example of an accommodation that cannot logically be implemented would be the loaning out of hearing aids to patients with deafness in the wards or in the ICU. This is because severity of deafness, type of deafness, onset of deafness, and personal lifestyles, all impact the selection and

programming of hearing amplification. This cannot be appropriately achieved due to the quick turnover time of patients in wards, limited time to refer and address hearing needs of these patients, as well as monitor cost and protection of hearing amplification devices in open wards.

In addition to the suggested recommendations for improved clinical practice from adults with deafness, adults with deafness also reported their own active problem-solving strategies which they implement in the healthcare setting to improve their own access to healthcare experiences. Some of the following strategies were offered by adults with deafness accessing services in the public healthcare setting, and have been illustrated in Figure 9 below:

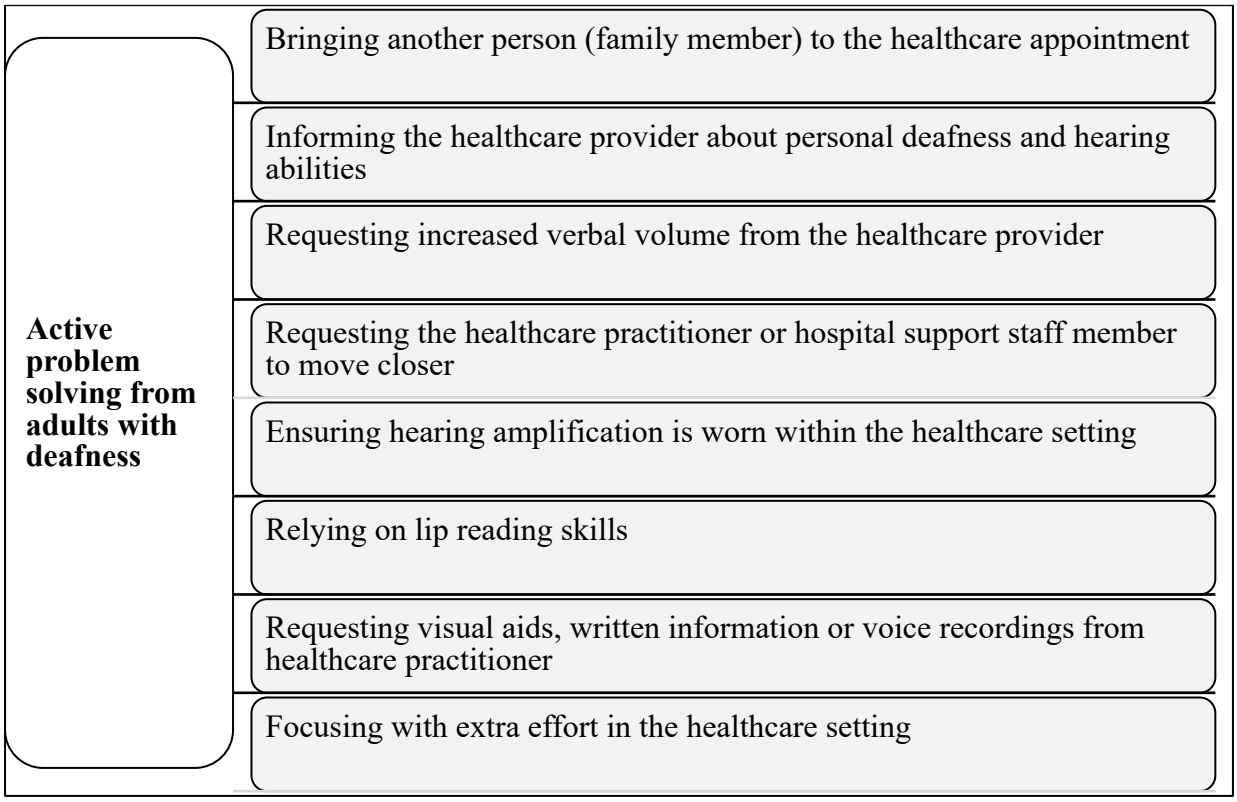


Figure 9: Examples of active problem solving reportedly used by participants with deafness in the healthcare setting

These strategies need to be made known to public hospital management, healthcare practitioners and support staff, the speech therapists and audiologists, and the quality of healthcare regulatory body in the hospital. By making these various parties aware of the efforts

which adults with deafness need to employ to improve their own access to healthcare experiences, the overall quality of these experiences may improve.

7.3 Limitations

A limitation that arose from this study was that communication needs should be acknowledged, accepted and accommodated for adults with deafness, however adults with deafness are not the only population with communication needs in the healthcare context. Children with deafness, and adults with different communication needs post neurological event, were not included in this study. Thus, results are limiting when describing the access to healthcare experience for people with different communication needs. Time constraints to allow each participant to respond as they wished to interview questions and still return for their appointments may have affected the depth of their responses. Overall, responses from participants were more negative than positive – as the participants were reflecting on past negative experience when additional reflection on current positive experiences could have been further elaborated on. Additionally, this study did not focus on age of onset of deafness, however based on the reports of participants – presbycusis was reportedly the most common cause of deafness, thus implying acquired deafness in the older age ranges. The limitation of this is that age of onset should be explored more thoroughly to explore the impact of age-related deafness and access to healthcare, as compared to optimal hearing and access to healthcare experiences previously experienced.

7.4 Conclusion

The lived experiences of adults with deafness when accessing their healthcare services to be understood. Results of this study, which aimed to explore the lived experiences of adults with deafness when accessing healthcare services in Johannesburg, South Africa, brought to light the needs of this population, as well as why the public healthcare system needs to improve the experience for this population. Not only does this imply that the public healthcare system does

not appropriately accommodate for, or accept deafness, but it also implies that in order for tangible change to be made – these experiences need to be reported. This study has highlighted that the role of the audiologist is crucial for the betterment of the access to healthcare experience for adults with deafness. Audiologists need to bring to the forefront the needs of adults with deafness that relate to hospital infrastructure, and clinical experiences with healthcare practitioners. Audiologists also need to advocate for patients with deafness, as while this study highlights the communication needs of adults with deafness, these needs will not be known to other healthcare practitioners if not shared and promoted. It is also the responsibility of audiologists in South Africa to consistently emphasise these needs, and promote audiological services.

There is great potential for the South African public healthcare system to better accommodate, and accept, the needs of adults with deafness. But, improvement in the access to healthcare experience of adults with deafness can only be achieved through notifying higher management, and educating employees and healthcare practitioners in the healthcare context about deafness in adulthood. Information gathered during this study, as described through application and critique of the Biopsychosocialtech model, the ICF, and the Theory of Accessibility (1981), will contribute to evidence-based practice, as the communication needs of adults with deafness has been highlighted. However, there is still the need for more research to be conducted. Integration of findings on similar topics from across South Africa will give a more comprehensive understanding into the general access to healthcare experience of adults with deafness.

References

Adams, R., Adeleke, F., Anderson, D., Bawa, A., Branson, N., Christoffels, A., de Vries, J., Etheredge, H., Flack-Davison, E., Gaffley, M., Marks, M., Mdhluli, M., Mahomed, S., Molefe, M., Muthivhi, T., Ncube, C., Olckers, A., Papathanasopoulos, M., Pillay, J., Schonwetter, T., Singh, J. A., Swanepoel, C., & Ramsay, M. (2021). POPIA Code of Conduct for Research (with corrigendum). *South African Journal of Science*, *117*(5/6).

AlDossary, S., Martin-Khan, M. G., Bradford, N. K., Armfield, N. R., & Smith, A. C. (2017). The development of a telemedicine planning framework based on needs assessment. Journal of medical systems, 41(5), 74.

Alegbeleye, B. J., & Mohammed, R. K. (2020). Challenges of healthcare delivery in the context of COVID-19 pandemic in Sub-Saharan Africa. Iberoamerican Journal of Medicine, 2(2), 100-109.

Allen, E. M., Call, K. T., Beebe, T. J., McAlpine, D. D., & Johnson, P. J. (2017). Barriers to care and healthcare utilization among the publicly insured. *Medical care*, *55*(3), 207.

Anfara Jr, V. A., & Mertz, N. T. (Eds.). (2014). *Theoretical frameworks in qualitative research*. Sage publications.

Arifin, S. R. M. (2018). Ethical considerations in qualitative study. *International Journal of Care Scholars*, *1*(2), 30-33.

Arulogun, O. S., Titiloye, M. A., Afolabi, N. B., Oyewole, O. E., & Nwaorgu, O. G. (2013). Experiences of girls with hearing impairment in accessing reproductive health care services in Ibadan, Nigeria. *African journal of reproductive health*, *17*(1), 85-93.

Azungah, T. (2018). Qualitative research: deductive and inductive approaches to data analysis. Qualitative research journal.

Baart, J., & Taaka, F. (2018). Barriers to Healthcare Services for People with Disabilities in Developing Countries: A Literature Review. *Disability, CBR & Inclusive Development*, *28*(4), 26.

Bali, S. (2018). Barriers to development of telemedicine in developing countries. In *Telehealth*. IntechOpen.

Baratedi, W. M., Tshiamo, W. B., Mokotedi, M. T., Khutjwe, J. V., Mamalelala, T. T., & Sewane, E. B. (2022). Experiences of accessing healthcare services by people with hearing loss/impairment (deaf) in sub-Saharan Africa: An integrative review. Journal of Nursing Scholarship, 54(1), 46-55.

Beck, D (2015). Chapter 7: Case History. In J. Katz & M. Chasin (Eds.), Handbook of Clinical Audiology (7th ed.). Essay, Wolters Kluwer Health.

Biernikiewicz, M., Taieb, V., & Toumi, M. (2019). Characteristics of doctor-shoppers: a systematic literature review. *Journal of market access & health policy*, *7*(1), 1595953.

Bolton, D., & Gillett, G. (2019). *The biopsychosocial model of health and disease: New philosophical and scientific developments* (p. 149). Springer Nature.

Bourke, B. (2014). Positionality: Reflecting on the research process. The qualitative report, 19(33), 1-9.

Braun, V., & Clarke, V. (2012). Thematic Analysis. *APA Handbook of Research Methods in Psychology*, *2*, 57-71.

Braun, V., Clarke, V. (2020). One size fits all? what counts as quality practice in (reflexive) thematic analysis? Qualitative Research in Psychology, 18(3), 328-352.

Braun, V., Clarke, V., Hayfield, N., & Terry, G. (2018). Thematic analysis. *Handbook of research methods in health social sciences*, 1-18.

Bufacchi, V. (2020). Justice as Non-maleficence. *Theoria*, *67*(162), 1-27.

Burger, R., & Christian, C. (2020). Access to health care in post-apartheid South Africa: availability, affordability, acceptability. Health Economics, Policy and Law, 15(1), 43-55.

Candela, A. G. (2019). Exploring the function of member checking. *The Qualitative Report*, *24*(3), 619-628.

City of Johannesburg. (2018). City of Johannesburg Regions. City of Johannesburg. Retrieved October 14, 2022, from https://joburg.org.za/about_/regions/Pages/City-of-Johannesburg-regions.aspx

Constitution of the Republic of South Africa: Act no. 108, 1996 (1996).

Daniel, B. K. (2019). Using the TACT framework to learn the principles of rigour in qualitative research. *Electronic Journal of Business Research Methods*, *17*(3), pp118-129.

David, K. B., Solomon, J. K., Yunusa, I., Lawal, B. K., Marshal, C. S., Okereke, M., & Ozuluoha, C. C. (2020). Telemedicine: an imperative concept during COVID-19 pandemic in Africa. *The Pan African Medical Journal*, *35*(Suppl 2).

de Andrade, V., & Landman, R. R. M. (2022). 'all of a sudden, you know, you can't go to these services, because of the risk of infection': Audiological service considerations at

Residential Care Homes for older persons during COVID-19. South African Journal of Communication Disorders, 69(2).

De Meyer, C. F., Petzer, D. J., Svari, S., & Svensson, G. (2013). Perceived justice in South African airline and hospital industries: measurement model. *International journal of Quality and service sciences*.

Department of Health (2011). Health Professions Act, 1972 (ACT NO. 56 of 1974): Regulations Defining the Scope of the Profession of Audiology. Government Gazette. 30 September 2011. Available at: https://www.hpcsa.co.za/Uploads/editor/UserFiles/downloads/legislations/regulations/

Di, X., Wang, L., Dai, X., & Yang, L. (2020). Assessing the accessibility of home-based healthcare services for the elderly: A case from Shaanxi province, China. International Journal of Environmental Research and Public Health, 17(19), 7168.

Dirth, T. P., & Branscombe, N. R. (2017). Disability models affect disability policy support through awareness of structural discrimination. *Journal of Social Issues*, *73*(2), 413-442.

Dizon, J., Grimmer, K., Louw, Q., Machingaidze, S., Parker, H., & Pillen, H. (2017). Barriers and enablers for the development and implementation of allied health clinical practice guidelines in South African primary health

Duncan, J., & O'Neill, R. (2022). The importance of the lived experience of deaf people. Deafness & Education International, 24(1), 1-1.care settings: a qualitative study. Health Research Policy And Systems, 15(1).

Dunn, D. S., & Andrews, E. E. (2015). Person-first and identity-first language: Developing psychologists' cultural competence using disability language. *American Psychologist*, *70*(3), 255.

Dworkin, S. (2012). Sample Size Policy for Qualitative Studies Using In-Depth Interviews. *Archives Of Sexual Behavior*, *41*(6), 1319-1320.

Edoh, T. O., Pawar, P. A., & Loko, L. Y. (2018). Challenges facing health service delivery in developing countries and solution approaches: the case of Benin, a West-African developing country. In *Handbook of Research on Emerging Perspectives on Healthcare Information Systems and Informatics* (pp. 515-559). IGI Global.

Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American journal of theoretical and applied statistics*, *5*(1), 1-4.

Farnes, C., Beckstrand, R. L., & Callister, L. C. (2011). Help-seeking behaviours in childbearing women in Ghana, West Africa. *International nursing review*, *58*(4), 491-497.

Francis, L. P., & Silvers, A. (2008). Debilitating Alexander v. Choate: Meaningful Access to Health Care for People with Disabilities. *Fordham Urb. LJ*, *35*, 447.

Gauteng Province Department of Health. (2018). The Official Website of the Gauteng Province | Helen Joseph Hospital. Retrieved from http://www.gauteng.gov.za/government/departments/health/services/hospitals/Pages/Helen-Joseph-Hospital.aspx

Gentles, S. J., Charles, C., Ploeg, J., & McKibbon, K. (2015). Sampling in qualitative research: Insights from an overview of the methods literature. *The Qualitative Report*, *20*(11), 1772-1789.

Goudge, J., Gilson, L., Russell, S., Gumede, T., & Mills, A. (2009). Affordability, availability and acceptability barriers to health care for the chronically ill: longitudinal case studies from South Africa. BMC health services research, 9(1), 1-18.

Govender, S. M., & De Jongh, M. (2021). Identifying hearing impairment and the associated impact on the quality of life among the elderly residing in retirement homes in Pretoria, South Africa. South African Journal of Communication Disorders, 68(1), 1-9.

Haigh, C., & Witham, G. (2013). Distress protocol for qualitative data collection. Archives of Psychiatric Nursing, 23(5), 343-350.

Haile, L., Kamenov, K., Briant, P., Orji, A., Steinmetz, J., & Abdoli, A. et al. (2021). Hearing impairment prevalence and years lived with disability, 1990–2019: findings from the Global Burden of Disease Study 2019. *The Lancet*, *397*(10278), 996-1009.

Harris, B., Goudge, J., Ataguba, J. E., McIntyre, D., Nxumalo, N., Jikwana, S., & Chersich, M. (2011). Inequities in access to health care in South Africa. Journal of public health policy, 32(1), S102-S123.

Hasumi, T., & Jacobsen, K. (2014). Healthcare service problems reported in a national survey of South Africans. *International Journal For Quality In Health Care*, *26*(4), 482-489.

Hearing impairment Reduces Access to Health Care. *The ASHA Leader*, *24*(3), 56-63.

Hogan, A., & Phillips, R. (2016). *Hearing Impairment and Hearing Disability: Towards a Paradigm Change in Hearing Services*. Routledge.

Institute of Medicine of the National Academies. (2008). Retooling for an aging America: Building the health care workforce. National Academies Press.

Johnson, J. L., Adkins, D., & Chauvin, S. (2020). A review of the quality indicators of rigor in qualitative research. *American journal of pharmaceutical education*, *84*(1).

Joubert, K., & Botha, D. (2019). Contributing factors to high prevalence of hearing impairment in the Elias Motsoaledi Local Municipal area, South Africa: A rural perspective. *South African Journal of Communication Disorders*, *66*(1), 1-7.

Kahn, J. P., Mastroianni, A. C., & Sugarman, J. (Eds.). (2018). *Beyond consent: Seeking justice in research*. Oxford University Press.

Kattari, S. K., Lavery, A., & Hasche, L. (2017). Applying a social model of disability across the life span. Journal of Human Behavior in the Social Environment, 27(8), 865-880.

Kazou, K. (2017). Analysing the Definition of Disability in the UN Convention on the Rights of Persons with Disabilities: is it really based on a 'Social Model' approach?. *International Journal of Mental Health and Capacity Law*, (23), 25-48.

Kazou, K. (2017). Analysing the Definition of Disability in the UN Convention on the Rights of Persons with Disabilities: is it really based on a 'Social Model' approach?. *International Journal of Mental Health and Capacity Law*, (23), 25-48.

Kelly, G., Mrengqwa, L., & Geffen, L. (2019). “They don’t care about us”: older people’s experiences of primary healthcare in Cape Town, South Africa. BMC Geriatrics, 19(1).

Khoza-Shangase, K. (2021). Confronting realities to early hearing detection in South Africa. Early detecfion and intervenfion in Audiology: An African perspecfive, 66-88.

Kritzinger, J., Schneider, M., Swartz, L., & Braathen, S. H. (2014). “I just answer ‘yes’ to everything they say”: Access to health care for deaf people in Worcester, South Africa and the politics of exclusion. Patient education and counseling, 94(3), 379-383.

Kuenburg, A., Fellinger, P., & Fellinger, J. (2015). Health Care Access Among Deaf People: Table 1. Journal Of Deaf Studies And Deaf Education, 21(1), 1-10.

Kushalnagar, R. (2019). Deafness and Hearing impairment. In *Web Accessibility* (pp. 35-47). Springer, London.

KwaZzulu-Natal Department of Health. (2021). *Definitions of Health Facilities*. Kznhealth.gov.za. Retrieved 15 August 2021, from http://www.kznhealth.gov.za/definitions.htm.

Leon, A. C., Davis, L. L., & Kraemer, H. C. (2011). The role and interpretation of pilot studies in clinical research. *Journal of psychiatric research*, *45*(5), 626–629.

Leslie, M., Gray, R., Eales, J., Fast, J., Magnaye, A., & Khayatzadeh-Mahani, A. (2020). The care capacity goals of family carers and the role of technology in achieving them. BMC Geriatrics, 20(1).

Lesch, H., Burcher, K., Wharton, T., Chapple, R., & Chapple, K. (2019). Barriers to healthcare services and supports for signing deaf older adults. Rehabilitation Psychology, 64(2), 237.

Lince-Deroche, N., Hendrickson, C., Moolla, A., Kgowedi, S., & Mulongo, M. (2020). Provider perspectives on contraceptive service delivery: findings from a qualitative study in Johannesburg, South Africa. *BMC Health Services Research*, *20*(1).

London, L., Zweigenthal, V., & Heap, M. (2020). Ensuring equal access to health services for the Deaf in South Africa. South African Health Review, 2020(1), 183-191.

Majid, M. A. A., Othman, M., Mohamad, S. F., Lim, S. A. H., & Yusof, A. (2017). Piloting for interviews in qualitative research: Operationalization and lessons learnt. *International Journal of Academic Research in Business and Social Sciences*, *7*(4), 1073-1080.

Malebranche, M., Morisod, K., & Bodenmann, P. (2020). Deaf culture and health care. *CMAJ*, *192*(50), E1809-E1809.

Maru, D., Stancel-Lewis, J., Easton, G., & Leverton, W. E. (2021). Communicating with people with hearing loss: COVID-19 and beyond. *BJGP open*, *5*(1).

Masuku, K. P., Moroe, N., van der Merwe, D. (2021). 'the world is not only for hearing people – it's for all people': The experiences of women who are deaf or hard of hearing in accessing healthcare services in Johannesburg, South Africa. African Journal of Disability, 10.

McBride-Henry, K., Nazari Orakani, S., Good, G., Roguski, M., & Officer, T. N. (2023). Disabled people's experiences accessing healthcare services during the COVID-19 pandemic: a scoping review. BMC Health Services Research, 23(1), 346.

McGrath, C., Palmgren, P. J., & Liljedahl, M. (2019). Twelve tips for conducting qualitative research interviews. *Medical teacher*, *41*(9), 1002-1006.

McIlroy, G., & Storbeck, C. (2011). Development of deaf identity: An ethnographic study. *The Journal of Deaf Studies and Deaf Education*, *16*(4), 494-511.

McKee, M., Moran, C., & Zazove, P. (2020). Overcoming additional barriers to care for deaf and hard of hearing patients during COVID-19. JAMA Otolaryngology–Head & Neck Surgery, 146(9), 781-782.

McKinney, V., Swartz, L., & McKinney, E. L. (2020). COVID-19, disability and the context of healthcare triage in South Africa: Notes in a time of pandemic. *African journal of disability*, *9*(1), 1-9.

McLaren, Z., Ardington, C., & Leibbrandt, M. (2013). *Distance as a barrier to health care access in South Africa*.

McQuoid-Mason, D. J. (2020). COVID-19: What should employers do if employed health professionals such as doctors and nurses refuse to treat COVID-19 patients despite being provided with the required personal protective equipment?. *South African Journal of Bioethics and Law*, *13*(2), 87-90.

Meade, M. A., Mahmoudi, E., & Lee, S. Y. (2015). The intersection of disability and healthcare disparities: a conceptual framework. *Disability and rehabilitation*, *37*(7), 632-641.

Melville, C. (2015). *Sexual and Reproductive Health at a Glance*. Oxford, UK: John Wiley & Sons Ltd.

Meyer, J. C., Schellack, N., Stokes, J., Lancaster, R., Zeeman, H., Defty, D., ... & Steel, G. (2017). Ongoing initiatives to improve the quality and efficiency of medicine use within the public healthcare system in South Africa; a preliminary study. Frontiers in pharmacology, 8, 751.

Middleton, A., Niruban, A., Girling, G., & Myint, P. K. (2010). Communicating in a healthcare setting with people who have hearing impairment. *Bmj*, *341*.

Miles, M., Huberman, A., & Saldana, J. (2014). *Qualitative Data Analysis. Thousand Oaks, Calif.: Sage.*

Miller, K., Miller, M., Moran, M., & Dai, B. (2018). *Data Management Life Cycle, Final report* (No. PRC 17-84 F). Texas A&M Transportation Institute.

Mitra, S., & Shakespeare, T. (2019). Remodeling the ICF. Disability and health journal, 12(3), 337-339.

Moermans, V., Mengelers, A., Bleijlevens, M., Verbeek, H., de Casterle, B., & Milisen, K. et al. (2021). Caregiver decision-making concerning involuntary treatment in dementia care at home. Nursing Ethics, 29(2), 330-343.

Müller, A. (2017). Scrambling for access: availability, accessibility, acceptability and quality of healthcare for lesbian, gay, bisexual and transgender people in South Africa. *BMC international health and human rights*, *17*(1), 1-10.

Mweri, J. G. (2018). Privacy and confidentiality in health care access for people who are deaf: The Kenyan case. Health Policy, 1(1), 2-5.

Myers, H. F. (2009). Ethnicity-and socio-economic status-related stresses in context: an integrative review and conceptual model. Journal of behavioral medicine, 32(1), 9-19.

Naseribooriabadi, T., Sadoughi, F., & Sheikhtaheri, A. (2017). Barriers and facilitators of health literacy among D/deaf individuals: A review article. Iranian journal of public health, 46(11), 1465.

Ndinda, C., Ndhlovu, T., & Khalema, N. E. (2017). Conceptions of contraceptive use in rural KwaZulu-Natal, South Africa: lessons for programming. International journal of environmental research and public health, 14(4), 353.

Neely, A. H., & Ponshunmugam, A. (2019). A qualitative approach to examining health care access in rural South Africa. *Social Science & Medicine*, *230*, 214-221.

Nevondwe, L. (2010). South African Social Security and Retirement Reform: A long journey towards the redrafting of the new Pension Funds Act. Pensions: An International Journal, 15, 287-296.

Ngobeni, V., Breitenbach, M., & Aye, G. (2020). Technical efficiency of provincial public healthcare in South Africa. *Cost Effectiveness And Resource Allocation*, *18*(1).

Nusbaum, L., Douglas, B., Damus, K., Paasche-Orlow, M., & Estrella-Luna, N. (2017). Communicating risks and benefits in informed consent for research: a qualitative study. *Global Qualitative Nursing Research*, *4*, 2333393617732017.

Ogundele, O., Pavlova, M., & Groot, W. (2020). Patterns of access to reproductive health services in Ghana and Nigeria: results of a cluster analysis. BMC Public Health, 20(1).

Olusanya, B. O., Davis, A. C., & Hoffman, H. J. (2019). Hearing impairment grades and the International classification of functioning, disability and health. Bulletin of the World Health Organization, 97(10), 725.

Oyewumi, A. M., & Adigun, O. T. (2013). Accessibility, usage of reproductive health information and attitude towards reproductive health practices of female adolescents with hearing impairment towards reproductive health practices in Oyo and Lagos States, Nigeria. *IOSR J. Humanit. Soc. Sci*, *6*, 1-7.

Pan South African Language Board. (2020). Language Policy. Pan South African Language Board Language Policy. Retrieved January 13, 2023, from https://pansalb.org/wp-content/uploads/PanSALB-approved-Language-Policy.pdf.

Pearse, N. (2019). An illustration of deductive analysis in qualitative research. In 18th European conference on research methodology for business and management studies (p. 264).

Penchansky, R., & Thomas, J. (1981). The Concept of Access. *Medical Care*, *19*(2), 127-140.

Penn, C., & Watermeyer, J. (2018). Islands of Good Practice. In Communicating Across Cultures and Languages in the Health Care Setting (pp. 119-170). Palgrave Macmillan, London.

Pickard, S., & Glendinning, C. (2002). Comparing and contrasting the role of family carers and nurses in the domestic health care of frail older people. Health & social care in the community, 10(3), 144-150.

Planey, A. M. (2019). Audiologist availability and supply in the United States: A multi-scale spatial and political economic analysis. Social Science & Medicine, 222, 216-224.

Presseau, J., McCleary, N., Lorencatto, F., Patey, A. M., Grimshaw, J. M., & Francis, J. J. (2019). Action, actor, context, Target, Time (AACTT): A framework for specifying behaviour. Implementation Science, 14(1).

Ray, A. (2012). *The Methodoloy of Sampling and Purposive Sampling*. Munich: GRIN Verlag.

Robles-Bykbaev, Y., Oyola-Flores, C., Robles-Bykbaev, V. E., López-Nores, M., Ingavélez-Guerra, P., Pazos-Arias, J. J., ... & Ramos-Cabrer, M. (2019). A Bespoke social network for deaf women in Ecuador to access information on sexual and reproductive health. *International journal of environmental research and public health*, *16*(20), 3962.

Rose, J., & Johnson, C. W. (2020). Contextualizing reliability and validity in qualitative research: toward more rigorous and trustworthy qualitative social science in leisure research. Journal of Leisure Research, 51(4), 432-451.

Sansone, R. A., & Sansone, L. A. (2012). Doctor shopping: a phenomenon of many themes. Innovations in clinical neuroscience, 9(11-12), 42–46.

Saurman, E. (2016). Improving access: modifying Penchansky and Thomas's Theory of Accessibility . *Journal of health services research & policy*, *21*(1), 36-39.

Schoon, I. (2018). Questionnaire design. In *Laboratory Psychology* (pp. 73-96). Psychology Press.

Schoonenboom, J., & Johnson, R. B. (2017). How to construct a mixed methods research design. *KZfSS Kölner Zeitschrift für Soziologie und Sozialpsychologie*, *69*(2), 107-131.

Schwartz, A. E., Munsell, E. G., Schmidt, E. K., Colón-Semenza, C., Carolan, K., & Gassner, D. L. (2021). Impact of COVID-19 on services for people with disabilities and chronic health conditions. Disability and Health Journal, 14(3), 101090.

Setia M. S. (2016). Methodology Series Module 3: Cross-sectional Studies. Indian journal of dermatology, 61(3), 261–264.

Shiba, T. M. (2021). Social control in the 20th century and its impact on households: A case study of disarticulation from Sophiatown to Meadowlands, Soweto.

Shozi, B. (2020). Something old, something new: applying reproductive rights to new reproductive technologies in South Africa. South African Journal on Human Rights, 36(1), 1-24.

Siedhoff, S. (2019). Results and discussion of exploratory research. In *Seizing Business Model Patterns for Disruptive Innovations* (pp. 45-63). Springer Spektrum, Wiesbaden.

Senayah, E. A., Mprah, W. K., Opoku, M. P., Edusei, A. K., & Torgbenu, E. L. (2019). The accessibility of health services to young deaf adolescents in Ghana. *The International Journal of Health Planning and Management*, *34*(1), e634-e645.

Smith, A., Jain, N., & Wallhagen, M. (2015). Hearing Loss in Palliative Care. Journal Of Palliative Medicine, 18(6), 559-562.

Solnyshkina, M., Zamaletdinov, R., Gorodetskaya, L., & Gabitov, A. (2017). Evaluating text complexity and Flesch-Kincaid grade level. *Journal of Social Studies Education Research*, *8*(3), 238-248.

South African Department of Social Development. (2021). *Department of Social Development - Batho Pele*. Dsd.gov.za. Retrieved 25 August 2021, from https://www.dsd.gov.za/index.php/about/batho-pele.

South African Doctors. (2021). *South African Doctors Hospitals Medical - State Hospitals - Helen Joseph Hospital - Auckland Park, Johannesburg, Gauteng, South Africa*. Doctors-hospitals-medical-cape-town-south-africa.blaauwberg.net. Retrieved 27 October 2021, from http://doctors-hospitals-medical-cape-town-south-africa.blaauwberg.net/hospitals_clinics_state_hospitals/state_public_hospitals_clinics_gauteng_south_africa/helen_joseph_hospital_auckland_park_johannesburg_gauteng_south_africa.

South African Social Security Agency – SASSA. (2022, September 7). Older Persons Grant. *Older persons grant.* Retrieved September 7, 2022, from https://www.sassa.gov.za/Pages/Older-Persons-Grant.aspx

STATSSA, 2011. Census 2011 Census in Brief - Statistics South Africa. [online] Statssa.gov.za. Available at: <http://www.statssa.gov.za/census/census_2011/census_products/Census_2011_Census_in_brief.pdf> [Accessed 22 August 2022].

Stevens, M. N., Dubno, J. R., Wallhagen, M. I., & Tucci, D. L. (2019). Communication and healthcare: self-reports of people with hearing loss in primary care settings. Clinical gerontologist, 42(5), 485-494.

Strode, A., & Essack, Z. (2017). Facilitating access to adolescent sexual and reproductive health services through legislative reform: Lessons from the South African experience. South African Medical Journal, 107(9), 741-744.

Swain, J., & French, S. (2000). Towards an Affirmation Model of Disability. *Disability & Society*, *15*(4), 569-582.

Totten, A. M., Womack, D. M., Eden, K. B., McDonagh, M. S., Griffin, J. C., Grusing, S., & Hersh, W. R. (2016). Telehealth: mapping the evidence for patient outcomes from systematic reviews.

United Nations (2006) Article 25 – Health Enable, United Nations. United Nations. Available at: https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities/article-25-health.html (Accessed: November 22, 2022).

Urban, B., & Maboko, P. (2020). Corporate sustainability: a focus on entrepreneurship, collaboration and regulation in the South African healthcare industry. *International Journal of Innovation and Sustainable Development*, *14*(2), 199-218.

Vergunst, R., Swartz, L., Hem, K. G., Eide, A. H., Mannan, H., MacLachlan, M., ... & Schneider, M. (2017). Access to health care for persons with disabilities in rural South Africa. *BMC health services research*, *17*, 1-8.

Visagie, S., Schneider, M., Scheffler, E., & Schneider, M. (2015). The impact of health service variables on healthcare access in a low resourced urban setting in the Western Cape, South Africa. African Journal of Primary Health Care and Family Medicine, 7(1), 1-11.

Wilkowska, W., Offermann-van Heek, J., Laurentius, T., Bollheimer, L., & Ziefle, M. (2021). Insights Into the Older Adults' World: Concepts of Aging, Care, and Using Assistive Technology in Late Adulthood. Frontiers In Public Health, 9.

Withers, J., & Speight, C. (2017). Health Care for Individuals with Hearing impairment or Vision Loss. *North Carolina Medical Journal*, *78*(2), 107-112.

World Health Organisation. (2017). *Human rights and health*. Who.int. Retrieved 14 August 2021, from https://www.who.int/news-room/fact-sheets/detail/human-rights-and-health.

World Health Organisation. (2021). *Disability*. Who.int. Retrieved 24 August 2021, from https://www.who.int/health-topics/disability#tab=tab_1.

World Health Organization. (2011). World report on disability 2011. Geneva, Switzerland: World Health Organization

World Health Organisation. (2021). (publication). World Report on Hearing. World Health Organisation.

World Health Organization. (2021). Deafness and hearing impairment. Retrieved 14 June 2021, from https://www.who.int/news-room/fact-sheets/detail/deafness-and-hearing-loss

World Health Organisation. (2023). Deafness and hearing loss. World Health Organization. https://www.who.int/health-topics/hearing-loss#tab=tab_2

World Medical Association. (2001). World Medical Association Declaration of Helsinki. Ethical principles for medical research involving human subjects.. Bulletin of the World Health Organization, 79 (4), 373 - 374. World Health Organization.

Appendices

Appendix A: Permission request and unconditional approval to conduct research at the chosen research site

Appendix B: Permission request and full unconditional approval to conduct research at the Speech Therapy and Audiology Department at the chosen research site

Appendix C: Participation information sheet

Appendix D: Participant consent forms

Appendix E: Interview questions

Appendix F: Example of thematic coding using Braun and Clarke's (2012) six phases of qualitative thematic analysis

Appendix G: Full unconditional ethical approval from the University of the Witwatersrand Human Research and Ethics Committee (HREC Medical)

Appendix H: Letter of agreement with Psychology Department at the chosen research site to refer participants for mental health counseling services

Appendix I: Letter of agreement with private psychology practice to refer participants for mental health counseling services

Appendix J: Distress protocol

Appendix K: POPIA checklist

Appendix L: Excerpt from the researcher's reflexive journal

Appendix M: Revised proposal full acceptance from the University of the Witwatersrand Faculty of Humanities

Appendix N: Letter of agreement with the University of the Witwatersrand Speech Therapy and Audiology Department to employ a third year or fourth year audiology student to interpret and transcribe interviews

Appendix A

Date: 20/10/2021

[redacted]

Greetings [redacted],

RE: Permission to conduct research at [redacted] (masters in audiology)

Study title: Lived experiences of adults with deafness when accessing healthcare services in Johannesburg, South Africa

My name is Alexa Reichenberg, and I am an masters in audiology student at the University of Witwatersrand, under the supervision of Dr. Joanne Neille and Dr. Victor De Andrade. I am seeking permission to conduct research at [redacted], and I would like to invite your hospital to participate this study. This study seeks to explore the experiences of adults with deafness when accessing healthcare services in Johannesburg, South Africa, especially in the current times of the global COVID-19 pandemic. Ethical clearance has been be obtained from the University of the Witwatersrand Human Research and Ethics Committee (HREC Medical). The findings of this study will be made available to [redacted] after its's completion, via email to the Speech Therapy and Audiology Department. This study is of interest to [redacted], as [redacted] has a fully operational audiology department that treats the adult population.

I am requesting permission to conduct this study at [redacted], and to access participants through the Speech Therapy and Audiology Department.

The following information is important for this study:

- Methodology and ethics: Sampling for this study will consist of patients with deafness wishing to participate in a semi-structured interview. No [redacted] staff will be required to stop their duties to assist the researcher. Participation will be voluntary, anonymous, and

Umthombo Building – 1st Floor, Room U132, Braamfontein East Campus , Private Bag 3, WITS 2050
T +27 11 717 4577 | **E** sppa.SHCD@wits.ac.za | www.wits.ac.za/shcd/speech-pathology-and-audiology/

confidential. Ethical considerations will be explained to all participants, using written descriptions and pictures.

- Referrals and debriefing: Participants that experience emotional distress will be referred to the Psychology Department, as well as an external psychologist that has agreed to the same terms. Participants that feel distress or unease may withdraw from the study at any point. A letter of agreement with the Psychology Department at [redacted] and an external psychologist that has agreed to the same terms, requesting that no waiting period or payment will be required if participants need to access mental health services, has been created to ensure that the distress protocol formulated is followed. The referral process will follow referral protocol to another department in [redacted], using the official referral letter at the Speech Therapy and Audiology Department and a copy of this agreement.

I therefore request permission in writing to conduct my research at [redacted]. The permission letter should be on hospital letterhead, signed, and dated, and specifically referring to myself, Alexa Reichenberg, and the title of my study.

If any concerns arise about the researcher during the course of the data collection, please feel free to contact Chairperson of this Committee, Professor Clement Penny, at 011 717 2301, or Clement.Penny@wits.ac.za. Should you wish to contact the research administrator, Ms Zanele Ndlovu, please do so at Zanele.Ndlovu@wits.ac.za or at Tel 011 717 1234 /1252/ 2656/2700. For any other queries, you may contact the researcher Alexa Reichenberg, at alexareichenberg@gmail.com or at 082 537 4918. Please feel free to contact the research supervisor of this study, Dr. Joanne Neille or Dr. Victor De Andrade, at Joanne.Neille@wits.ac.za or Victor.DeAndrade@wits.ac.za respectively, or at 011 717 4576.

Alexa Reichenberg (1410504)
082 537 4918
alexareichenberg@gmail.com
Masters of audiology student
Audiologist and speech therapist

GAUTENG PROVINCE
HEALTH
REPUBLIC OF SOUTH AFRICA

[redacted]

Dear Alexa Reinchenberg

STUDY: Live experiences of adults with deafness when accessing healthcare services in Johannesburg, South Africa.

RESEARCHERS: Alexa Reinchenberg

GP_202204_036

The above the study was discussed at the Research Committee meeting. We recommend that permission be granted for [redacted] to be used as a site for the above research,
The researcher is expected to the following:

- Upon completion of the study, copy thereof should be submitted to [redacted]
- It is the researcher's duty to collect the data from the relevant department after the Research Committee approved the study.

Please liaise with the HOD and Unit Manager or Sister in Charge to agree on the dates and time that would suit all parties.

Kindly forward this office with the feedback of your study on completion of the research.
Thank you

[redacted]

Approved

[redacted]

Umthombo Building – 1st Floor, Room U132, Braamfontein East Campus , Private Bag 3, WITS 2050
T +27 11 717 4577 | **E** sppa.SHCD@wits.ac.za | www.wits.ac.za/shcd/speech-pathology-and-audiology/

Appendix B

Date: 20/10/2021

[redacted]

Greetings [redacted] ([redacted] Speech Therapy and Audiology Head of Department),

RE: Permission to conduct research at [redacted] Speech Therapy and Audiology Department (masters in audiology)

Study title: Lived experiences of adults with deafness when accessing healthcare services in Johannesburg, South Africa

My name is Alexa Reichenberg, and I am an masters in audiology student at the University of Witwatersrand, under the supervision of Dr. Joanne Neille and Dr. Victor De Andrade. I am seeking permission to conduct research at [redacted], and I would like to invite your hospital to participate this study. This study seeks to explore the experiences of adults with deafness when accessing healthcare services in Johannesburg, South Africa, especially in the current times of the global COVID-19 pandemic. Ethical clearance has been be obtained from the University of the Witwatersrand Human Research and Ethics Committee (HREC Medical). The findings of this study will be made available to [redacted] after its's completion, via email to the Speech Therapy and Audiology Department. This study is of interest to [redacted], as [redacted] has a fully operational audiology department that treats the adult population.

I am requesting permission to conduct this study at [redacted], and to access participants through the Speech Therapy and Audiology Department.

I am specifically requesting the following:

Umthombo Building – 1st Floor, Room U132, Braamfontein East Campus , Private Bag 3, WITS 2050
T +27 11 717 4577 | **E** sppa.SHCD@wits.ac.za | www.wits.ac.za/shcd/speech-pathology-and-audiology/

- Permission to sample participants from the Speech Therapy and Audiology Department, according to when the consenting patient is booked for an audiology follow-up assessment or retest, or hearing aid fitting.
- Permission to make use of a quiet room for an interview space

The following information is important for this study:

- Methodology and ethics: Sampling for this study will consist of patients with deafness wishing to participate in a semi-structured interview. No [redacted] staff will be required to stop their duties to assist the researcher. Participation will be voluntary, anonymous, and confidential. Ethical considerations will be explained to all participants, using written descriptions and pictures.
- Referrals and debriefing: Participants that experience emotional distress will be referred to the Psychology Department, as well as an external psychologist that has agreed to the same terms. Participants that feel distress or unease may withdraw from the study at any point. A letter of agreement with the Psychology Department at [redacted] and an external psychologist that has agreed to the same terms, requesting that no waiting period or payment will be required if participants need to access mental health services, has been created to ensure that the distress protocol formulated is followed. The referral process will follow referral protocol to another department in [redacted], using the official referral letter at the Speech Therapy and Audiology Department and a copy of this agreement.

I therefore request permission in writing to conduct my research at [redacted], specifically at the Speech Therapy and Audiology Department. The permission letter should be on hospital letterhead, signed, and dated, and specifically referring to myself, Alexa Reichenberg, and the title of my study.

If any concerns arise about the researcher during the course of the data collection, please feel free to contact Chairperson of this Committee, Professor Clement Penny, at 011 717 2301, or Clement.Penny@wits.ac.za. Should you wish to contact the research administrator, Ms Zanele Ndlovu, please do so at Zanele.Ndlovu@wits.ac.za or at Tel 011 717 1234 /1252/ 2656/2700. For any other queries, you may contact the researcher Alexa Reichenberg, at alexareichenberg@gmail.com or at 082 537 4918. Please feel free to contact the research

Umthombo Building – 1st Floor, Room U132, Braamfontein East Campus , Private Bag 3, WITS 2050
T +27 11 717 4577 | **E** sppa.SHCD@wits.ac.za | www.wits.ac.za/shcd/speech-pathology-and-audiology/

supervisor of this study, Dr. Joanne Neille or Dr. Victor De Andrade, at Joanne.Neille@wits.ac.za or Victor.DeAndrade@wits.ac.za respectively, or at 011 717 4576.

Alexa Reichenberg (1410504)
082 537 4918
alexareichenberg@gmail.com
Masters of audiology student
Audiologist and speech therapist

GAUTENG PROVINCE
HEALTH
REPUBLIC OF SOUTH AFRICA

[redacted]

TO WHOM IT MAY CONCERN

RE: Alexa Reichenberg research

The speech therapy department has allowed Ms. Reichenberg to collect data from our department under the following conditions:

- She will arrive before all patients to prepare for the interview
- She will interview the patients for a maximum of 45 minutes
- She will be allocated space for the interviews on Tuesdays and Wednesdays only during her data collection period.
- She will require no assistance from any of our stuff members for data collection days
- She can send the consent forms prior so that we can get consent signed from the participants on her behalf.

Regards,

29/03/2022

[redacted]
Chief Speech Therapist & Audiologist

[redacted]

29/03/2022

[redacted]
Speech Therapist & Audiologist

[redacted]

Umthombo Building – 1st Floor, Room U132, Braamfontein East Campus , Private Bag 3, WITS 2050
T +27 11 717 4577 | **E** sppa.SHCD@wits.ac.za | www.wits.ac.za/shcd/speech-pathology-and-audiology/

Appendix C

Participation information sheet

Date: 20/10/2021

Hello,

My name is Alexa Reichenberg, and I am a masters of audiology student at the University of Witwatersrand (Wits). I am being supervised by Dr. Joanne Neille and Dr. Victor De Andrade. I am doing a research study, titled: Lived experiences of adults with deafness when accessing healthcare services in Johannesburg, South Africa. **I would like to invite you to take part in this study.**

What do I need to do?

Participation will involve an organized 30-minute, audio recorded interview at [redacted]. You will need to come on a on a day you will be coming to the hospital for something else and follow COVID-19 rules. Once the interview is finished, you will need to read through your answers or listen to your interview. This can be done by coming back to [redacted] on an agreed date and time. Your details will not be shared. You will need to consent by saying so on audio recording, and by signing your name on the form. If someone is needed to interpret the interview, you must agree that the interpreter is allowed to help.

Benefits of taking part in this study:

There are no direct benefits for participating in this study.

Risks of taking part in this study:

In the interview, I will ask you questions about your access to healthcare experience. These questions may make you feel upset, angry, or sad. If this happens, the interview will stop. You will be referred to the emotional support services available at [redacted] or another psychologist outside of the hospital, with agreement to be seen free of charge and without any waiting period if you need. I do not have the ability to make your access to healthcare experience easier or more convenient. I do not have direct access to booking systems for any department, but can help to make referrals if needed.

Umthombo Building – 1st Floor, Room U132, Braamfontein East Campus , Private Bag 3, WITS 2050
T +27 11 717 4577 | **E** sppa.SHCD@wits.ac.za | www.wits.ac.za/shcd/speech-pathology-and-audiology/

Taking part in this study will be your own choice. You can leave the study at any time without giving a reason. There will be no negative consequences for stopping the interview.

If any concerns arise about the researcher during this study, please contact any of the numbers below:

Alexa Reichenberg (Researcher) – 082 537 4918 or alexareichenberg@gmail.com
Dr. Joanne Neille (Supervisor) or Dr. Victor De Andrade (Supervisor) Joanne.Neille@wits.ac.za or Victor.DeAndrade@wits.ac.za
[redacted] Psychology Department – 011 489 0807
Professor Clement Penny (Chairperson of University of the Witwatersrand Medical Ethics Committee) – 011 717 2301 or Clement.Penny@wits.ac.za
Zanele Ndlovu (Research administrator at University of the Witwatersrand Medical Ethics Committee) - 011 717 1234 or Zanele.Ndlovu@wits.ac.za

Alexa Reichenberg (1410504)
082 537 4918
alexareichenberg@gmail.com
Masters of audiology student
Audiologist and speech therapist

Appendix D

Participant consent form

Lived experiences of adults with deafness when accessing healthcare services in Johannesburg, South Africa
Researcher: Alexa Reichenberg

Please tick yes/no if you agree with the following statements regarding your participation in this study:

I agree that my responses in the interview can be recorded onto a recording device for analysis. My personal information will not be recorded or shared.
Yes ___ No ___

I agree that all information discussed in the interview can be used and quoted for analysis.
Yes ___ No ___

I understand that I can withdraw from the study with no punishment, no delay in future appointment bookings, and no financial gain.
Yes ___ No ___

I understand that there is no appointment booking, or financial benefit to participating in this study.
Yes ___ No ___

I have read the participation information sheet and understand the purpose of the study and the process it will follow (the researcher read the participation information sheet to me if I was unable to read it)
Yes ___ No ___

I understand that the researcher will require my participation again to check my if what I said in the interview is correct. I agree that I can come check my answers on the scheduled time agreed upon.
Yes ___ No ___

I know that I have been given contact details if I need more information about this study
Yes ___ No ___

I know that I can go to the [redacted] Psychology Department, or the other counsellor details provided, for mental health counselling services with a referral letter
Yes ___ No ___

SIGNATURE FOR PARTICIPATION (participant): _____
at [redacted] on ____/____/_____

Umthombo Building – 1st Floor, Room U132, Braamfontein East Campus , Private Bag 3, WITS 2050
T +27 11 717 4577 | **E** sppa.SHCD@wits.ac.za | www.wits.ac.za/shcd/speech-pathology-and-audiology/

Consent form for audio recording of study participation

Lived experiences of adults with deafness when accessing healthcare services in Johannesburg, South Africa
Researcher: Alexa Reichenberg

I consent to audio recording of the interview.

I understand that:

- The recording will be stored in a secure location (a locked cupboard or password protected computer) with restricted access to the researcher and the research supervisor.
- The recording will be transcribed and any information that could identify me will be deleted.
- The recordings will be deleted within either (a) two (2) years of the publication of the research findings, or (b) six (6) years, if no publications arise from this research.
- Anyone wishing to access this information in the future will first have to obtain the approval of the Human Research Ethics Committee (Medical) of the University of the Witwatersrand, Johannesburg.
- Direct quotes from my interview, without any information that could identify me, may be cited in the research report or other write-ups of research.

NAME OF PARTICIPANT: _____
DATE: _____
PLACE: _____
SIGNATURE OR MARK: _____

WITNESSED BY: _____
DATE: _____
PLACE: _____
SIGNATURE OR MARK: _____

Umthombo Building – 1st Floor, Room U132, Braamfontein East Campus , Private Bag 3, WITS 2050
T +27 11 717 4577 | **E** sppa.SHCD@wits.ac.za | www.wits.ac.za/shcd/speech-pathology-and-audiology/

Appendix E

Interview Questions

Study title: Lived experiences of adults with deafness when accessing healthcare services in Johannesburg, South Africa

Participant Biographical Information

Interview number _____

Assigned pseudonym _____

Date of interview ____/____/_____

Age _____

Gender Male ____ Female ____ Other (specify) _____

Aided or unaided Aided (bilateral) ____ Aided (unilateral) ____ Unaided ____

Interview Questions

1. Tell me about yourself
2. Tell me about your deafness and the effect it has had on your life?
3. Tell me about the type of healthcare services you have accessed throughout your lifetime since acquiring deafness (or since becoming deaf) and your experiences when accessing these healthcare services
4. Tell me about how COVID-19 has impacted your ability to use healthcare services (mask wearing, using technology, booking appointments over the phone, consulting with doctors from a distance)
5. Tell me about some ways in which you've overcome any challenges communicating with your healthcare providers or nurses or other healthcare professional while being deaf, and during COVID-19
6. Tell me about what could be done to enhance you access to healthcare experience

Umthombo Building – 1st Floor, Room U132, Braamfontein East Campus , Private Bag 3, WITS 2050
T +27 11 717 4577 | **E** sppa.SHCD@wits.ac.za | www.wits.ac.za/shcd/speech-pathology-and-audiology/

Appendix F

THEME	KEY
Aging and deafness	
The hospital environment	
COVID-19 pandemic, deafness, and access to healthcare	
Reflections on acceptance of the public healthcare system	

how adults with deafness nagivate the access process

a system with a ticketing system, contact system and a booking system. So to have that in place, I think it's like an ABC because when the research will show the stats, how to deal with that. So if you look at especially on the hearing side. That I've put myself I've seen this it's a major thing because people want to come to the hospital to do the ears but they look at when they come they see how there's about 50 people here, then they turn around they go home but when they go home some of those people don't make it back here because they the frustration they saw when they came in the waiting just put them off. And 90% of the of the pensioners that come here can't even make it to here because they have a problem getting here already. So if they're using public transport or they need to get or get someone to get them here it's a problem already. If they come that day, they just maybe an hour two hours later they see they won't be able to be seen. They turn right around they'll try and use up the pension money to buy the batteries or they just leave the hearing aid you understand and becomes a problem like that. So even to communicate with those people in other levels with us maybe the daughter's number the son's number, other people to contact them because it's already having problems even if you fall you're not gonna get to a pensioner. So if there's a way of communicating with those people to find out why they're not coming they haven't been back for their batteries in like, four months. Is there a problem that the person passed on? Or is it a problem where they can't get to come? Or is there a system that they can put in place where someone goes out physically to check them out they places and do maybe like a mobile unit that goes into an area the professor is the mobile unit, that will help so tremendously, because when I say to come in so far, but if you look at some times is to get in at with a COVID time it was a problem. So if there was a mobile unit come in your area, I mean, there'll be more response because now they can even look at the kids at the school. They can the mobile unit into the school. Because if I had a mobile unit come to my school many years ago, I think I would want to talk to myself.

You're answering all my questions before I've even gotten to them yet. This is great. Do you think your hearing loss and COVID impacted your ability to access a health care system? Can you elaborate a bit for me?

Just can you just repeat that?

Sure I can. So COVID and your hearing loss? How did that impact your ability to access

More research needed in public healthcare

Ageing adults want to have hearing checked

Users of public healthcare are no happy - reluctant to use

Transport and finances as pensioner

Long waiting times = frustration

Reflect on long waiting times = system under pressure

Difficulties of ageing and limited finances - pensioners on SASSA

Purchasing of batteries not priority

Suggesting how to fix - feasability?

COVID and communication changes

Services hard to get to for elderly people

Problem solving - asking researcher to repeat - common experience

Umthombo Building – 1st Floor, Room U132, Braamfontein East Campus , Private Bag 3, WITS 2050
T +27 11 717 4577 | **E** sppa.SHCD@wits.ac.za | www.wits.ac.za/shcd/speech-pathology-and-audiology/

Appendix G

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

R14/49 Alexa Reichenberg

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)

CLEARANCE CERTIFICATE NO. M211132

NAME: (Principal Investigator)	Alexa Reichenberg
DEPARTMENT:	Speech Pathology and Audiology Helen Joseph Hospital
PROJECT TITLE:	Lived experiences of adults with deafness when accessing healthcare services in Johannesburg, South Africa
DATE CONSIDERED:	26/11/2021
DECISION:	Approved unconditionally
CONDITIONS:	
NOTE:	If contact information regarding student study participants is required, please contact the University Registrar's office <Nicoleen.Potgieter@wits.ac.za>
SUPERVISOR:	Dr J Neille and Dr V de Andrade
APPROVED BY:	Dr CB Penny, Chairperson, HREC (Medical)
DATE OF APPROVAL:	12/04/2022

This clearance certificate is valid for 5 years from date of approval. Extension may be applied for.

DECLARATION OF INVESTIGATORS

To be completed in duplicate and **ONE COPY** returned to the Research Office Secretary on the Third Floor, Faculty of Health Sciences, Phillip Tobias Building, 29 Princess of Wales Terrace, Parktown, 2193, University of the Witwatersrand. I/we fully understand the conditions under which I am/we are authorized to carry out the above-mentioned research and I/we undertake to ensure compliance with these conditions.Should any departure be contemplated, from the research protocol as approved, I/we undertake to resubmit the application to the Committee. I **agree to submit a yearly progress report**. The date for annual re-certification will be one year after the date of convened meeting where the study was initially reviewed. In this case, the study was initially reviewed in **November** and will therefore be due in the month of **November** each year. Unreported changes to the application may invalidate the clearance given by the HREC (Medical).

Principal Investigator Signature _____ Date _____

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

Umthombo Building – 1st Floor, Room U132, Braamfontein East Campus , Private Bag 3, WITS 2050
T +27 11 717 4577 | **E** sppa.SHCD@wits.ac.za | www.wits.ac.za/shcd/speech-pathology-and-audiology/

Appendix H

Date: 20/10/2021

[redacted]

Good day [redacted]

RE: Letter of agreement with [redacted] Psychology Department to refer participants for mental health counseling services (masters of audiology)

Study title: Lived experiences of adults with deafness when accessing healthcare services in Johannesburg, South Africa

My name is Alexa Reichenberg, and I am an masters in audiology student at the University of Witwatersrand, under the supervision of Dr. Joanne Neille and Dr. Victor De Andrade. This study seeks to explore the experiences of adults with deafness when accessing healthcare services in Johannesburg, South Africa, especially in the current times of the global COVID-19 pandemic. Ethical clearance has been be obtained from the University of the Witwatersrand Human Research and Ethics Committee (HREC Medical). Participants may experience emotional distress when answering questions detailing possible negative healthcare access experiences. The risk level for this study is classified as level 3: low risk. The specifics of the distress protocol for this study state that any participants that experience emotional distress will either continue or stop the interview process based on their own autonomy, be referred immediately and receive mental health counselling services (please see the distress protocol attached).

As mental health counseling services are needed as a direct response to this study, the content and resulting emotional distress will be the reason for referral. For your assistance, you are not required to give mental health counseling services beyond this reason, unless you choose to do so with your own department or practice, and on your own time.

Umthombo Building – 1st Floor, Room U132, Braamfontein East Campus , Private Bag 3, WITS 2050
T +27 11 717 4577 | **E** sppa.SHCD@wits.ac.za | www.wits.ac.za/shcd/speech-pathology-and-audiology/

The [redacted] Psychology Department agrees to the following:

- To provide mental health counselling services to participants of this study at the same standard as any other patient
- To provide mental health counselling services to participants of this study free of charge
- To provide mental health counselling services to participants of this study without any waiting period or waiting list
- To provide mental health counselling services regarding the content discussed in the study, which is only discussing deafness and access to health experiences.

The researcher of this study (Alexa Reichenberg) agrees to the following:

- To follow the distress protocol created for this study (please see attached)
- To immediately refer participants of this study to the [redacted] Psychology Department if any participants experience emotional stress
- To provide an official referral letter from the Speech Therapy and Audiology Department to the out-patient subdivision of the [redacted] Psychology Department, and a copy of this agreement to the participant making use of mental health counselling services
- To follow up on any participants that received mental health counselling services if services were used

Your assistance is greatly appreciated.

This letter of agreement is acknowledged and accepted by:

Alexa Reichenberg (researcher)

[redacted]

Umthombo Building – 1st Floor, Room U132, Braamfontein East Campus , Private Bag 3, WITS 2050
T +27 11 717 4577 | **E** sppa.SHCD@wits.ac.za | www.wits.ac.za/shcd/speech-pathology-and-audiology/

GAUTENG PROVINCE
HEALTH
REPUBLIC OF SOUTH AFRICA

[redacted]

2 March 2022

To Whom It May Concern

Request for psychological support/intervention potentially required by participants in proposed research study entitled Lived Experience of adults with deafness when accessing healthcare services in Johannesburg, A. Reichenberg (1410504); Protocol Ref no. M211132 MED21-11-004

I confirm that the [redacted] Psychology Department agrees to provide psychological services/psychological intervention/support for participants presenting with adverse psychological reactions and/or symptoms during the course of this proposed research. Such patients should be referred to the Psychology Outpatient Department with a referral letter and will be seen on weekdays between 13:00 and 14:00 for consultation, counselling and/or further case management recommendations. Patients who are referred on weekdays before 13:00 will be seen on the day of referral. If not, they should present at the Psychology Department on the next working day before 13:00 and will be seen between 13:00 and 14:00 on that day. In the event of the patient in question presenting with barriers to communication, arrangements to assist the patient may result in delays. These consultation, counselling and/case management recommendation services will be undertaken by delegated intern clinical psychologists, community service clinical psychologist or clinical psychologists. Psychiatry and/or other referrals may be made as part of further case management recommendations.

The contact person is [redacted] Psychology Department, [redacted]

Please do not hesitate to contact me in case of queries.

Yours sincerely

[redacted]
Principal Clinical Psychologist [redacted]
[redacted]

Umthombo Building – 1st Floor, Room U132, Braamfontein East Campus , Private Bag 3, WITS 2050
T +27 11 717 4577 | **E** sppa.SHCD@wits.ac.za | www.wits.ac.za/shcd/speech-pathology-and-audiology/

Appendix I

Date: 20/10/2021

Dr. V. Jithoo (University of the Witwatersrand Psychology Head of Department)
011 717 4541
University of the Witwatersrand Psychology Department – School of Human and Community Development
1 Jan Smuts Ave, Braamfontein, Johannesburg Gauteng

Greetings Dr. V. Jithoo (University of the Witwatersrand Psychology Head of Department),

RE: Letter of agreement with University of the Witwatersrand Psychology to refer participants for mental health counseling services (masters of audiology)

Study title: Lived experiences of adults with deafness when accessing healthcare services in Johannesburg, South Africa

My name is Alexa Reichenberg, and I am an masters in audiology student at the University of Witwatersrand, under the supervision of Dr. Joanne Neille and Dr. Victor De Andrade. This study seeks to explore the experiences of adults with deafness when accessing healthcare services in Johannesburg, South Africa, especially in the current times of the global COVID-19 pandemic. Ethical clearance has been be obtained from the University of the Witwatersrand Human Research and Ethics Committee (HREC Medical). Participants may experience emotional distress when answering questions detailing possible negative healthcare access experiences. The risk level for this study is classified as level 3: low risk. The specifics of the distress protocol for this study state that any participants that experience emotional distress will either continue or stop the interview process based on their own autonomy, be referred immediately and receive mental health counselling services (please see the distress protocol attached).

As mental health counseling services are needed as a direct response to this study, the content and resulting emotional distress will be the reason for referral. For your assistance, you are not required to give mental health counseling services beyond this reason, unless you choose to do so with your own department or practice, and on your own time.

Umthombo Building – 1st Floor, Room U132, Braamfontein East Campus , Private Bag 3, WITS 2050
T +27 11 717 4577 | **E** sppa.SHCD@wits.ac.za | www.wits.ac.za/shcd/speech-pathology-and-audiology/

The University of the Witwatersrand Psychology Department agrees to the following:

- To provide mental health counselling services to participants of this study at the same standard as any other patient
- To provide mental health counselling services to participants of this study free of charge
- To provide mental health counselling services to participants of this study without any waiting period or waiting list
- To provide mental health counselling services regarding the content discussed in the study, which is only discussing deafness and access to health experiences.

The researcher of this study (Alexa Reichenberg) agrees to the following:

- To follow the distress protocol created for this study (please see attached)
- To immediately refer participants of this study to the University of the Witwatersrand Psychology Department if any participants experience emotional stress
- To provide an official referral letter from the Speech Therapy and Audiology Department to the out-patient subdivision of the University of the Witwatersrand Psychology Department, and a copy of this agreement to the participant making use of mental health counselling services
- To follow up on any participants that received mental health counselling services if services were used

Your assistance is greatly appreciated.

This letter of agreement is acknowledged and accepted by:

Alexa Reichenberg (researcher)	Dr. V. Jithoo (University of the Witwatersrand Psychology Head of Department)

Umthombo Building – 1st Floor, Room U132, Braamfontein East Campus , Private Bag 3, WITS 2050
T +27 11 717 4577 | **E** sppa.SHCD@wits.ac.za | www.wits.ac.za/shcd/speech-pathology-and-audiology/

Date: 20/10/2021

Dr. V. Jithoo (University of the Witwatersrand Psychology Head of Department)
011 717 4541
University of the Witwatersrand Psychology Department – School of Human and Community Development
1 Jan Smuts Ave, Braamfontein, Johannesburg Gauteng

Greetings Dr. V. Jithoo (University of the Witwatersrand Psychology Head of Department),

RE: Letter of agreement with a psychologist to refer participants for mental health debriefing services (masters of audiology)

Study title: Lived experiences of adults with deafness when accessing healthcare services in Johannesburg, South Africa

My name is Alexa Reichenberg, and I am an masters in audiology student at the University of Witwatersrand, under the supervision of Dr. Joanne Neille and Dr. Victor De Andrade. This study seeks to explore the experiences of adults with deafness when accessing healthcare services in Johannesburg, South Africa, especially in the current times of the global COVID-19 pandemic. Ethical clearance has been be obtained from the University of the Witwatersrand Human Research and Ethics Committee (HREC Medical). Participants may experience emotional distress when answering questions detailing possible negative healthcare access experiences. The risk level for this study is classified as level 3: low risk. The specifics of the distress protocol for this study state that any participants that experience emotional distress will either continue or stop the interview process based on their own autonomy, be referred immediately and receive mental health counselling or debriefing services (please see the distress protocol attached).

As mental health counseling services are needed as a direct response to this study, the content and resulting emotional distress will be the reason for referral. For your assistance, you are not required to give mental health debriefing services beyond this reason, unless you choose to do so in your own professional capacity, and on your own time.

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG
SCHOOL OF HUMAN AND COMMUNITY DEVELOPMENT
SPEECH PATHOLOGY AND AUDIOLOGY

The psychologist agrees to the following:

- To provide mental health debriefing services to participants of this study free of charge.
- To provide mental health debriefing services to participants of this study without as little waiting period as possible for the debriefing psychologist.
- To provide mental health debriefing services regarding the content discussed in the study.

The researcher of this study (Alexa Reichenberg) agrees to the following:

- To follow the distress protocol created for this study (please see attached).
- To immediately refer participants of this study to the agreeing psychologist if any participants experience emotional stress (directly to Dr. V. Jithoo).
- To provide an official referral letter from the Helen Joseph Hospital Speech Therapy and Audiology Department to the out-patient subdivision of the University of the Witwatersrand Psychology Department, and a copy of this agreement to the participant making use of mental health debriefing services.
- To follow up on any participants that received mental health debriefing services if services were used.

Your assistance is greatly appreciated.

This letter of agreement is acknowledged and accepted by:

Alexa Reichenberg (researcher)	Dr. V. Jithoo (private psychologist and University of the Witwatersrand Psychology Head of Department)

Umthombo Building – 1st Floor, Room U132, Braamfontein East Campus , Private Bag 3, WITS 2050
T +27 11 717 4577 | **E** sppa.SHCD@wits.ac.za | www.wits.ac.za/shcd/speech-pathology-and-audiology/

Umthombo Building – 1st Floor, Room U132, Braamfontein East Campus , Private Bag 3, WITS 2050
T +27 11 717 4577 | **E** sppa.SHCD@wits.ac.za | www.wits.ac.za/shcd/speech-pathology-and-audiology/
IYUNIVESITHI YASEWITWATERSRAND | YUNIVESITHI YA WITWATERSRAND

Appendix J

Distress Protocol

Adapted from Haigh and Witham (2013)

Step to be Taken	Process to Follow

Identify distress during interview	• Participant indicates verbally that they are experiencing discomfort, stress or emotional distress
	  ○ Participant may directly inform the researcher that the questions asked are not suitable, or are causing discomfort or distress
	• Participant exhibits behaviours indicative or suggestive of discomfort, stress or emotional distress (such as crying, shaking)
	  ○ Participant may indirectly indicate that the researcher needs to stop the interview

Researcher response	• Immediately stop the interview discussion
	• Clarify if discomfort, stress or emotional distress is being experienced by the participant
	• Offer participant immediate support by clarifying if they feel safe, would like to take a break or immediately withdraw
	• Assess if participant needs to be taken to emotional support counselling services immediately
	  ○ Directly to [redacted] Psychology out-patient department
	  ○ Immediate referral to University of Witwatersrand psychology department – Dr. V. Jithoo to provide debriefing services in her own professional capacity
	  ○ Immediate referral to external psychological services
	• Review and clarify with participant if they feel safe and are happy to continue the interview or if the interview needs to stop
	• Accept participant response to continue or to withdraw

Umthombo Building – 1st Floor, Room U132, Braamfontein East Campus , Private Bag 3, WITS 2050
T +27 11 717 4577 | **E** sppa.SHCD@wits.ac.za | www.wits.ac.za/shcd/speech-pathology-and-audiology/

Referral	• State to participant that an agreement has been made with the emotional counselling unit at the research site, free of charge and with no waiting period
	• Provide participant with a referral letter, as per the agreement with the emotional counselling unit at the research site
	  ○ Direct, or physically accompany, participant to the emotional counselling unit at the research site ([redacted] Psychology out-patient department)
	  ○ Assist participant in making a booking with the emotional counselling unit at the research site ([redacted] Psychology out-patient department)
	  ○ Provide participant with contact information for external psychological support (University of Witwatersrand psychology department - Dr. V. Jithoo to provide debriefing services in her own professional capacity)

Follow up	• Encourage participant to use the services at the emotional counselling unit at the research site ([redacted] Psychology out-patient department), or at the external psychological support provided (University of Witwatersrand Psychology department - Dr. V. Jithoo to provide debriefing services in her own professional capacity) • Contact participant to check if they used the services at the emotional counselling unit chosen and confirm if it was helpful • Document which participants made use of the emotional or psychological support services provided, and which did not

Umthombo Building – 1st Floor, Room U132, Braamfontein East Campus , Private Bag 3, WITS 2050
T +27 11 717 4577 | **E** sppa.SHCD@wits.ac.za | www.wits.ac.za/shcd/speech-pathology-and-audiology/

Appendix K

Protection of Personal Information (POPI): Use and Storage of Research Data

'Raw' or unprocessed data, especially where the identity or personal data of research participants is included, must be safeguarded and preserved from unauthorised access. Data may be destroyed after use, but preservation in an archive or personal collection may also be appropriate, desirable or even essential. All data should be preserved in a way that respects the nature of the original participants' consent.

Name of student: Alexa Reichenberg
Student number: 1410504
Title of project: Lived experiences of adults with deafness when accessing healthcare services in Johannesburg, South Africa
Name of supervisor(s): Prof. J. Neille and Dr V. de Andrade

Nature of raw data (e.g. test score sheets; audio recordings of interviews): Interview recordings, interview transcripts, participant biographical information, participant consent forms

What is to be done with the raw data after completion of the project?

___✓___ Stored securely in supervisor's office
___✓___ Stored in a password protected computer (specify whose computer: Alexa Reichenberg)
___✓___ Stored in digital form with all identifying features removed (e.g. in the case of interview transcripts, these should be anonymised)
___**N/A**___ Stored in an archive (specify where: _____)
___✓___ Stored in an on-line data base (specify where: Google drive with password protection)
___✓___ Destroyed (indicate when data is to be destroyed: hard copies containing participant names/signatures shredded in September 2022, and all audio recordings of interviews were deleted post transcription).

What is to be done with the signed informed consent sheets?

___ **N/A** ___ Stored securely in supervisor's office
___✓___ Scanned and stored in a password protected computer (specify whose computer: Alexa Reichenberg; original copies should then be destroyed)

Any additional comments:
Consent sheets were signed by participants at the research site Speech Therapy and Audiology Department, scanned into digital format and shredded, and emailed directly to the researcher.

Umthombo Building – 1st Floor, Room U132, Braamfontein East Campus , Private Bag 3, WITS 2050
T +27 11 717 4577 | **E** sppa.SHCD@wits.ac.za | www.wits.ac.za/shcd/speech-pathology-and-audiology/

Appendix L

Reflexive Journal - A. Reichenberg
Entry 9.
Date: 14/06/2022

Today was the pilot study.
Access to the speech and Audio department was as expected, as per the agreements from HJH CEO and STA HOD.

Pilot participant hesitant to participate
Why? → Nervous to report experiences
→ Nervous to miss audio consult.
How to fix → Make future participants more comfortable + reassured
Confirm access to participants procedure.

Thoughts: Procedure works → adjustments must be made. Recording software reliable. Transcribing effective.

Plan: Continue into data collection phase
Check in with supervisors.

Umthombo Building – 1st Floor, Room U132, Braamfontein East Campus , Private Bag 3, WITS 2050
T +27 11 717 4577 | **E** sppa.SHCD@wits.ac.za | www.wits.ac.za/shcd/speech-pathology-and-audiology/

Appendix M

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG
FACULTY OF HUMANITIES

Miss Alexa Reichenberg
66a Tregoning Street
Linksfield
Johannesburg 2192
Gauteng
South Africa

Student Number: 1410504

27 January 2022

CC. Dr. Joanne Neille & Dr Victor De Andrade

Dear Miss Alexa Reichenberg

DECISION ON RESEARCH PROPOSAL SUBMITTED FOR THE MASTER OF ARTS IN AUDIOLOGY BY RESEARCH

I am pleased to advise you of the decision reached by the reader/readers of the Graduate Studies Committee on your proposal entitled: ***"Lived experiences of adults with deafness when accessing healthcare services in Johannesburg, South Africa"***

Reader's decision on proposal:

Revised proposal accepted.

I confirm Dr. Joanne Neille & Dr Victor De Andrade have been appointed as your supervisors.

Please take note of the information on the Criteria for submitting research for examination which is attached and ensure that the Faculty is informed of any changes of address during the year.

Kindly note that all MA and PhD candidates who would like to graduate as soon as possible must ensure that they meet the ETD requirements within six (6) weeks of receipt of the examiners' reports by the supervisor. **A student is required to remain registered in the Faculty until his/her graduation.**

Yours Sincerely

M Ntseare

Mpho Ntseare (Ms)
Faculty of Humanities
Private Bag X 3
Wits, 2050

Private Bag 3, WITS 2050, South Africa | **T** +27 11 717 4007 | **E** help.humanities@wits.ac.za | www.wits.ac.za/humanities
IYUNIVESITHI YASEWITWATERSRAND | YUNIVESITHI YA WITWATERSRAND

Appendix N

Date: 01/02/2021

Dr. L. Ntlhakana
Head of Discipline: Audiology
University of the Witwatersrand

Greetings Dr. L. Ntlhakana,

RE: Permission to employ a third year or fourth year audiology student to interpret and transcribe interviews for MA Audiology

Study title: Lived experiences of adults with deafness when accessing healthcare services in Johannesburg, South Africa

My name is Alexa Reichenberg, and I am an masters in audiology student at the University of Witwatersrand, under the supervision of Dr. Joanne Neille and Dr. Victor De Andrade. This study seeks to explore the experiences of adults with deafness when accessing healthcare services in Johannesburg, South Africa, especially in the current times of the global COVID-19 pandemic. Provisional ethical clearance has been be obtained from the University of the Witwatersrand Human Research and Ethics Committee (HREC Medical). In order to obtain full ethical clearance, an interpreter must be employed to ensure no participant is excluded due to language barrier between the researcher and participant.

I am seeking permission to employ either a third year or fourth year audiology student to assist with my data collection. The student will be employed to assist with interpretations of interview questions and responses. The student will be required to meet employment criteria:

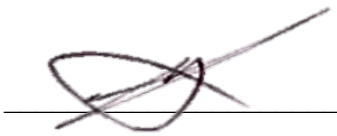
- Fluently communicate verbally in isiZulu or Sesotho.
- Interpret isiZulu or Sesotho if either language is their first additional language.
- Interpret back into English from isiZulu or Sesotho.
- Transcribe interview responses provided in isiZulu or Sesotho and assist with transcription into English from isiZulu or Sesotho.
- Agree to uphold all ethical principles outlined for this study, and strictly maintain participant confidentiality and anonymity (a consent form will be provided).

Umthombo Building – 1st Floor, Room U132, Braamfontein East Campus , Private Bag 3, WITS 2050
T +27 11 717 4577 | **E** sppa.SHCD@wits.ac.za | www.wits.ac.za/shcd/speech-pathology-and-audiology/

The student will be paid R66.00 (third year hourly rate) or R76.00 (fourth year hourly rate) for their services and time, as per the current University of the Witwatersrand student employment rates. A formal advert for the employment opportunity will be created highlighting the above terms of employment. The advert will be sent out via the official email correspondence to third- and fourth-year audiology students (SPPA email), and via the class representatives to the class WhatsApp groups. My contact details will be provided, along with my supervisors' contact details should any student be interested in the opportunity. Dates of data collection have not yet been set, as they are dependent on when the research site ([redacted]) can accommodate me. I will inform you which student will be accepting this opportunity.

I am further requesting that permission be granted on a document signed using the Audiology Department letterhead, and with your signature. This will be sent to the University of the Witwatersrand Human Research and Ethics Committee (HREC Medical).

If any concerns arise about the researcher during the course of the data collection, please feel free to contact Chairperson of this Ethics Committee, Professor Clement Penny, at 011 717 2301, or Clement.Penny@wits.ac.za. Should you wish to contact the research administrator, Ms Zanele Ndlovu, please do so at Zanele.Ndlovu@wits.ac.za or at Tel 011 717 1234 /1252/ 2656/2700. For any other queries, you may contact the researcher Alexa Reichenberg, at alexareichenberg@gmail.com or at 082 537 4918. Please feel free to contact the research supervisors of this study, Dr. Joanne Neille or Dr. Victor De Andrade, at Joanne.Neille@wits.ac.za or Victor.DeAndrade@wits.ac.za respectively, or at 011 717 4576.



Alexa Reichenberg (1410504)
082 537 4918
alexareichenberg@gmail.com
Masters of audiology student
Audiologist and speech therapist

Letter of consent and agreement to uphold ethical guidelines as the interpreter of this study

I, _____ (interpreter name), hereby agree to uphold the ethical guidelines of this study that stipulate:

- All participant information will be kept confidential, will not be discussed with anyone outside the study, and will not be shared.
- All participant responses will be kept confidential, will not be discussed with anyone outside the study, and will not be shared.
- All researcher/interviewer questions will be interpreted as provided in English, without rephrasing, and without additional clarification unless, requested by the researcher/interviewer.
- All participant responses will be interpreted honestly, without rephrasing, and without additional clarification, unless requested by the researcher/interviewer.
- All questions asked and answered will not be led by the interpreter to achieve desired responses, will not be interrupted, and no additional questions will be asked by the interpreter.

I, _____ (interpreter name), consent to:

- My voice being recorded on audio recording for analysis purposes.
- Provide accurate interpretation of interpreted questions and participant responses.

NAME OF INTERPRETER: _____
DATE: _____
PLACE: _____
SIGNATURE OR MARK: _____

NAME OF RESEARCHER: _____
DATE: _____
PLACE: _____
SIGNATURE OR MARK: _____

Umthombo Building – 1st Floor, Room U132, Braamfontein East Campus , Private Bag 3, WITS 2050
T +27 11 717 4577 | **E** sppa.SHCD@wits.ac.za | www.wits.ac.za/shcd/speech-pathology-and-audiology/

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG
SCHOOL OF HUMAN AND COMMUNITY DEVELOPMENT
SPEECH PATHOLOGY AND AUDIOLOGY

29 March 2022

Memorandum
From: Dr Liepollo Ntlhakana

To whom it may concern

RE: Request for research assistants: 3rd and 4th year students

This letter confirms that Ms Alexa Reichenberg requested permission to work with third and fourth year students as research assistants to assist with data collection, transcription and analysis. Ms Reichenberg is a post-graduate student registered for Master's degree in Audiology. Permission is granted for Ms Reichenberg to work with undergraduate students in the Audiology program who meet the inclusion criteria of the research assistant. Permission is grated based on the following conditions:

- Students' availability and willingness to participate.
- That the students' involvement as a research assistant does not interfere with their academic schedule and program.
- Payment for travel to the research site to be clearly discussed with the students prior, that is, whether payment will be incurred by the research or the student.

Should additional information on the Department of Audiology's undergraduate degree be required for the purpose of this permission letter, please do not hesitate to contact me via email liepollo.ntlhakana@wits.ac.za or office number (011) 7174581.

Kind Regards

Dr Liepollo Ntlhakana
Acting Head of Discipline (Audiology)

Umthombo Building – 1st Floor, Room U132, Braamfontein East Campus , Private Bag 3, WITS 2050
T +27 11 717 4577 | **E** sppa.SHCD@wits.ac.za | www.wits.ac.za/shcd/speech-pathology-and-audiology/

Umthombo Building – 1st Floor, Room U132, Braamfontein East Campus , Private Bag 3, WITS 2050
T +27 11 717 4577 | **E** sppa.SHCD@wits.ac.za | www.wits.ac.za/shcd/speech-pathology-and-audiology/
IYUNIVESITHI YASEWITWATERSRAND | YUNIVESITHI YA WITWATERSRAND