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Araujo, Monica Luisa

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An Exploratory Study on Time Perspective as a Possible Indicator of Audiological Help-Seeking Behaviours and Intervention Outcomes, in Gauteng South Africa.

Monica L. Araujo

Student number: 1122743

The Department of Speech Pathology and Audiology

School of Human and Community Development

Faculty of Humanities, University of the Witwatersrand

M.A. Audiology

Dr. de Andrade and Mrs. Petrocchi-Bartal

February 2023

Declaration

I, Monica Araujo, student number 1122743, declare that this research report is my own work. All the sources that I made use of, referred to or quoted have been indicated and acknowledged. This research report is being submitted to the Degree of Masters of Arts in Audiology, to the University of the Witwatersrand, Johannesburg. It has not been submitted for any degree or examination, at any other university or institution.



Monica Araujo (1122743)

February 2023

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Abstract

Time perspective is a basic psychological construct that is vital in indicating several health-related behaviours. Whilst numerous indicators of audiological help-seeking behaviours and intervention outcomes such as age, perceived severity of hearing loss, gender, and stigma, have been studied, there is a large paucity of research on time perspective within the audiological field. Therefore, time perspective, which is frequently depicted as one of the most powerful influencers on human behaviour, has guided this study by researching whether it may indeed indicate audiological help-seeking behaviours and intervention outcomes.

The study set out to explore patient perceptions of the theme of time and the possible impact of time perspective on audiological help seeking behaviours and intervention outcomes. The researcher also explored audiological experiences that may relate to different aspects of time perspective. Finally, participants were asked to provide advice on how audiologists could consider the aspect of time and time perspective within the audiological journey of patients.

To address the research aims and objectives, a cross-sectional, qualitative, exploratory research design using inductive and narrative approaches, was implemented at a private practice in the South of Johannesburg. The participants included adults who are hearing aid users and attend the private practice for audiological services. These participants were recruited through purposive, convenience, and maximum variation sampling. Data were obtained through conducting semi-structured interviews and two focus groups. The data was then analysed using the Framework Method.

Several important themes and sub-themes emerged, which mainly indicated the perception that different time perspectives, namely, future orientated, present-hedonistic, present-fatalistic, past-negative, or past-positive, influence the audiological help-seeking behaviours and intervention outcomes of individuals in different ways. Due to this, and the perceived important influence of time perspective on audiological behaviours, participants

advised the use of a time perspective tool as well as distinct approaches to be used by audiologists, based on the different time perspectives of patients, to ensure the best audiological journey for all.

Findings therefore suggested that time perspective may indeed indicate audiological help-seeking behaviours and intervention outcomes. As this study was exploratory in nature, it would be beneficial to study it on a larger scale using quantitative methods. In the interim, it was advised that time perspective should be a psychological construct with which audiologists ought to familiarise themselves.

Key words: Time perspective, time, hearing loss, hearing aids, audiological help-seeking behaviours, intervention outcomes

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Problem Statement and Rationale

According to the World Health Organization (WHO), hearing loss is recognised as the fourth highest cause of disability, worldwide (Rasiah & Sulakshan, 2018). It is also the third foremost cause of years lived with a disability, and the first leading cause of years lived with a disability in individuals older than 70 years (Lisan et al., 2022). Astonishingly, an estimated 1.57 billion individuals presented with a hearing loss in 2019, globally, which accounts for every fifth person (Haile et al., 2021). With the global increase in the world's population and the elderly, the number of individuals with hearing loss is rising at a rapid pace. Research has revealed that the regions most affected in the world by disabling hearing losses are Asia Pacific, South Asia, and Sub-Saharan Africa (Rasiah & Sulakshan, 2018). These regions include low- and middle-income countries, like South Africa (Bezuidenhout et al., 2021). Moreover, it is these areas that present with a prevalence rate of nearly four times that of higher income areas (Rasiah & Sulakshan, 2018). Within South Africa exclusively, which is a middle-income country, hearing impairment has been reported as the third highest disability, after physical and visual impairments (Joubert & Botha, 2019).

Research has been conducted to evaluate the factors that could influence audiological help-seeking behaviours, for individuals with hearing loss (Meister et al., 2014). A study revealed that seeking help and adopting hearing aids are impacted by several features such as age, self-reported perception of hearing difficulties, severity of hearing loss, hearing associated activity limitations and participation restrictions, acknowledgements of barriers and benefits of hearing amplification, support from significant others, communication disability and contextual factors (Meyer & Hickson, 2012). Furthermore, the attitudes of health professionals were seen as contributing significantly to the decisions that hearing-impaired individuals make, in relation to help seeking behaviour and hearing aid uptake (Meyer & Hickson, 2012). Importantly, when reviewing several studies, no specific study was found on psychological

factors and help-seeking behaviours. The impact of psychological elements on hearing aid uptake had only been examined by one research team and requires further investigation (Meyer & Hickson, 2012). More recently, the health belief and trans-theoretical models were used to investigate audiological help seeking behaviours and develop a questionnaire (Arnold et al., 2019). Influential aspects relating to self-efficacy, apparent benefits and barriers of a behaviour, perceived danger of not performing the behaviour and prompts to take action, were studied. Importantly, this study explained that there is a need for the development of assessment tools to provide insight into different decisional mechanisms in older individuals with hearing loss (Arnold et al., 2019). Additionally, whilst these considerations have been identified, it is still not known how they could be measured, how they relate to one another to impact audiological help-seeking, and to what extent they are predictive of different behaviours (Arnold et al., 2019). Due to hearing loss leading to adverse effects on the lives of older individuals when left untreated, thorough research is necessary to delineate which factors are more predictive of the decision to seek audiological assistance in terms of initial consults and hearing aid uptake (Meyer & Hickson, 2012).

Audiological help-seeking and intervention choices are viewed as health-related behaviours that are evidently influenced by several predictors and factors. Time perspective has been studied as a basic psychological concept that is essential in predicting various health-related behaviours (Sansone et al., 2013). Time perspective has actually been depicted as one of the most powerful influences on the behaviour of humans (Wojtkowska et al., 2021). More specifically, time perspective, which is divided into chronological groups of the past, present, and future, is the idea that individuals' perceptions of time are largely influential on the feelings, behaviours, and perceptions of these individuals. Although it is vital, it is an understated and unconscious cognitive paradigm that underlies ones goal settings, decision making, and personality (Sobol-Kwapinska et al., 2019). Research has explained time

perspective as one of the overall attributes of personality (Bolotova & Hachaturova, 2013). Therefore, it plays an essential role in life events and processes, impacts on many facets of human activity, and is linked with various personality features. Time perspective has the capability to influence various characteristics of an individual's behaviour, including behaviour in challenging circumstances, which occur more often because of the volatility and unpredictability of social situations as well as the development of social-psychological power (Bolotova & Hachaturova, 2013). Above all, the significance of examining time perspective is explained by the impact that peoples thoughts about their present and past may have on the effectiveness of their actions within the present time (Bolotova & Hachaturova, 2013).

Previous research has further explained that time perspective is considered a causal element in behaviours for which time is of importance (Hall et al., 2015). These include specific behaviours with cost and benefits that take place along different time dimensions, for example, looking at now versus later on (Hall et al., 2015). As seen theoretically and practically, the element of time plays a crucial role within the area of hearing loss and audiological intervention uptake (Hall et al., 2015). Such time elements include but are not limited to, early detection and intervention, beliefs around time and time frames associated with the acceptance of hearing loss. Furthermore, the psychological concept of time perspective has been studied across different areas within health and life behaviours, such as researching it as a predictor of procrastination, smoking status, healthy behaviours and disease mediating states, academic performance, and subjective well-being in older adults, to name a few (Hall et al., 2015). Based on these studies and their findings, emphasis has been placed on the importance and applicability of the time perspective construct within the health domain (Hall et al., 2015). However, time perspective does not yet seem to have received the same research attention within the field of audiology, which forms part of this health sector.

In a study which examined hearing disability acceptance and the process of change in a patient's journey, the element of time and related psychological terms was discussed (Manchaiah, 2013). Specifically, emphasis was placed on the importance of investigating hearing disability acceptance with regard to psychological terms. Furthermore, a clinical implication of this study was that it highlights the significance of seeing and understanding patients from a different perspective, such as within the time domain. Hence, the models within this study provided crucial information about the temporal dimension of the hearing aid journey (Manchaiah, 2013). More explicitly, it was reported that the process and stages of change regarding hearing loss and hearing aid uptake, can also be studied from different analytical levels like psychological, socio-economic, psychosocial, and biological, as opposed to a health behaviour perspective only (Manchaiah, 2013). Consequently, this study mentioned the importance and potential benefit of examining time perspective as a predictor of help-seeking behaviours and rehabilitation outcomes (Manchaiah, 2013).

It is therefore apparent that an exploratory study investigating time perspective as a possible indicator of audiological help-seeking behaviours and intervention outcomes, would be of great interest and benefit to the field. This is due to the above-mentioned information explaining that there is a significant paucity of studies on time perspective within the audiological field, although the perception of time is known to be a major influencer on the emotions and behaviour of individuals (Mooney et al., 2017). Furthermore, this research may be significantly beneficial because of the recurrent necessity to identify varying decisional mechanisms, factors of a psychological nature, the extent to which factors are predictive of different behaviours, and those that may result in reduced readiness for change within the audiological help-seeking and intervention journey (Pronk et al., 2017).

Literature Review

Introduction

Hearing impairment, which forms the basis of this study, refers to the partial or complete loss of the ability to hear (Niazi et al., 2020). This may create other life challenges for these individuals, such as, difficulty communicating with people, isolation from several activities, decreased self-esteem, and loss of autonomy to name a few. Consequently, this often has detrimental effects on the mental health, psychological wellbeing, and quality of life of individuals, especially if audiological help and intervention is not sought after (Niazi et al., 2020). Nevertheless, as seen in audiological practice and according to literature, audiological help-seeking behaviours for hearing loss are frequently delayed, from the time of first noticing a possible hearing loss, to seeking the audiological assistance (Ratanjee-Vanmali et al., 2018). There is mounting evidence to show that several factors contribute to the delay around seeking audiological assistance and intervention. Such factors include social stigma, cognitive challenges, age, the negative connotations around having a hearing loss, poor awareness, and financial constraints (Ratanjee-Vanmali et al., 2018). Whilst these factors have been observed numerous times within practice, the researcher who is also a practicing audiologist, noticed that the concept of time, may too be a factor. In this case, time will therefore need to be considered as a possible indicator of audiological help-seeking behaviours and intervention outcomes. In researching the impact of time on human behaviour, the psychological concept of time perspective was mentioned and further investigated. There appears to be mounting evidence related to time perspective as a core aspect of daily human psychological functioning, with a major influence on the feelings, thoughts, and behaviours of individuals (Burzynska & Stolarski, 2020). Therefore, literature has described the strong link between time perspective and different health-related behaviours (Hall et al., 2015). Although studies have shown this,

there is no literature on the specific association between time perspective and any audiological behaviours. Since a strong established relation has been made between time perspective and its influence on human motivation, planning, and behaviours as well as its importance in optimal human functioning, it is vital for this construct to be studied within audiology (Przepiorka et al., 2020). In support of this, Manchaiah (2013) explained the importance and possible benefit that may come from exploring time perspective as a predictor of help-seeking behaviours and rehabilitation outcomes within the audiology setting. The aforementioned information as well as observations made by the researcher within practice, has thus guided this study on time perspective as a possible indicator of audiological help-seeking behaviours and intervention outcomes in Gauteng, South Africa.

Prevalence of Hearing Loss: Globally and in South Africa

Currently, hearing loss is a major public health concern and is therefore a larger issue than most perceive it to be (Wilson & Tucci, 2021). Hearing loss is often considered an invisible impairment that impacts a large population of the world. Over 20% of the world's population presents with a mild-to-total loss in the better ear, and more than 5% present with a moderate-to-total loss that can negatively impact on daily social interactions (Wilson & Tucci, 2021). Therefore, a recent study stated that hearing loss has been recognised as the fourth highest cause of disability worldwide, with Asia Pacific, South Asia and Sub-Saharan Africa being the area's most negatively impacted (Paken et al., 2021). In the year 2021, the WHO revealed that more than 5% of the world's population, approximately 430 million individuals, present with a disabling hearing loss and require rehabilitation and intervention (World Health Organization (WHO), 2021a). It was further stated that this number could easily increase to almost 700 million individuals by the year 2050 (WHO, 2021a). Moreover, hearing loss is one of the principal contributors to the burden of disease globally, bypassing other chronic illnesses, like dementia (Louw et al., 2018). The increasing global burden of hearing loss has a variety

of contributors, namely aging, due to increased life expectancy worldwide, occupational and recreational noises without noise protection, and finally, the extensive use of ototoxic drugs for treatment of illnesses (Louw et al., 2018).

Globally and within South Africa, it is essential to acknowledge and fully understand this burden of disease. In simple terms, burden of disease refers to the health status of a particular country or population (Devleesschauwer et al., 2014). Statistics have shown that South Africa experiences a quadruple burden of disease (World Health Organization (WHO), 2018). This occurs due to communicable diseases such as Tuberculosis (TB) and HIV/AIDS, child and maternal morality and non-communicable diseases such as cancer, diabetes, hypertension, cardiovascular diseases, chronic lung diseases, trauma, and mental illnesses (WHO, 2018). As previously mentioned, hearing loss significantly contributes to the burden of disease of countries and is actually presented within Global Burden of Disease (GBD) studies on the prevalence of hearing impairments (Haile et al., 2021). Therefore, the impact of hearing loss is widely recognised by numerous stakeholders such as researchers, health professionals, individuals with a hearing loss as well as policy makers. It is vital to understand the impact of hearing loss and its contribution to the burden of disease, in order to work towards reducing the burden that hearing loss has (Haile et al., 2021). Therefore, awareness and comprehension of the burden of disease is important within the health sector for decision-making processes. This knowledge of burden of disease, size of the health issues in the country, specific groups that are at risk, and trends in the health context over a period of time, facilitates policy makers with making appropriate decisions and selecting relevant priorities (Devleesschauwer et al., 2014). Most importantly, and specific to South Africa, understanding the burden of disease can be used for discovering the expected health care usage and is also essential for effectively prioritising helpful intervention plans and examining their influence as well as cost-effectiveness (Devleesschauwer et al., 2014). Therefore, it is crucial within the audiological

field, for audiologists and researchers to prioritise and use best evidence practices regarding hearing health care as well as provide guidance on the global and South African distribution of hearing impairments (Haile et al., 2021). By doing the latter and implementing context-specific and vital audiological prevention programmes, the burden of hearing impairment can be reduced (Joubert & Botha, 2019).

Following on from this, studies have revealed the devastating personal impact of hearing loss on individuals, like increased unemployment, poor overall health, decreased academic success, increased levels of depression, and social isolation (Louw et al., 2018). Not only may the individual with a hearing loss experience a negative impact, but there may also be a huge financial burden placed on society as a whole (Louw et al., 2018). Moreover, this financial burden of hearing loss is significantly worse for developing countries, like South Africa, that already undergo challenges such as poverty, life-threatening illnesses, reduced human resources, poor infrastructure, and environmental risk factors (WHO, 2021a). Statistics have shown that Sub-Saharan Africa is indeed one of the developing world regions with a considerably higher prevalence of hearing loss when compared to developed countries (Louw et al., 2018). In saying this, hearing loss prevalence within the sub-Saharan African region may be underestimated due to the limitation of population-based research studies (Louw et al., 2018).

More specifically, within the underserved rural South African areas, there is a limited amount of information on the prevalence, cause and factors that contribute to hearing loss (Joubert & Botha, 2019). Nevertheless, the WHO explained that nearly 80% of individuals who present with a disabling hearing loss, reside in low- and middle-income countries (WHO, 2021a). Hence, within South Africa, which forms part of the low- and middle-income world, the prevalence of hearing loss is three to six in every 1000 live births, with the public sector presenting with the largest amount of people impacted (Bezuidenhout et al., 2021).

Understanding the causes and prevalence of hearing loss as well as its contribution to the burden of disease within a certain country and population, such as in South Africa, is vital for enabling context-specific effective prevention (Joubert & Botha, 2019).

Public and Private Healthcare Sector within South Africa

Within the context of South Africa, it is important to delve deeply into the discrepancies between the public and private health care sectors, as well as why this has occurred. Rensburg (2021) explained that the public sector is funded by the state and serves most of the population, specifically 71%. Conversely, the private sector is mainly funded through individual contributions to health insurance or medical aids, and caters for about 27% of the population (Rensburg, 2021). Whilst many cannot afford the cost of private healthcare, some individuals, especially when desperate, may find a way to utilise the private healthcare route due to the advantages that come with this sector, such as fewer or no rushed appointments, shorter waiting periods, pertinent disease control and prevention procedures, and superior resources and facilities (Miller, 2019). In order to do so, studies have shown that many South Africans actually make use of a combination of the private and public health sectors (Africa Check, 2017). The number of individuals who have medical aid, surprisingly, does not equal the number of individuals who use the private health sector. Hence, many appear to use a combination of the sectors depending on their health requirements at that time. Depending on the medical aid scheme and what is covered under it, some individuals may use public hospitals for inpatient care (Africa Check, 2017). As mentioned above, some may feel obliged to seek private healthcare to obtain perceived better quality of care even though they are not on medical aid. However, if private healthcare is something that is completely inaccessible to them due to financial constraints, then they often do not make use of any healthcare services, including public ones (Komape, 2013). This is due to the perceptions that most South Africans have regarding the public healthcare sector and it being poor in quality of care, dignity, respect, and

trust (Komape, 2013). To delve deeper into the trust aspect, research shows that if people do not trust a certain healthcare system to ensure an appropriate level of quality health care, then it will remain highly underused (Komape, 2013). This is frequently the case within South Africa, where the general perception of primary health care, including doctor-supported, nurse-based, clinics and community health centers, is negative. These perceptions occur despite considerable investments made by the government in healthcare, to improve the access to health care (Komape, 2013). This may occur because health issues form part of the most important areas of human concern and individuals actively try to obtain quality care, and therefore attempt to avoid care that is perceived to be detrimental to their health (Komape, 2013). These perceptions can therefore make patients feel that they should attempt to seek assistance within the private sector, should they want quality care. However, due to the high cost of private healthcare, it is has been reported that such individuals are mainly limited to retail pharmaceutical services, general practitioners, and some specialists (Africa Check, 2017). Conversely, there are some patients who simply cannot afford the private sector and therefore need to accept the challenges that come with primary health care (Komape, 2013). However, as previously mentioned, some struggle to accept this and are concerned with the quality of care that comes with the public sector, and will therefore choose not to seek any help, unless their health concerns are viewed as serious or require immediate attention (Komape, 2013). Due to such challenges, South Africa has been working towards the implementation of a National Health Insurance System (NHI) so that affordable quality healthcare services may be available for everyone, no matter who they are, where they stay, or their financial status (Maseko & Harris, 2018). The NHI however has not been implemented and is an ongoing effort by South Africa to eventually address the access barriers and injustice within the healthcare system (Maseko & Harris, 2018). In the meantime, a South African prepaid medical card has been introduced to assist those who wish to have access to prompt, well-organised, and

structured medical treatment, but who are not in a position to afford medical aid (L. Daniel, 2022). This card can therefore be used as an alternative to health insurance or medical aids, as it still allows patients to access private healthcare in their specific times of need (L. Daniel, 2022).

In referring to the aforementioned information, it is important to explain that the health system within South Africa, which is commonly described as dysfunctional, has its roots in the economical and socio-political issues that occurred in South African history (Coovadia et al., 2009). Occurrences such as the migrant labour system, income inequalities, excessive violence, the damage of family life, as well as gender and racial discrimination, have all inevitably impacted health care, and health services, in a negative manner. The health system faced an enormous amount of challenges in 1994, when apartheid ended, and some of these challenges persist to this day (Coovadia et al., 2009). Whilst the public health system in South Africa has been altered into a non-discriminatory, comprehensive national service, poor management, leadership, and maintenance have resulted in the deficient implementation of policies that are often adequate and helpful. Therefore, key factors and elements of primary health care are not present within the country and there is a significant crisis of human resources in the health sector. Overall, it is vital to understand that these prominent features of South African history account for many of the current issues faced in health care, and specifically the public health sector (Coovadia et al., 2009).

In saying this, the private healthcare sector in South Africa presents with its own challenges. One problem is that accessing medical services from the this sector is often expensive, and as a result, many cannot afford it (Buswell, 2022). Moreover, individuals who use this healthcare occasionally experience challenges and disappointments of their own. Specifically, Ballot (2021) stated that there is a perception that paying expensive medical aid and private health insurance rates, means excellent service, but this not always the case. There

have therefore been suggestions that some private practitioners lack communication, debriefing skills, and accountability. Ballot (2021) also reported a lack of compassion, humanity, and support by some practitioners in this sector. Moreover, it was said that private practitioners often view their jobs as running a business so as to increase their financial gain, and they may therefore relinquish their responsibilities as professionals onto the loved ones of individuals who have health issues (Ballot, 2021). As a result, there has recently been criticism of the private sector, especially after Covid-19, regarding being controlled by a small number of substantial providers, as well as for over-pricing on certain services (Buswell, 2022). In addition, due to Covid-19, higher economic uncertainty, and increased job losses, private healthcare has become even more of a financial challenge (Business Tech, 2020). Despite these challenges, many South Africans have reported the desire to seek private healthcare assistance due to perceptions about better communication, trust, staff attitudes, and quality of care, even though this is not always something that they can afford (Komape, 2013). Improvements within the public sector therefore need to be made so as to regain the trust of the population in the public healthcare system (Komape, 2013). This may take time, and so for some, financial sacrifices are being made to seek some form of help in the private sector (L. Daniel, 2022).

A theory that closely relates to the above is Bronfenbrenner's Ecological Model for Human Development. This model describes how both human development and behaviour are impacted on by a set of interactions that occur between different system structures, including cultural, political, psychological, familial, and socioeconomic realms, which at length, shape the behaviour, wellness, and daily decisions that occur (Backonja et al., 2014). Bronfenbrenner's model therefore declares that human development is an evolving complicated reciprocal interaction that often happens over time between people, symbols, and objects in their environment. The foundation of this model belongs in levels of environmental influences that places the individual at the innermost level and then expands externally toward

bigger social structures of influence (Backonja et al., 2014). Microsystems consist of interpersonal exchanges between friends, teachers, family members, and work colleagues. Mesosystems is the second level of influence and consists of the activities and relationships that occur between two or more microsystems, such as interplay between work and home (Backonja et al., 2014). The third level is exosystems, which is a bigger social system that includes two or more settings, consisting of both direct and indirect elements. Examples include culture, economics, or politics. Macrosystems is the final level of influence and includes expansive cultural and subcultural attributes that impact on all of the previously mentioned levels, such as resources, lifestyle components, knowledge, and belief systems (Backonja et al., 2014). Within his work, Bronfenbrenner also explained an additional dimension of influence, which is called chronosystems. Chronosystems describe environmental or individual changes or stability, that may happen due to the passage of time in life, such as family structure or employment (Backonja et al., 2014). This therefore relates to this study and the above mentioned information, as to understand an individual's development through life as well as behaviour choices, it is important not only to consider the individual and his or her immediate environment, but also to consider the interactions and exchanges that occur in the larger environment (Guy-Evans, 2020). Therefore, within South Africa, the healthcare sectors, socioeconomic status, location, cultural ideas, which mainly fall within the microsystems and macrosystems of this model, as well as all environmental changes within one's life which falls under chronosystem, together with the other levels of influence, are all interrelated and can impact on the development as well as behaviours of such individuals. In this case, behaviours including audiological help-seeking and intervention.

Different Audiological Terms

Before delving deeper into the audiological aspect of this study, it is important to mention that there have been many discussions around different audiological terms and how to

correctly use them. Research explains that the difference between these terms depends on the degree or severity of hearing loss (World Health Organization, 2021). Hence, correctly distinguishing between the varying terms and different levels of hearing challenges, is important (Felman, 2018). Hearing loss has been defined as the decreased ability to hear sounds in the way that other individuals who have hearing within normal limits do (Felman, 2018). These normal limits include hearing thresholds of 20dB or better bilaterally. If hearing is worse than 20dB, patients are considered as having a hearing loss. This hearing loss may range from mild, to moderate, to severe or profound (World Health Organization, 2021). Hard of hearing is a term used to refer to individuals who have a hearing loss that ranges from mild to severe. These people normally communicate with others via spoken language and tend to gain benefit from hearing aids or other assistive listening devices. In contrast, individuals who are deaf, often have a hearing loss that is profound in nature and indicates that there is very little or no hearing at all. It is therefore common for these individuals to communicate via sign language (World Health Organization, 2021). Another term frequently used is hearing impaired. This refers to individuals who have any degree of hearing loss, ranging from mild right up to profound. Hence, this term includes individuals who are hard of hearing, and who are deaf (DO-IT, 2022). Within this study, hearing loss and hearing impairment will mainly be used interchangeably, as the participants have hearing challenges ranging from mild to profound.

Hearing Loss

According to research, hearing loss is the most common type of sensory disorder within humans, and often manifests in various forms, such as hearing loss from birth, to sudden hearing loss, or a slow gradual hearing loss as one ages (Müller & Barr-Gillespie, 2015)**.** Hearing loss can therefore have many etiologies, such as those stemming from genetics or environmental factors. More specifically, repeated ear infections, abnormalities within the structures of the ear, excessive exposure to occupational or recreational noises, aging and

certain illnesses such as meningitis, are often identified causes of hearing loss (Müller & Barr-Gillespie, 2015). Additionally, within South Africa , the adult population is commonly exposed to various causes of hearing loss, such as ototoxic medications, exposure to excessive noise, as well as life-threatening diseases such as HIV-AIDs (Makhoba & Joseph, 2016).

Hearing loss is not only a sensory disorder, but may also have major implications for communication, social interaction, work, and overall care (Pryce et al., 2016). Hence, the presence of a hearing impairment often poses risks for daily life, in terms of issues with communication, language acquisition, as well as speech recognition abilities (Ohlenforst et al., 2017). Moreover, the issues pertaining to a hearing loss, such as required increase in listening effort, can frequently result in higher levels of mental fatigue and distress, anxiety-related sick leave from work and reduced mental and physical energy (Ohlenforst et al., 2017). Most significantly, hearing loss can drastically change the social interactions of individuals and their quality of life, because of their withdrawal from social roles and leisure activities (Ohlenforst et al., 2017). Despite these challenges, hearing loss is still often an underestimated impairment (Maltby, 2019).

Hearing Loss Detection and Intervention

South African Challenges Regarding Hearing Loss Detection and Intervention

Evidently, hearing loss may be a debilitating sensory disorder for many individuals, with significant negative impacts on their daily lives (Ohlenforst et al., 2017). Whilst this is often the case, those living in developing countries, such as in South Africa can present with additional challenges (Peer, 2015). For example, in developed countries, audiological service delivery models work effectively, from screening to diagnosing hearing losses, through the use of institution-based programmes in numerous communities with established infrastructure, available resources, and access to healthcare (Peer, 2015). In contrast, socioeconomic factors, poor infrastructure, reduced resources, and a critical shortage of trained health professionals

still exist within South Africa, and all of these factors negatively impact on service delivery within the health profession, including audiology (Peer, 2015). This relates yet again to Bronfenbrenner's theory of human development, and specifically the macrosystems level of influence, as the impact of economics, resources, and different lifestyle components on daily decision-making, wellness and behaviour, is evident within the South African context (Backonja et al., 2014). As a result, models of audiology such as early detection and hearing intervention (EDHI) plans, require significant adaptations to allow for the deficiencies that occur within the healthcare systems in developing countries, and specifically South Africa. Whilst these challenges are mainly prevalent in the public health sector, issues within the private South African sector related to early hearing detection and intervention have also been identified (Moodley & Storbeck, 2015). For example, studies emphasised the scarcity of hearing screening services within this sector, the need for an efficient data management and follow-up system, as well as the need to enhance and refine the knowledge and awareness of hearing screening amongst healthcare professionals (Moodley & Storbeck, 2015). In reference to babies specifically, within developed countries, the national EHDI protocols screen over 90% of newborns through universal newborn hearing screening, in a successful manner (Peer, 2015). Diagnosis of a hearing loss should be completed at 3 months of age and appropriate referrals for early intervention plans should occur no later than 6 months of age (Peer, 2015). Within South Africa, the opposite occurs, with almost 90% of babies not undergoing hearing screening, despite attempts at doing so (Peer, 2015). In addition, there are no existing screening protocols for adult high-risk populations to diagnose hearing loss at an early stage. As a result, screening and testing is normally done at the discretion of health professionals. Due to these challenges and the lack of early detection of hearing loss in both infants and adults, interventions are delayed, which can have major life consequences. In an Australian study, it was reported that hearing loss often worsens gradually and is frequently only diagnosed and

managed numerous years after its onset, after it has resulted in various negative consequences like decreased independence, depression, negative impact on employment, poorer quality of life, and even social isolation (McMahon et al., 2013). Johnson (2018) further explained that a long delay in addressing hearing loss, not only has a negative influence on the patients themselves, but their families too, in terms of health-related quality of life, reduced self-efficacy, social isolation, and increased anxiety and depression. This strongly relates to third party disability, which is the disability of family members because of a health condition such as hearing loss, of their spouse or family member (Mach et al., 2019). Moreover, a link exists between untreated hearing loss and accelerated cognitive decline in older individuals (McMahon et al., 2013).

Limited Awareness of Hearing Loss

Although there are numerous reasons why individuals do not seek audiological help or seek it later than required, limited affordability and accessibility of hearing health care, specifically in underserved populations as mentioned above, is a large reason that cannot be ignored (C. E. Johnson, 2018). Another significant reason is reduced public awareness of audiological issues and services (Joubert et al., 2017). Within South Africa, there are a restricted number of audiological resources and health professionals, especially within the public sector. This shortage of hearing health services appears to have a negative impact on the awareness of hearing and audiological health, of the general population (Joubert et al., 2017). Hence, there is a widespread lack of awareness when it comes to the audiology profession and the services offered by these professionals. However, identifying, treating and preventing hearing issues should be a priority in South Africa, particularly because in various cases a permanent hearing loss can be prevented (Joubert et al., 2017). Consequently, there is a demand for the development and implementation of useful strategies to improve the general public's awareness on the audiology profession within South Africa (Joubert et al., 2017). Not only is

it important for the awareness of the public to be increased, but research shows that doctors, specifically general practitioners in public and private settings, should also be made more aware of hearing loss and audiological services, as their knowledge is often a huge barrier to successful audiological intervention (McMahon et al., 2013). This may be due to their lack of awareness in a few areas including, the risk factors associated with age-related hearing loss and how to identify such at-risk individuals, the basic tools to identify a hearing loss, the negative impact of hearing loss on an individual's mental, emotional and physical health, and finally how audiological assistance and aural rehabilitation can benefit patients (McMahon et al., 2013). Research has thus advised that because of the large role that general practitioners play in diagnosing and managing health conditions in adults, they could assist with the early detection and intervention of hearing loss in adults (McMahon et al., 2013). They could play vital roles in reducing the stigma around hearing loss and hearing aids and motivating at-risk individuals to seek audiological assistance. General practitioners could also help in the early identification of older adults with an age-related hearing loss, and whether or not any associated disabilities or negative consequences have occurred. Finally, they could focus on appropriately referring such individuals to audiologists or other ear specialists. This could occur by refining the ability of general practitioners to identify at-risk people and then directing specific questions toward them so as to recognise a potential hearing challenge (McMahon et al., 2013). Consequently, increasing this knowledge, comprehension, and practice behaviour of general practitioners by adding more hearing related aspects into their Continuing Professional Development (CPD) requirements, has been recommended. Additional ways to improve early detection and intervention of hearing loss in adults is potentially introducing Speech-In-Noise Tests or telephonic and internet hearing screening programs (McMahon et al., 2013). The implementation of such programmes could allow for the early detection of adult hearing loss, and effective treatment thereof, as such screenings and programmes would assist in identifying

the daily functional challenges of hearing loss and the need for rehabilitation, as opposed to just measuring the type and severity of the loss (McMahon et al., 2013).

Delayed Implementation of Audiological Intervention

Nevertheless, due to the debilitating nature of hearing loss, intervention is recommended by professionals, specifically audiologists, at any stage of the hearing loss journey. Often, treatment options for hearing loss are medical devices, such as hearing aids, frequency modulation (FM) systems, and cochlear implants (Müller & Barr-Gillespie, 2015). In South Africa, particularly the public sector, a lack of resources, infrastructure, and staff often delays the implementation of these intervention options, resulting in late hearing aid or cochlear implant fittings (Peer, 2015). Although patients do receive hearing aids, FM systems, and cochlear implants, the waiting periods are often long (Peer, 2015). Hearing losses that are left untreated, often result in negative consequences, like falls in the elderly due to ear-related imbalances, greater risks for cognitive decline, and social isolation (Arnold et al., 2019). Interestingly, many studies have explained that there is generally a two-to-five-year delay between identifying the hearing issue and seeking help. In some instances, this delay may be as much as 15 years or more (Maltby, 2019). Whilst this often occurs due to issues of age, stigma, loneliness, denial and, uncertainty, in South Africa, poor resources, poor infrastructure, and a lack of health professionals may contribute to this delay (Peer, 2015). Although in private practice some of these challenges are not as widely present, research shows a general lack of knowledge on early hearing detection and intervention, which is a widespread barrier to seeking audiological help within the country, in both sectors (Naidoo & Khan, 2022). Furthermore, medical aids and their lack of payment of hearing screenings or tests, may also contribute to delayed help seeking and prevention of early hearing detection and intervention (Naidoo & Khan, 2022). Another issue reported within both sectors which impacts negatively on early hearing detection and intervention, is the poor follow-up rate of individuals with a

possible or confirmed hearing loss, with regard to the hearing loss journey and the necessary steps to be taken, such as undergoing aural rehabilitation or getting hearing aids (Naidoo & Khan, 2022). Despite mounting evidence on the benefits of hearing aid usage on overall communication and health outcomes, hearing loss within the older community is still frequently left untreated (Pronk et al., 2017). Treatment of such individuals may be extremely challenging, and if the patient is in denial, then rejection of hearing aids or any form of rehabilitation is highly probable (Maltby, 2019). Sadly, even when the individual has understood the need for amplification, hearing loss as a condition still has a negative stigma associated with it, and thus, many prefer to use a hearing aid that is discreet, or not use one at all (Maltby, 2019). The negative stigma and belief system surrounding hearing aids and the use thereof, again confirms Bronfenbrenner's final level of influence, macrosystems, which shows how knowledge and belief systems which form part of expansive cultural and subcultural attributes, impacts on the decisions and behaviour of individuals (Backonja et al., 2014).

Significance of Holistic Intervention for Patients with Hearing Loss

Literature has shown that hearing aids are the most common form of intervention for hearing loss, specifically for the elderly (Maltby, 2019). This is because they are often the best option to treat age related hearing loss and also improve quality of life (Maltby, 2019). In addition, auditory rehabilitation and assistive listening devices are also essential rehabilitative options for patients with hearing loss (Ciorba et al., 2012). According to the WHO, the provision of holistic services by audiologists in managing individuals with hearing loss, involves implementing aural rehabilitation sessions (Makhoba & Joseph, 2016). Aural rehabilitation is known as any device, process, knowledge, procedure, interaction, or therapy session which reduces the psychosocial and communicative effects of a hearing impairment. A comprehensive aural rehabilitation programme consists of three key components namely, communication training, sensory management, and counselling (Makhoba & Joseph, 2016).

Hence, aural rehabilitation is vital as it greatly assists in decreasing participation restrictions and facilitates with improved environmental and personal strategies to reduce the often incapacitating impact of hearing loss on daily life (Makhoba & Joseph, 2016). Research has therefore highlighted the importance of audiologists in South Africa to provide aural rehabilitation services that are both contextually and culturally relevant to the population at hand (Makhoba & Joseph, 2016).

Assistive listening devices (ALD's) which also often form part of the audiological rehabilitation program, include several types of amplification equipment that allow for optimal communication and interaction of those with a hearing loss (Kim & Kim, 2014). This is done by making the speech signal more accessible to the patients, when hearing aids themselves are not adequate (Kim & Kim, 2014). There are various types of ALD's used to overcome signal to noise ratio issues, distance, reverberation, and noise. Such devices include FM sound systems, hardwire devices, induction loop systems, television, alert/alarm devices, and telephone listening devices (Kim & Kim, 2014). Therefore, these devices often enhance the hearing ability of individuals within numerous environments, such as workplaces, airports, and classrooms (Kim & Kim, 2014). In some cases, a combination of the aforementioned intervention options is used to allow for the best outcomes for the patient (Ciorba et al., 2012). In further support of this, studies revealed that recognising individuals with a hearing impairment, providing them with suitable hearing devices, conducting auditory training, as well as teaching them coping strategies, are essential in positively influencing their quality of life, and should therefore be considered for all patients (Ciorba et al., 2012).

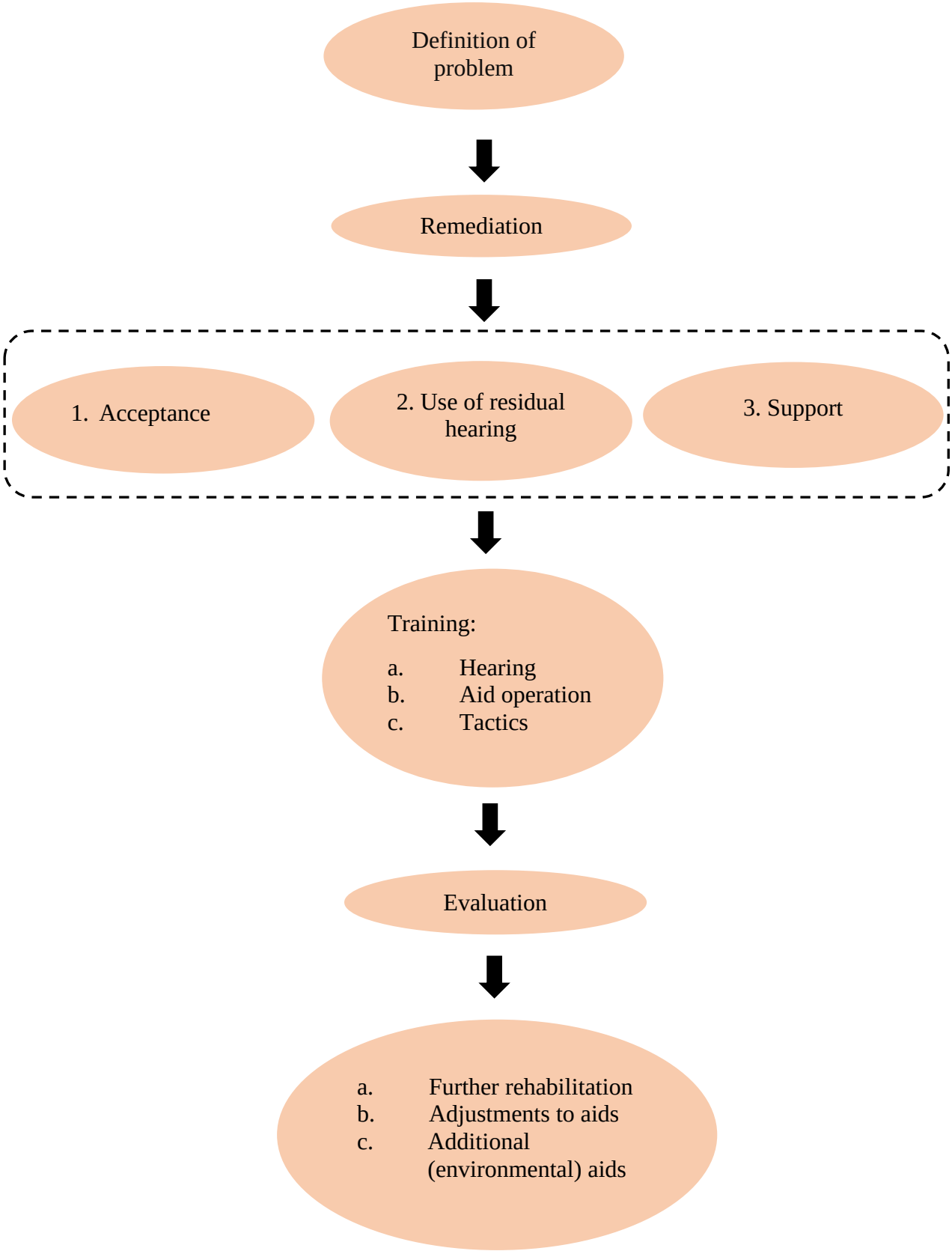
Implementation of a Problem-Solving Model for Audiological Rehabilitation

In further discussing intervention, a problem-solving model of the rehabilitation procedure for those with a hearing loss, was set out by Maltby (2019). As seen in Figure 1, the

model has been divided into different sections, commencing with the beginning of the hearing loss journey, and working its way through the hearing loss and rehabilitation journey.

Figure 1

Maltby's Problem-solving Model of the Rehabilitation Process



Note. Problem-Solving Model of the Rehabilitation Process in Audiology. From *Principles of Hearing Aid Audiology, 3rd Edition (*3rd ed., p. 279), by M.T. Maltby, 2019, Cambridge Scholars Publishing. Copyright 2019 by Maryanne Tate Maltby. Reprinted.

As shown in Figure 1, the first part of the process is the definition of the problem (Maltby, 2019). This stage is vital within the hearing loss journey of a patient. Hence, this is the point at which the audiologist obtains important information, specifically through case history which delves into the hearing loss of the individual, areas of challenge, perspectives, attitude, and associated characteristics. Therefore, the most commonly used tools for defining the problem consists of the audiological assessment, informal discussions, and case history. Additional instruments, such as questionnaires and speech audiometry can also be done within this stage, to add further detail and depth to the evaluation of the audiologist (Maltby, 2019). Evidently, the rehabilitation process includes more than this first part and a mere hearing aid fitting. It entails setting the scene to enable the best use of amplification as possible. Therefore, for individuals who will not benefit from hearing aids, they may find assistance through the use of assistive devices, which will appropriately target their specific needs and problem (Maltby, 2019). Counselling is often necessary when patients require hearing aids, as it may facilitate with acceptance of their hearing loss, the challenges it comes with and the benefits of using amplification. By providing appropriate counselling, unrealistic expectations can be avoided and the rehabilitation process may be more effective (Maltby, 2019)

Seeking an Ideal Balance to Selling Hearing Solutions

Adding to the above, it is evident that the effective management of individuals with hearing loss is one that is complex and important, in both private and public settings. Thus, the approach taken by the audiologist in managing these patients through their journey is vital. There has often been a notion that audiologists are salespeople, and this holds a negative

connotation (von Borstel, 2021). Although audiologists do engage in selling of hearing devices, it is important that they do this selling with the correct and ethical approach. Hence, audiologists should take on a solution selling approach as opposed to a product selling approach (von Borstel, 2021). Focusing solely on selling hearing devices is not advisable, nor is it ethical, as it purely focuses on the price of the devices, as opposed to offering a total hearing solution for patients. Hence, this approach is not a patient-centered one and does not look to improving the quality of life of the patient, as a priority. Thus, when this approach is used, there is often a lower client loyalty, as patients tend to move from audiologist to audiologist, to see if cheaper hearing devices can be obtained (von Borstel, 2021). On the contrary, solution selling within audiology prioritises a total hearing solution for patients. Hence, it involves a combination of the audiologists' recommendations, the practice, the services provided, and the products available. Solution selling is therefore seen as the best customised and most ideal hearing solution for patients as it focuses on personal concern and exceptional personal services (von Borstel, 2021). This is vital as within the audiological industry patients do not merely need a device, but rather a total hearing solution that will enhance the quality of life for themselves and their loved ones. Evidently audiologists do engage in selling, however, the approaches taken to selling should be ethical and in the patient's best interest (von Borstel, 2021).

The Hearing Aid and Patient Journey

Individuals with a hearing loss and their communication partners undergo a series of experiences before, during, and after their hearing test and intervention sessions (Manchaiah, 2013). The 'patient journey' is a phrase that refers to recognising and fully comprehending the experiences that patients undergo throughout the course of their hearing impairment and rehabilitation (Manchaiah, 2013). This assists patients and audiologists in picturing the entire journey, which starts even before individuals realise the presence of a hearing loss, and continues until they understand how to manage their loss (Ida Institute, 2019). More

importantly, health professionals can better comprehend and reflect upon the individual journeys of their own patients. This allows them to understand the specific needs of their patient and work together with them to achieve effective outcomes (Ida Institute, 2019). Although there are differences regarding the onset of hearing loss, the stages and processes experienced by individuals are presumed to be generally similar (Manchaiah et al., 2011).

As reported by the Ida Institute (2019), there are seven stages of the hearing aid journey. These stages are pre-contemplation, contemplation, preparation, action, maintenance, relapse, and permanent exit. Within the first stage of pre-contemplation, the patients either do not notice that they have a hearing loss, or they do not view it as severe enough to visit an audiologist (Ida Institute, 2019). Hence, they are normally shocked when the issue is made known to them, as they often do not realise the existing symptoms. The second stage involves patients being hesitant and unsure about seeking help or making changes (Ida Institute, 2019). More specifically, they feel at ease with their existing situation however, they simultaneously worry about the possible consequences of not acting on their hearing loss. Within the third preparation stage, patients continue to show uncertainty, or have reached a point where they feel ready to take action, although they are often unsure of how to go about seeking help. Consequently, they often search for information and advice from others and health professionals, to support their choice, however, they also contemplate coping with the difficulty on their own (Ida Institute, 2019). Action, which is the fourth stage, involves patients deciding to act on their hearing impairment (Ida Institute, 2019). Hence, they often want to speak about their hearing challenges with others. In doing so, they seek recognition and appreciation from those around them. This stage also involves concerns regarding not being able to actually proceed with taking action (Ida Institute, 2019). The fifth stage is the maintenance stage which encompasses the patient beginning to use hearing devices in addition to effective communication strategies. Although they have acted, patients often still feel uncertain about the process. Some feel

content with using hearing aids, however, some have difficulty accepting the implications associated with hearing loss (Ida Institute, 2019). Similarly, some patients feel sad and anxious and often forget the reasoning behind acting on their hearing impairment. The patients who are happy and feel positive will move to the permanent exit stage, whilst those having more challenges normally recede to the relapse stage. This stage consists of patients struggling to use their hearing aids in a consistent manner or may even involve patients who give up on their hearing aids completely (Ida Institute, 2019). These patients are frequently ill-tempered as they feel as if they have failed, due to their lack of perseverance with the hearing devices. Some may however find enjoyment in not having to utilise hearing aids, whilst others may find motivation to try them again. Finally, the permanent exit stage involves patients feeling comfortable with their devices and the communication strategies that they have learnt. Overall, they believe they are capable of managing their hearing impairment (Ida Institute, 2019).

As seen above, individuals with a hearing loss navigate through several stages such as gaining awareness of the hearing issue, choosing whether or not to seek help as well as obtaining an audiological referral (Manchaiah et al., 2011). Maltby (2019) further describes the four types of attitudes towards this hearing aid journey, specifically related to hearing loss and amplification. The first attitude is a positive one towards hearing aids and the aural rehabilitation process. The second involves a mostly positive attitude, with the presence of some complicating elements. These may consist of a difficult hearing loss to fit, or a previous bad hearing aid fitting experience. The third type comprises mostly of a negative attitude with an element of cooperative purpose. Finally, the fourth attitude includes a small group of individuals who completely reject hearing aids. Regrettably, intervention is not often successful with this group (Maltby, 2019). Due to the variability and desire for successful intervention, it is vital for audiologists to fully comprehend the process and patient journey and the possible associated attitudes of each patient (Manchaiah et al., 2011).

Personality Types: Patients and Audiologists

In adding to the aforementioned information, Traynor (2004) explained the importance of considering the different personality types of patients, as an audiologist. Through this consideration, there tends to be an improvement in the efficacy of treatment and in a patient's perception of his or her hearing impairment. It was suggested that audiologists consider the use of the Keirsey Temperament Sorter II (KTSII), which is designed to facilitate professionals in understanding different personality types so as to adjust treatment approaches to fit the specific needs of each individual (Traynor, 2004). The KTSII model consists of four different personality types, namely Sensing-Judging (SJ), Sensing-Perceiving (SP), Intuitive-Thinking (NT) and Intuitive-Feeling (NF). SJ individuals mainly present with logistical intelligence, factual practicality, and they enjoy having control over all situations. They are often decisive, precise, dependable, loyal, socially responsible, and people who struggle with change. A large portion of adults with hearing loss have a SJ personality (Traynor, 2004). SP individuals are typically good with crisis management and are strategically intelligent. They tend to tolerate challenges as well as the inadequacies of themselves and others, however, they are not tolerant of long and extensive processes. They are often free spirited, impulsive, flexible, action oriented, practical, and like change (Traynor, 2004). Those with an NF personality frequently have challenges with staying on a specific task and normally have multiple projects happening at once. They tend to have an extreme desire for harmony in their lives and due to this, they exhibit a need for everyone in their surroundings to be constantly happy, which is impossible. They are regularly described as individuals with integrity, vibrant imagination, sympathy, interpersonal skills, cooperation, and the need for appreciation and inspiration (Traynor, 2004). Finally, NT individuals exhibit high standards and are uninspired by authority. They mainly enjoy their reputation of being logical and inventive, as they favor strategic thinking and complexity. They are therefore described as knowledgeable, high achievers, independent,

confrontational, non-conformists, conceptualisers, and intellectually intriguing (Traynor, 2004). Evidently, it is essential for clinicians to consider these varying personality types, to provide individualised and effective rehabilitation to patients. Patients, however, are not the only ones with personality types. It is therefore vital to consider the personality type of an audiologist as this can impact on the journey in a considerable manner, even though this is often not something that is considered (Traynor, 2004). It is therefore important for practicing audiologists to identify their personality types according to the KTSII so as to monitor their own natural tendencies regarding behaviour when dealing with patients (Traynor, 2004).

Audiological Help-Seeking Behaviours

As previously mentioned, although there are many effective diagnostic and intervention options for hearing loss, help-seeking behaviours are low (Arnold et al., 2019). More than twenty factors have been identified as influences of audiological help-seeking, such as age, perceived severity of hearing loss, self-reported hearing challenges, and support from society, to name a few (Arnold et al., 2019). However, it is still not known how these different influences could be measured, how they relate with one another to impact audiological help-seeking, as well as to what extent they are predictive of behaviours (Arnold et al., 2019). As explained in existing studies, the choice to seek help for hearing impairments is largely determined by crucial signs of mis-hearing as symptoms (Pryce et al., 2016). Furthermore, within this decision-making process, several different factors are involved, such as being well-informed, learning information about hearing and hearing loss, as well as adapting to the hearing loss and its persistent nature. According to research, the decision-making process is highly reliant on attitudinal opinions and cues to action (Pryce et al., 2016).

In studies which focused on the hearing aid evaluation and uptake process, there were also a number of different indicators involved (Pronk et al., 2017). Specifically, older age, increased measured hearing loss, and greater self-perceived impairment, were factors all linked

with an increased probability of hearing aid uptake (Pronk et al., 2017). Additionally, individuals with no or reduced perceptions of hearing aid stigma, those who recognised more benefits than obstacles to using hearing aids, those whose loved ones held a positive attitude to hearing aids, and those with better social support, were more likely to get hearing aids (Pronk et al., 2017). Research revealed even more features, some inconsistent, that impact the uptake of hearing aids. These include, manual dexterity, education level, style of coping, cognitive functioning, familiarity with technology use, and employment status. Finally, elements based on circumstantial evidence and clinical experience were also considered as essential. Such elements include patient-professional rapport and interactions as well as the self-efficacy of managing hearing aid devices (Pronk et al., 2017).

Pronk et al. (2017) implemented the health belief and transtheoretical models to investigate additional predictors of hearing aid uptake and to explore effect modification by gender, age, and readiness for change. Like other studies, it was found that social pressure, severity of hearing loss, and self-reported hearing impairment are all substantial predictors of hearing aid uptake. Interestingly, this study found that factors such as increased hearing loss severity and hearing aid stigma were modified by gender (Pronk et al., 2017). This means that they were only predictive of entering a hearing aid uptake journey for females and not for males. Moreover, readiness for change was discovered to be a modifier for increased self-reported hearing impairment. This means that its positive predictive impact was stronger for individuals who demonstrated readiness to act on their hearing loss, than for individuals who demonstrated reduced readiness. Remarkably, no modifications by age were noticed (Pronk et al., 2017). This study further emphasised the need to investigate and identify influences that cause reduced readiness for change, so that they can be noted and included as part of the help-seeking process. Finally, this study highlighted that some predictors, like stigma, self-reported

hearing impairment, and severity of hearing loss, may often depend on readiness for change of behaviour and gender (Pronk et al., 2017).

Whilst several factors influence help-seeking behaviours, there are also numerous factors that influence the time in which individuals seek audiological help (Clements, 2015). Research has shown that environmental, physiological, patient-clinician interaction, and psychological factors, all play a role in how long an individual takes to seek audiological assistance. More specifically, social and environmental factors delay the decision-making of individuals with an acquired hearing loss to seek help (Clements, 2015). Some of these include stigma, poor understanding of society and family members, attitudes and opinions of people, knowledge of hearing aid usage, and perceived benefit of using hearing aids (Clements, 2015). In terms of physiological factors, studies revealed that for older individuals, the earlier the onset of age-related hearing loss, the more likely they are to seek audiological help. Moreover, if the hearing difficulties are complex, such as individuals being increasingly aware of their hearing sensitivity, then it is common that help will be sought after earlier (Clements, 2015). With regard to patient-clinician rapport and interactions, studies expressed that a poor initial auditory consultation with an audiologist can take individuals back into a cycle of denial regarding their hearing loss and taking action for it (Clements, 2015). Finally, psychological factors that contribute to patients timing of help-seeking, include their perceived disability, an overpowering sense of fear towards technology use, and the psychological and emotional stress of accepting a hearing loss (Clements, 2015). A study on these critical factors revealed that most patients sought assistance during a time when positive energy and negative stress were imbalanced. Moreover, encouragement to join peer support groups was given when positive energy significantly outweighed negative stress. Therefore, in order to enable the necessary help-seeking behaviour, it is essential to experience such psychological and emotional factors (Clements, 2015). Although there are an abundance of influences impacting on the timing of

seeking help, they do not often happen in isolation but rather express themselves throughout the patient journey, at different phases (Clements, 2015).

Seemingly, the element of time in delayed help-seeking and time in general, forms a large part of the audiological process. Additionally, time has also been explained in the sense of audiologists rushing to provide their patients with hearing solutions, which often doesn't allow for the time to absorb and accept the presence of a hearing loss (Clements, 2015). This could ultimately result in a delay to undergo intervention. For many, it has taken them countless years to decide on seeking audiological help, and therefore if audiologists are too focused on the hearing impairment itself and intervention, as opposed to targeting the possible barriers, then there is a chance that no solution will be implemented (Clements, 2015).

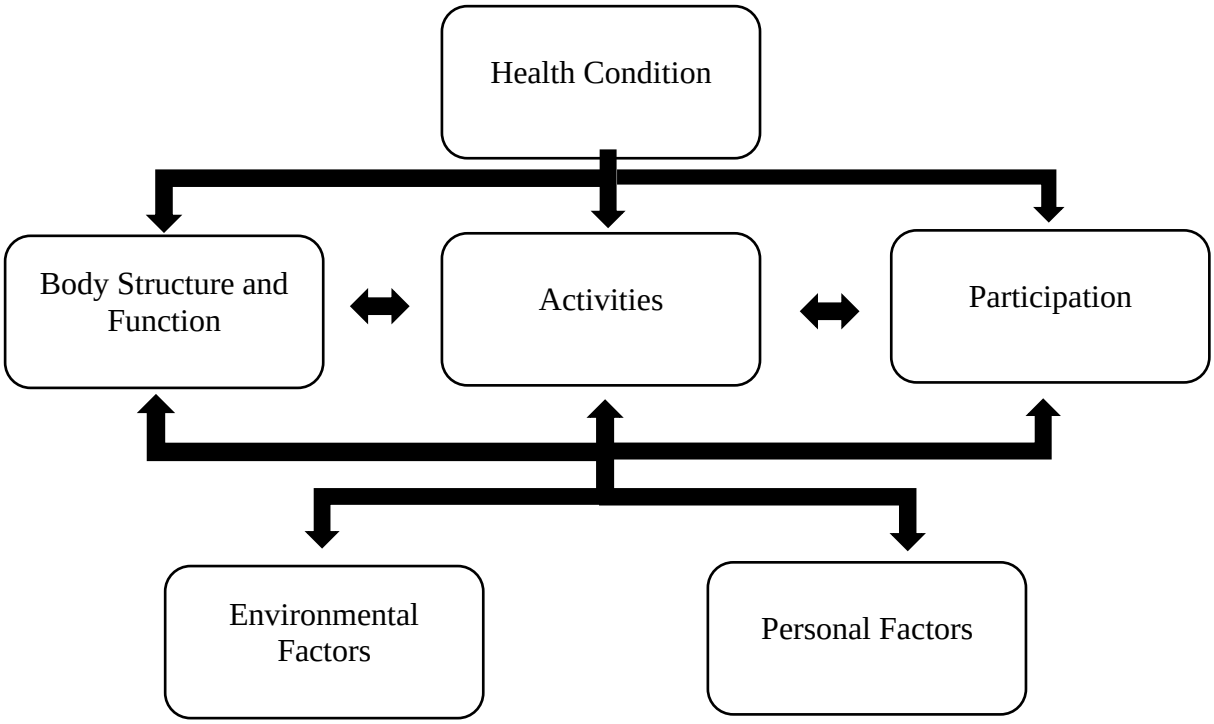
Additional studies described the element of time in the sense of when individuals may stop delaying their audiological help-seeking behaviours. Whilst various hearing-related challenges commonly occur in the daily lives of these individuals, they often ignore them or try cope as best as possible with them, so as to protect their identity and continue with life, by avoiding and delaying the acceptance of hearing loss and the need for assistance (Jonsson & Hedelin, 2018). It is often only when these challenges become disabling and debilitating to the functioning of an individual, that audiological assistance is sought after. Regularly, it is not until these individuals feel that their inability to hear well, is causing a huge lack of contact with their world, do they then decide to seek some form of audiological help (Jonsson & Hedelin, 2018). Frequently, when they feel disabled by their hearing loss, and therefore identify themselves as having a hearing disability, then they are almost forced to address their hearing issues (Jonsson & Hedelin, 2018).

The latter is linked to the International Classification of Functioning, Disability and Health (ICF) as seen in Figure 2. This is a popular framework used within the health sector to explain the effects of health impairments on people and promote patient-centered care amongst

different health professionals (Meyer et al., 2016). The ICF contemplates an individual's health through functioning and disability, as well as through contextual aspects. In terms of functioning and disability, focus is placed on describing body structures and functions, as well as activities and participation. Within this framework, the associated negative effects of a health condition are explained using terms such as, impairments, which is hearing loss in this case, activity limitations, which could be interaction challenges, and participation restrictions, which could include problems with initiating and maintaining relationships (Meyer et al., 2016). Contextual aspects of the framework, take into account the influence of personal factors, such as gender, age, or personality, as well as environmental factors such as stigma, advice of family and friends, on the functioning and disability of an individual who has a health condition, such as a hearing loss (Meyer et al., 2016).

Figure 2

International Classification of Functioning, Disability, and Health



Note. From “What Is the International Classification of Functioning, Disability and Health and Why Is It Relevant to Audiology?”, by C. Meyer., C. Grenness., N. Scarinci and L. Hickson, 2016, *Seminars in Hearing, 37*(3), Learning outcomes, Figure 1 (https://doi.org/10.1055%2Fs-0036-1584412). Copyright 2016 by Thieme Medical Publishers. Reprinted.

Literature has proven that the effects of hearing loss can be considerable, for both children and adults. Regarding adults, hearing loss may have a negative influence on work tasks, communication, interactions, and even participation in different social events. Due to this, research discovered a link between hearing loss and poorer psychosocial well-being and quality of life amongst those with a hearing loss and their families too (Meyer et al., 2016). Mounting evidence shows that activity limitations (e.g. perceived communication challenges), participation restrictions (e.g. perceived hearing impairment), and personal factors (e.g. attitudes about hearing aids and family and friend support) have a larger impact on seeking audiological intervention and the outcomes thereof, than the actual severity of the hearing loss (Meyer et al., 2016). This supports the above information which states that it is often when an individual feels disabled and as if his or her hearing loss is causing activity limitations and participation restrictions to a more severe extent, that he or she will then be more likely to seek help and partake in intervention effectively. Based on this information, the element of time appears to be a crucial component of the hearing aid journey and therefore requires further comprehensive investigation.

The Structure of Time: Globally and within African Philosophy

Due to the above findings regarding time, it is essential to look further into this element. There are various aspects within the structure of time, such as seconds, hours, days, weeks, years, the past, present and future, as well as positive and negative life events that pass rapidly or slowly (Sobol-Kwapińska et al., 2018). Within the field of psychology, the experience of time depends majorly on how individuals think about it, and the way that people think about

time is associated with their childhood, personality, and life experience. As explained by the model of temporal relations, mental representations of time underlie the experiences of time. Research has also emphasised the large influence that culture has on attitudes toward time (Sobol-Kwapińska et al., 2018). Edward Hall described a term called “silent language” which refers to a culture’s particular attitude towards time (Hall, 1990, as cited in Sobol-Kwapińska et al., 2018a, p. 1). Additionally, studies have explained that one of the features of attitudes toward time, is the attitude towards clock time. Clock time is known to provide order on daily activities and assists human functioning by providing a certain frame of reference, which regulates the times of events, activities, as well as the beginning and ending of different situations (Sobol-Kwapińska et al., 2018). There is a difference between event-time culture and clock-time culture. For example, within clock-time cultures, a great deal of emphasis is placed on the clock and deadlines characterised by particular hours. In contrast, within event-time culture the journey of time is defined by various events, and individuals do not assign much emphasis to times set in advance. Hence, a novel event starts when the prior one has finished (Sobol-Kwapińska et al., 2018). Within African philosophy specifically, the concept and structure of time was researched extensively from a variety of different perspectives because time is viewed as playing an essential role in the way in which society develops its beliefs, perceptions, and morals (Marava, 2015). It is safe to say that each race and culture around the world presents with their own philosophy and thought process on time and its structure (Babalola & Alokan, 2013). Original assumptions by the West were that time was given no value within African philosophy. However, research revealed that it is completely incorrect to assume that in African philosophy, there is no indigenous moral thought regarding the concept of time (Babalola & Alokan, 2013). Time concept is observed as a socio-cultural philosophical conception which makes up a large part of one’s identity, and the ideas of time that African philosophies possess are indeed highly rational and theoretical. Therefore, time is indeed

valuable within African philosophy, and therefore vivid ideas about the concept of time are present and valued (Babalola & Alokan, 2013).

More explicitly, research explained that within African philosophy, time is often viewed as a combination of events which have occurred, those which are currently occurring, and those which will occur inevitably (Marava, 2015). Interestingly, the phenomenon of time extends beyond the physical realm, right into the ontological aspect and timeless eternity (Marava, 2015). This proves another misconception about time concepts within African philosophy, which is that ideas of the future are not considered (Babalola & Alokan, 2013). It is important to note that within African philosophy, the concept of time has been in the process of change since colonial times. More specifically, during the colonial era, African philosophy was exposed to a large amount of Western civilisation, which had an impact on colonised societies. At first, a dual conception of time was adopted, and then both linear and indigenous concepts of time were used in a simultaneous manner (Babalola & Alokan, 2013). After the colonial era, linear time conception was highlighted overall, however, the African philosophy did not totally abandon its own conceptions of time. Hence, to this day African philosophy encourages the use of linear time in daily tasks and personal native time as occasion requirements. It is therefore stated with great positivity that indigenous concepts of time, within African philosophy, remain live and active within minds, stories, and literature (Babalola & Alokan, 2013). Evidently, different cultures have varying and unique concepts of time and these distinctive perceptions of the passage of time are what relate to the famous term of time perspective (Sircova et al., 2014).

Time Perspective

The goal of all time concepts, namely, time perspective, time orientation, and time attitude, is to explain how all individuals are conscious of the passing of time, and as a result try to make sense of it (Stănescu, 2015). This is done either by determining which time frame

one tends to have a bias for (temporal orientation), or by engaging in different emotional responses towards the future, present, or past (time attitude). Time perspective was recognised as the most representative concept in examining the relations between personal experiences and different time frames (Stănescu, 2015). Initially, there were different definitions for time perspective, however, the most common explanation and conceptualisation of the term, is that suggested by Zimbardo and Boyd. They explained it as an unconscious process whereby the constant journey of social and personal experiences is allocated to different time frames, which ultimately assists individuals in providing meaning, order, and coherence to such events (Stănescu, 2015). These temporal categories were further defined as cognitive frames that change in terms of periodicity, as they are reflective of unique personal events or repetitive temporal patterns (Hall, 1983, as cited in Stănescu, 2015). In psychology, time perspective is described as a central facet within psychological time, separating human experiences into the past, present, and future (Precin, 2017). Therefore, it has been emphasised as one of the major dimensions of human existence and is largely associated with various essential psychological concepts (Desmyter & De Raedt, 2012). Hence, time perspective is a highly vital, mainly unconscious dimension that impacts over thirty different human behaviours (Precin, 2017). Due to its unconscious nature, people are not even aware of the influence and bias that comes from time perspective when making life decisions (Desmyter & De Raedt, 2012).

Further literature explained that dispositional and circumstantial elements determine the formation of time perspectives (Stănescu, 2015). More specifically, processes including modeling education, socialisation, cultural, religious, and environmental factors impact whether one focuses on the past, present, or future, when engaging in behaviours and making decisions. Situational factors, such as stressful circumstances, were also said to influence time perspective bias (Stănescu, 2015). In referring back culture, it was revealed that because of the direct link between human behaviour and psychological elements, time perspective indeed

shows large cross-cultural differences (Sircova et al., 2014). Cross-cultural studies have grouped time processes into monochronic and polychronic cultural time orientations and perspectives. Cultures that possess a monochronic time orientation often prefer to do one thing at a time and focus on segmentation and time schedules. Therefore, they are deadline-orientated and concentrate on finishing one task before beginning the next one (Sircova et al., 2014). Conversely, cultures with a polychronic time orientation often do various things at once, and they emphasise the completion of operations as opposed to adhering to predetermined schedules (Sircova et al., 2014). South Africa falls more into the category of monochronicity as timeframes are viewed as essential to the population (Sircova et al., 2014). In referring back to time perspective being influenced by several factors, it would therefore make sense to say that different time perspectives are reflective of people's differences in culture, religion, family dynamics, education, and social class (Keyser, 2017). As stated above, this is an essential point within the South African context, due to the variability of the population regarding culture, education level, religion, and race to name a few. Moreover, time perspective is said to be comparable to a personal characteristic, as it involves demonstrating a constant tendency in forms of feelings, thoughts, and behaviours (Keyser, 2017). With further regard to personal characteristics, time has been explained not only as objective, but subjective too, as individuals have unique perceptions of time (Precin, 2017). In fact, Zimbardo and Boyd define time perspective as a persistent personality trait (Zimbardo, 1999 as cited in Zabelina et al., 2018). Therefore, the stability of time perspective as a trait of an individual's personality, determines its ability to predict human behaviour (Zabelina et al., 2018)

Individuals often develop a tendency to favor one time frame over another when making decisions or engaging in different behaviours, and this is called a cognitive temporal bias (Stănescu, 2015). Therefore, one specific time perspective becomes the core predictor of daily life behaviours and choices. In studies conducted by Zimbardo and Boyd, the importance of

having a balanced time perspective was emphasised (Stănescu, 2015). This is known as an "ideal optimal temporal perspective" and involves possessing attitudes towards the past, present, and future that are flexible and can change depending on the situational demands of the circumstance, as well as the values and needs of an individual (Boniwell & Zimbardo, 2012, p. 171). Research adds that through different intervention approaches, time perspective can be targeted and modified (Sansone et al., 2013).

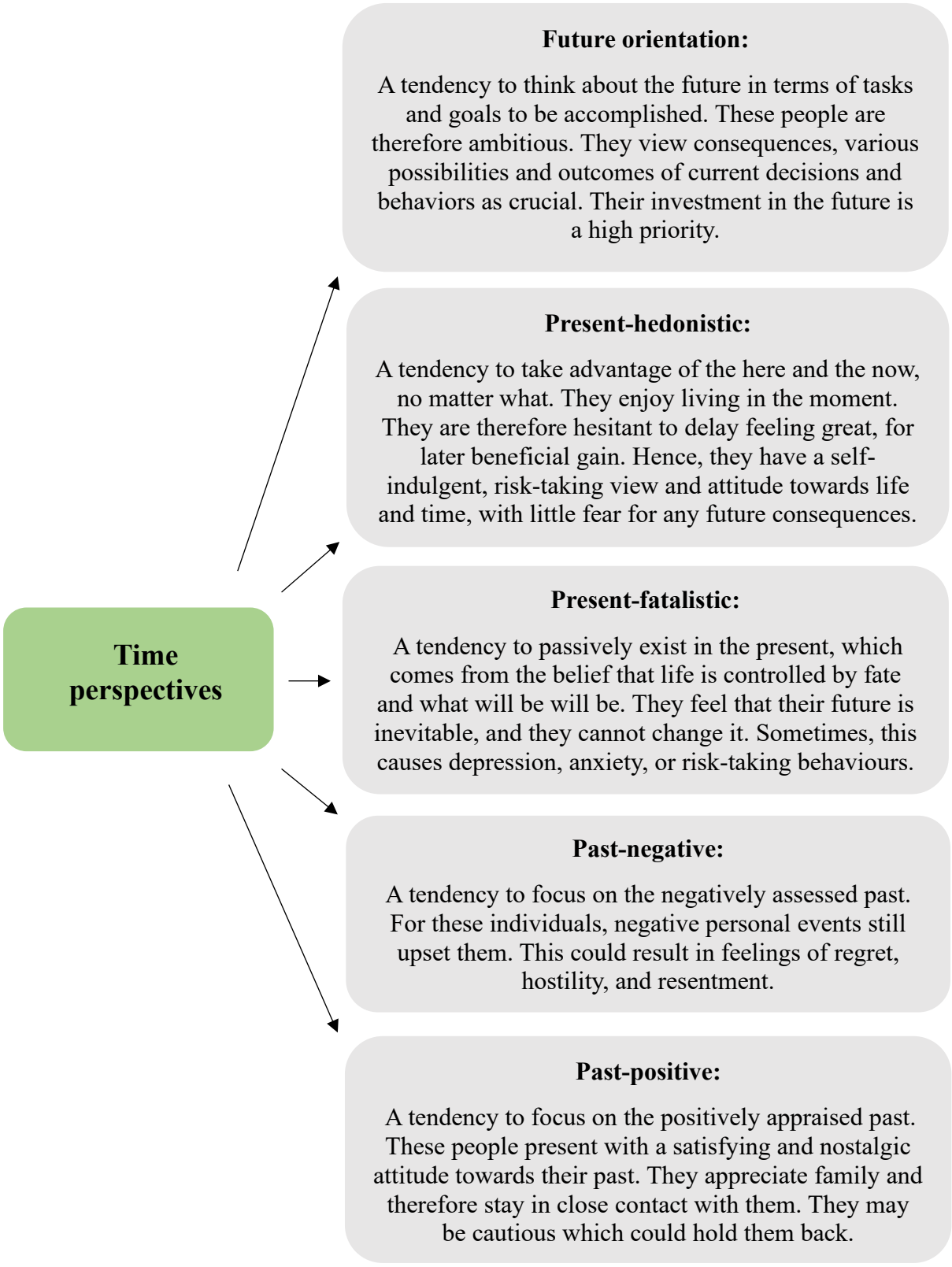
To understand and target time perspective fully, the researcher developed a description of the different time dimensions based on the existing literature, as represented in Figure 3. The three simple time frames, such as the past, present, and future assist us in encoding, storing, and remembering experiences (Desmyter & De Raedt, 2012). They also facilitate us in creating expectations, goals, imaginative events, and several possibilities. There are five main factors within the general three-dimension time frame of past, present, and future. The first is past-negative, which involves a negative and loathing view of the past (Desmyter & De Raedt, 2012). More specifically, such individuals display pessimistic views of past experiences, have often undergone a traumatic past, or have maintained a negative perception of a former neutral incident (Precin, 2017). They also commonly present with reduced emotional stability and contemplation of future consequences, as well as loneliness, depression, anxiety, poor self-esteem, and poor motivation towards reaching goals. The next is past-hedonistic which involves a self-indulgent, risk-taking view and take towards life and time, with minimal fear for any future consequences. These individuals enjoy present pleasure, love taking risks, crave excitement, have fun with intense activities and are highly receptive to friendships (Desmyter & De Raedt, 2012). Future-orientated individuals place importance on future goals and incentives. They view consequences, various possibilities and outcomes of current decisions and behaviours, as crucial. Hence, they normally focus on accomplishing future goals and rewards (Precin, 2017). Within this time perspective, the key characteristic is gratification

delay, which is the ability to postpone instantaneous gratification in favor of future goals and rewards. Furthermore, this time perspective is related to increased levels of well-being, positive behaviours and actions, superior wealth, long-term goal achievement, more time spent on studying, and overall higher education (Precin, 2017).

Individuals with a past-positive time perspective, present with a pleasurable, gentle, emotional, and nostalgic attitude towards their past. They are motivated to maintain relationships with loved ones (Desmyter & De Raedt, 2012). Moreover, high scores in this time perspective, reveal increased levels of optimism, well-being, resilience, and sense of security (Precin, 2017). Finally, those with a present-fatalistic time perspective possess an attitude towards life and the future, that is fatalistic, miserable, and defenseless (Desmyter & De Raedt, 2012). More specifically, they have an overall pessimistic view towards the present and future, due to their belief that the future is predetermined, and cannot be impacted by one's behaviours, and that the present must be recognised and accepted for what it is (Precin, 2017). Such individuals often present with anxiety, poor emotional stability, depression, and aggression issues (Precin, 2017). These factors are commonly measured using the Zimbardo Time Perspective Inventory (ZTPI), which is an evidence based instrument involving cognitive, emotional, motivational, and social processes that determine time perspective (Desmyter & De Raedt, 2012).

Figure 3

Description of the Five Time Perspectives



Studies have shown that time perspective is defined as a fairly stable individual viewpoint that can evolve and change as one ages (Laureiro-Martinez et al., 2017). Moreover, research revealed that the five-time perspectives are independent of one another, which suggests that individuals can change and move their focus amongst these different time constructs and that concentrating on one perspective essentially does not prevent thinking about the others (Laureiro-Martinez et al., 2017). Therefore, factors that affect one time perspective do not necessarily always affect other time perspectives. There is ever increasing evidence that supports how older individuals focus more on the positive events of the past, as opposed to the negative past events, and that their present is handled in a manner that is less hedonistic (Laureiro-Martinez et al., 2017). Therefore, as individuals become older, they look at their past with less negativity, and therefore with less regret. Additionally, for older individuals, emotion regulation is viewed as a vital lifegoal and one that individuals tend to be better prepared to practice when they are older (Laureiro-Martinez et al., 2017). As they often draw on the outcomes of their past situations to gain an increased internal point of control, their risk-taking behaviours are reduced. Therefore, a negative correlation has been found between age and both present-hedonistic and present-fatalistic time perspectives (Laureiro-Martinez et al., 2017).

In terms of future orientated time perspectives, research suggests that in one's youth, time is seen as extensive and unlimited, and therefore, long-term goals are prioritised as they improve future opportunities (Laureiro-Martinez et al., 2017). Therefore, as individuals age, the opposite occurs and time is viewed as limited, and thus social support and emotional regulation which are short-term goals, receive the ultimate priority (Laureiro-Martinez et al., 2017). In very young children, the cognitive skills concerned with future planning are not yet developed, whereas in adolescence and adulthood, they are. Consequently, through middle age, more focus is placed on future prospects than on the fact that time is limited. Then around sixty years of age, this shifts to a reduced focus on future prospects, and an increased focus on time

restrictions (Laureiro-Martinez et al., 2017). However, upon careful analysis, researchers found that content is what differs, such as the patterns of expectations and aspirations that various age groups concentrate on. Therefore, Laureiro-Martinez et al. (2017) did not find a relation between the future time perspective and age, due to the latter which states that what changes with age is the set of age-specific goals that are focused on, and not specifically future events.

In a recent study, findings revealed that younger individuals have a more flexible and differentiated time perspective (Sobol-Kwapinska et al., 2019). This flexibility may explain their diversity in time perspective and why they adapt easier, in comparison to older individuals (Sobol-Kwapinska et al., 2019). Evidently, they are better able to adjust their behaviour according to the needs of a situation. Interestingly, Sobol-Kwapinska et al., (2019) found that older adults often present with more of an integrated time perspective. This decrease in the number of components in time perspective with age, may be understood as the integration between different areas of mental processes, involving reference to time. Hence, the older individuals are, the more they have an integrated perception of life, including time constructs, and the more often they try to sustain a balanced life and develop a rational viewpoint on life (Sobol-Kwapinska et al., 2019). Nevertheless, ambiguities still exist about age and time perspective, and as a result, further research on this topic has been emphasised.

Time perspective has been explored in several health and general life behaviours. More specifically, it has been studied as being a predictor of procrastination, smoking status, subjective wellbeing in older adults' general achievement, motivation, self-regulation, risky behaviours, academic achievement, as well as healthy behaviours and disease-mediating states, to name a few. A study which explored time perspective as a predictor of healthy behaviours and disease-mediating states, concluded that there is a definite association between different time perspectives and engaging in healthy behaviour tendencies (Hall et al., 2015). This study further reinforced the great applicability of time perspective within the health field (Hall et al.,

2015). The findings within this study correlate with findings in other studies exploring the impact of time perspective on health behaviours. With further emphasis on time perspective, a study conducted by Manchaiah (2013) emphasised that one of the clinical implications was the importance of seeing and understanding patients from a different perspective, such as within the time domain. The models included within this study provided crucial information about the temporal dimension of the hearing aid journey. Hence, it was recommended that the hearing aid journey and process of change should be studied from different analytical levels, including a psychological level (Manchaiah, 2013). This is important within multiple contexts, but may be particularly useful in South Africa due to the high prevalence of hearing loss, and individuals of different cultures and backgrounds requiring audiological intervention and support (Wilson & Tucci, 2021).

Coping Strategies Implemented by Different Time Perspectives

In life, everyone is faced with challenging situations that need to be addressed, such as being diagnosed with a hearing loss. Research has revealed that individuals often implement coping strategies according to their time perspectives, when dealing with these situations (Bolotova & Hachaturova, 2013). Future orientated individuals select strategies such as self-control as well as rationally considering different ways to solve their problems. Specifically, they choose behavioural and cognitive coping strategies to facilitate them. In addition to the above, they may distance themselves or set a problem aside for some time, not because they do not want to solve it, but because they want to think about different options and ways to resolve their problem, in a sensible manner (Bolotova & Hachaturova, 2013). Therefore, their implementation of such coping strategies, encourages, enables and equips them to actively tackle conflict or difficult life situations (Bolotova & Hachaturova, 2013). Individuals with a past positive time perspective are said to seek social support from loved ones and deem interaction with others to be an essential resource when coping with these challenging

situations (Bolotova & Hachaturova, 2013). With regard to the present hedonistic time perspective, such individuals implement optimism as an emotional strategy as well as nonadaptive behavioural and emotional strategies like active avoidance and aggression. Similarly, present fatalistic individuals use adaptive strategies but also nonadaptive emotional strategies like self-blame, aggression and suppressed feelings. In terms of their nonadaptive behaviour strategies, they frequently implement avoidance and active retreat. Finally, those with past negative time perspectives tend to implement all forms of maladaptive coping strategies such as suppressed emotions, confusion, retreat, and deception (Bolotova & Hachaturova, 2013). Evidently and importantly, different time perspectives are associated with different coping strategies.

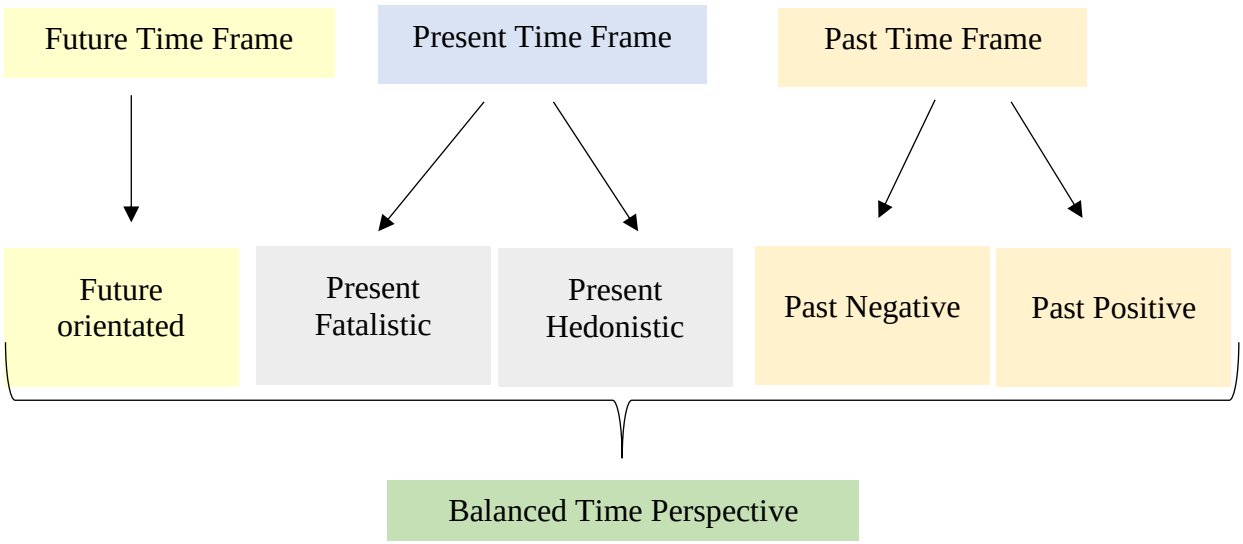
Time Perspective Therapy

Literature has shown that time perspective therapy integrates well into Zimbardo's framework in Temporal Theory (Zimbardo et al., 2012). This type of therapy considers that everyone has a unique time perspective, based on their personal life experiences, whether good or difficult, as seen above. Ultimately, this perspective is the way in which humans view their lives. Nevertheless, these experiences do not need to limit how individuals view the world and their place in it, specifically when the dominant perspective is damaging to the individuals themselves and those around them (Zimbardo et al., 2012). As research has stated, no matter what the experiences of the past have been, everyone still has a choice. Hence, by adapting and changing the time perspective of individuals, lives can also change. Ultimately, the constant knowledge that humans always have the choice to change how time is viewed regarding their lives is essential and forms the basis of this therapy (Zimbardo et al., 2012). The goal of time perspective therapy is therefore to create a balanced time perspective (BTP) of the past, present, and future as illustrated in Figure 4. This therapy has been mainly used in individuals with post-traumatic stress disorder, where the therapist assists them in moving from a past negative

time perspective, to one in which the future is seen and imagined in a positive manner (Zimbardo et al., 2012).

A BTP involves a combination of ideal scores on all the various time perspectives (Przepiorka et al., 2020). By having a BTP, individuals can shift between the past, present, and future when responding to different circumstances and this positively predicts human well-being. Therefore, these people experience more satisfaction and positive affect in their lives (Przepiorka et al., 2020). Studies have actually shown a link between personality and time perspective. For example, associations exist between a past negative time perspective and neuroticism, which is a personality trait that consists of a long-term inclination to experience negative emotions and affects such as irritability, anxiety, anger, self-consciousness, emotional instability, or even depression (Widiger & Oltmanns, 2017). Additionally, links have been established between a future time perspective and dependability and a present hedonistic time perspective and extraversion. Furthermore, personality issues normally correlate with present fatalistic, past positive, and past negative time perspectives (Przepiorka et al., 2020). An important finding revealed that time perspective was a predictor of life satisfaction over and above the big five personality traits. Hence, time perspective is a different and important construct that contributes on its own to human function and is a vital feature in attaining happiness of an ideal level (Przepiorka et al., 2020).

Figure 4
Balanced Time Perspective



Theoretical Framework

Time Perspective (TP) Theory

The time perspective theory forms the basis of this research and is the overarching theory of this study. As previously explained, this theory believes that behaviour is highly influenced by how individuals relate their actions to their past, present, and future (Stolarski et al., 2018). More specifically, this theory explains that to some extent, individuals divide their personal experiences and events into the past, present, and future, unconsciously (Sobol-Kwapińska et al., 2018). An essential outcome of this process is that a certain individual's choices, behaviours, and judgements are impacted by the time dimension that this individual favors. As mentioned before, five different types of time perspectives have been recognised namely, past-positive, past-negative, present-hedonistic, present-fatalistic, and future perspective (Sobol-Kwapińska et al., 2018). Based on this and the information explained in this literature review, it is essential to use this theory within the theoretical framework as it concurrently takes into consideration the impact of the past, present, and future (Åström et al., 2019). Furthermore, it forms the basis of this study due to investigations being made on whether time perspective could be a possible indicator of audiological help-seeking behaviours and intervention outcomes. Whilst this is the key theory that underlies this study, there are other theories that play a role and contribute to the topic and are therefore important to discuss.

Psychodynamic Theory

The psychodynamic theory plays a role within this study, as it highlights the unconscious motives that underlie the behaviour and personality of individuals (Bornstein, 2022). Hence, emphasis has been placed on unconscious psychological processes and the substantial impact that childhood experiences have on the personality of an adult. There are three core assumptions within this theory and the first is, primacy of the unconscious. This

involves the fact that most psychological processes occur outside of one's conscious awareness. Therefore, the mind's mental activities are assumed to be mainly unconscious (Bornstein, 2022). Hence, motives, memories, and feelings are said to be inaccessible to the consciousness of an individual. The second assumption is critical importance of early experiences. Hence, this theory highly emphasises the large influence of early childhood events on an adult's personality development. More specifically, it states that early experiences, create personality processes that impact us many years later. This is particularly the case for experiences that are extraordinary in a positive or negative way, such as losing a family member (Bornstein, 2022). The final assumption is psychic causality, which explains that nothing in the mental life occurs by chance. Thus, it is not believed that thoughts, motives, feelings, or behaviours are random (Bornstein, 2022). Many theorists and researchers are in agreement that emotional responses, intentions, thoughts, and behaviours do not happen randomly, but rather originate from a combination of psychological and biological processes (Bornstein, 2022). This theory is therefore important for this research, as like the time perspective theory, this theory focuses on unconscious psychological processes and the impact of the past, on behaviours and personality.

Socioemotional Selectivity Theory (SST)

Another theory that supports the current study is the socioemotional selectivity theory. The SST is known as a life span theory of motivation which suggests that the goals that humans choose is in accord with their position in life and is aimed at increasing life satisfaction (Sullivan-Singh et al., 2015). According to this theory, detected variations in goal preferences across the life span urge individuals to consider tasks that facilitate them in obtaining benefit from the rest of their lives (Sullivan-Singh et al., 2015). Within this theory, goals impact on the formation of social networks and social preferences. Since goals direct cognitive processing, the SST theorises that memory, emotional experiences, decision-making and attention are all significantly influenced by an individual's time perception (English & Carstensen, 2016). In

contrast to other developmental theories of adulthood, this theory also considers future time perspective and how perceptions of the future change, as opposed to focusing merely on past experiences (English & Carstensen, 2016). Evidently, the SST explains that human motivation is highly influenced by time perspective (Desmyter & De Raedt, 2012). Therefore, for individuals who possess an extensive time perspective, the quest for goals associated with knowledge acquisition is rational and adaptive, as they perceive a long future ahead in which acquired knowledge is valuable (Sullivan-Singh et al., 2015). However, for those who view time as being more limited, acquiring novel knowledge is not as valuable, as there is a restricted time in which it can be used. Hence, it is these people who have an increased likelihood to chase goals that can be instantly rewarded and gratified (Sullivan-Singh et al., 2015). More simply, younger individuals often view time as more open-ended and therefore focus on knowledge-linked goals, whereas older individuals view time as being more restricted and as a result focus on emotion-related goals (Sullivan-Singh et al., 2015).

In a study investigating time perspective, the SST was used to explain the differences within the structure of time perspective (Desmyter & De Raedt, 2012). This study emphasised that within this theory, it is essential to consider the interaction of three-time dimensions, namely, biological time, social expectations, and historical time, to understand adult development. Moreover, this theory was said to be essential when it comes to explaining the cultural uniqueness and different historical periods that each individual grows up in (Sobol-Kwapinska et al., 2019). Evidently, this theory is highly relevant within South Africa due to the various cultures and historical events which occurred. Moreover, investigating this theory in individuals coping with a restricted time perspective that has occurred because of physical illness instead of ageing, allows the opportunity to increase the support for this theory as well as facilitates the comprehension of how changes in time perspective may assist the psychological adjustment to difficult life situations (Sullivan-Singh et al., 2015). Such illnesses

and challenging life situations include being diagnosed with a hearing loss and having to undergo intervention.

COM-B Behavioural Model

As seen above, theories from health psychology were used as the theoretical framework for this study. Interestingly, there has been increased application of health psychology theories within the audiological field (Coulson et al., 2016). More specifically, they have been used as guiding frameworks when researching hearing loss and the positive promotion of hearing health. Studies have stressed the great positivity in applying these theories to audiology and psychology, as they will undeniably provide benefit to both fields (Coulson et al., 2016). Based on the above-mentioned information, it is crucial to use such theories as the supporting framework for this study. Whilst above theories are well-established and have provided a significant body of research regarding theories of behaviour, it is vital to acknowledge and be receptive to novel and developing theories in the same manner as with older theories (Coulson et al., 2016).

At the foundation of the novel research is a psychological model of human behaviour, called the COM-B model as seen in Figure 5, which integrates the psychological elements related to behaviour change (Coulson et al., 2016). This model was developed because research showed that there was a need for a comprehensive supra-theory model of behaviour, applicable and relevant across different contexts (Barker et al., 2016). In previous studies, models of health related behaviour such as the health belief model, the theory of planned behaviour, and the transtheoretical model were used, but significant criticism and challenges were found within these models (Coulson et al., 2016). As a result, it was advised to consider the use of a new approach to studying behaviour change. This is where the COM-B model arose. The C stands for capability, the O, stands for opportunity, and the M, stands for motivation. Simply, the model explains that all the above is needed to perform the B, which is behaviour (Barker et

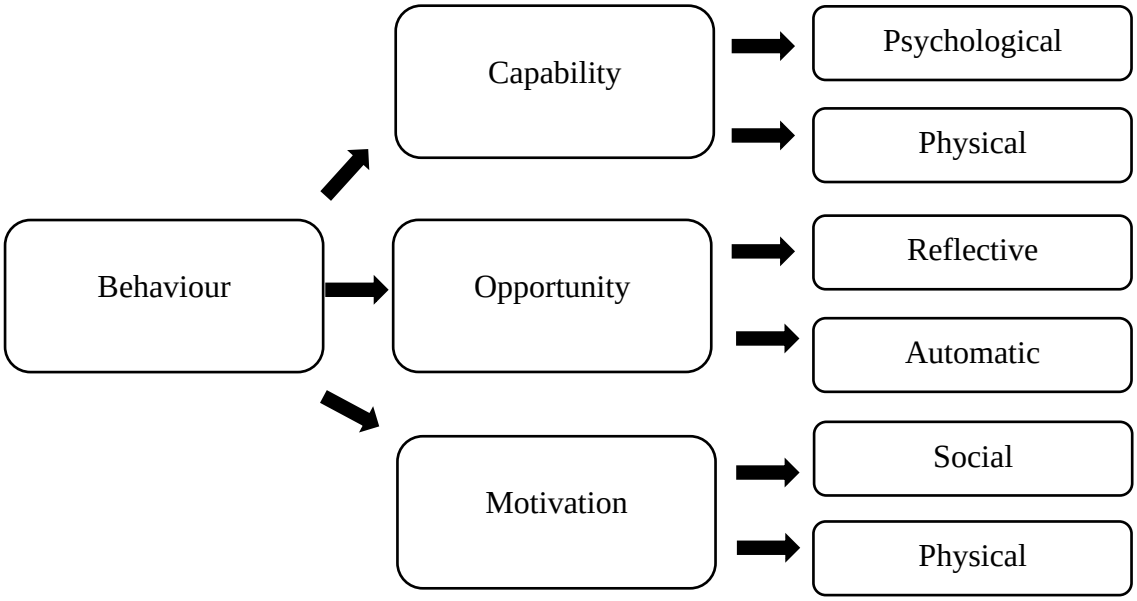
al., 2016). This model therefore suggests that for individuals to partake in a certain behaviour (B) at any time, they must be both psychologically and physically able (C) and must have the physical and social opportunity (O) to conduct the behaviour (Barker et al., 2016). Additionally, they must need or want to engage in the behaviour more so than other competing behaviours at that point in time (M). This explanation of motivation includes automatic processes such as habits and instincts, simple drives, as well as intention and choice which falls under reflective processes. This model was designed to guide our understanding of behaviour in context and create different behavioral targets as a foundation for intervention with individuals (Barker et al., 2016). If a desired behaviour is not occurring, then further analysing the behaviour and the determinants of the behaviour, will assist in discovering what needs to be changed to allow for the desired behaviour to occur. Hence, all elements of the COM-B model are interdependent, and work in harmony to assist changing of a behaviour or maintaining an already adopted one (Coulson et al., 2016). Moreover, each element of the COM-B model is further split into sub-elements that are used to obtain and define the more advanced details of the COM-B elements that are specific to a certain desired behaviour (Coulson et al., 2016). This theory was developed as part of a larger behaviour system which is called the Behaviour Change Wheel (BCW) (Barker et al., 2016). The main purpose of this broader framework, is to facilitate those who are involved in behaviour change interventions to move from a behavioural analysis of the issue, to an intervention plan (Coulson et al., 2016). More clearly, the BCW enables developers to recognise policy categories and intervention purposes that could allow for change, in a methodical and understandable manner (Barker et al., 2016).

In terms of application, it has been successfully used in various contexts but hasn't been widely utilised in audiology, as of yet (Barker et al., 2016). This is because the COM-B and BCW models are recent developments within the behavioural psychology fields. However, in a study

conducted by Barker et al. (2016), detailed examples of how the COM-B model and BCW can be applied in the context of hearing healthcare specifically to guide the development of an intervention and to improve the adherence of hearing-aid use in adults with acquired hearing loss, was provided (Barker et al., 2016). Therefore, it was advised by studies to consider existing theories of health-related behaviours, however, new models and theories also need to be recognised and included as guiding frameworks (Coulson et al., 2016).

Figure 5

The COM-B Model



Note. From “Capability, opportunity, and motivation: an across contexts empirical examination of the COM-B model”, by J. Willmott., B. Pang and S. Rundle-Thiele, 2021, *BMC Public Health*, *21*(1014). Copyright 2021 by The Author(s).

Methodology

Research Question

Could time perspective potentially indicate audiological help-seeking behaviours and intervention outcomes, in adults diagnosed with a hearing loss, within a South African private practice setting?

Aims and Objectives

Main Aim of the Study:

To explore whether time perspective could potentially indicate audiological help-seeking behaviours and intervention outcomes, as perceived by adults diagnosed with a hearing loss, within the South African private practice setting.

Objectives of the Study:

1. To explore patient perceptions of the theme of time associated with audiological help seeking behaviours and intervention outcomes, with specific focus on initial consultations, the hearing aid decision-making process, hearing aid uptake, and the journey of amplification.
2. To explore patient perceptions of the possible impact of time perspective on audiological help seeking behaviours and intervention outcomes, with specific focus on initial consultations, the hearing aid decision-making process, hearing aid uptake, and the journey of amplification.
3. To explore audiological experiences that may relate to different aspects of time perspective.
4. To obtain possible advice on how audiologists could consider the aspect of time and time perspective within the audiological and hearing aid journey of their patients.

Research Design

A cross-sectional, qualitative, exploratory research design was selected for this study. Firstly, a cross-sectional study was used as it includes analysing data about a population at a certain point in time (Setia, 2016). Moreover, and importantly, the data obtained from a cross-sectional study may be the starting point for upcoming research on the topic (Setia, 2016). Secondly, qualitative research consists of gathering and analysing data of a non-numerical manner to comprehend opinions, ideas, and experiences (Palinkas et al., 2015). Hence, it is used to obtain in-depth perceptions into an issue or create novel ideas for research. Furthermore, the intention of qualitative research is to attain depth of comprehension as well as retain rich meaning when analysing and interpreting data (Palinkas et al., 2015). Therefore, within this specific study, a qualitative design allowed for the assembly and analysis of detailed experiences, beliefs, and ideas of hearing aid users, surrounding time and time perspectives within the audiological journey.

Within this design, an exploratory research method was also selected as it is frequently implemented when there is an insufficient amount of information about a certain phenomenon, such as that of time perspective in audiology (Boru, 2018). Hence, the purpose of such a research design is not to provide conclusive answers to the research questions, but to simply explore the research topic in differing levels of details. Consequently, it is set out to confront novel problems, on which very little or no prior research has been conducted (Boru, 2018). Furthermore, an exploratory design often forms the foundation for more conclusive studies and defines the primary research design, data collection methods, and methodology (Boru, 2018). As previously explained, there is insufficient research on time perspective in the audiological field. Therefore, an exploratory approach was necessary to allow for novel information and ideas to be obtained and analysed.

Additionally, this study also implemented an inductive approach (Gabriel, 2013). This is because the aim of this study was not necessarily concerned with evaluating a specific theory but was rather focused on the possibility of developing a new theory based on the data obtained. Moreover, inductive approaches are commonly used when there is no existing literature on the topic of investigation, as there is no specific theory to assess (Gabriel, 2013).

Whilst conducing the interviews, it was found that some elements of a narrative approach were being used. Within a narrative approach, the stories provided by the participants, form the raw data used in analysis and interpretation (Butina, 2015). Hence, this approach has been used in various disciplines to learn about the historical experiences, culture, lifestyle, and identity of the narrator. Interviews were identified as a means of data collection that would elicit narrative data, and this was indeed seen whilst conducting the individual interviews with the participants of this study. Moreover, a defining trait of a narrative approach has been the collecting of stories or narratives either from individuals themselves, or from a small group of individuals (Butina, 2015). Again, within this study, two small focus groups were held, and it was again found that stories were elicited and shared within these groups. Benefits to using a narrative approach have been highlighted. One benefit is that stories are often simple to elicit when discussing certain topics, as humans are defined as natural storytellers, although they may not always be simple to analyse. Secondly, researchers frequently obtain in-depth meaning from stories told by participants, as stories normally reveal the identity, opinions, and lifestyles of these participants. Finally, due to the detailed descriptions provided during narratives, it can be simple for the researcher to accomplish and achieve in-depth data for the study (Butina, 2015).

Therefore, within this study an exploratory, qualitative design with an inductive and narrative approach was implemented due to the large paucity of research on time perspective

in the field of audiology, and therefore the need for exploratory and in-depth insight into this phenomenon.

Participant Selection

Sampling Strategy

Purposive sampling was the first sampling strategy used. This strategy is most commonly used in qualitative research for the purpose of identifying and selecting information-rich cases associated with the phenomenon of interest (Louw et al., 2018). Hence, this includes choosing individuals or groups of individuals who exhibit knowledge or experience regarding the phenomenon of interest (Palinkas et al., 2015). Within qualitative research methods, the intention of this strategy is to maximise validity, applicability, and effectiveness (Palinkas et al., 2015). When referring to the study at hand, the researcher therefore purposefully selected hearing aid users who fit the inclusion criteria, had certain desired characteristics, and who and were likely to provide useful information about the phenomenon of time perspective as a potential indicator of audiological help seeking behaviours and intervention outcomes.

In addition, convenience sampling was applied. This is a form of non-probability sampling that involves the researcher recruiting participants who are easy to reach, such as those who are at the researchers work site or a nearby school (Jager et al., 2017). Therefore, this type of sampling does not consist of any random selection of participants. Although this type of sampling has poorer generalisability in comparison to probability samples, it has numerous advantages. These include the fact that it has been around for several generations, it is the most common non-probability sampling strategy used, it is more efficient, cost-effective, readily available, and can be simpler to implement (Jager et al., 2017). Within this study, this sampling was used by recruiting patients from the workplace of the researcher.

Maximum variation (heterogeneity) sampling which falls under purposive sampling, was also used in this study. Simply, this form of sampling attempts to maximise perspectives

by choosing participants with a broad variety of attributes (Patton, 2002). Its main aim is therefore to identify, explain, and describe common and central themes that occur across a large amount of variation (Patton, 2002). Research has shown that for small samples, having a large amount of heterogeneity can be an issue since the cases involved are so different from one another. However, maximum variation sampling turns this so-called weakness into a strength. This is done by implementing the logic that any common patterns that arise from large variations are of great use and interest in encapsulating the key experiences and shared elements of a phenomenon (Patton, 2002). Hence, when choosing a small sample of participants with great variability, the data collection and analysis methods lead to two kinds of results. The first was high-quality and descriptive explanations of each case, which was essential for reporting on uniqueness. The second was vital shared patterns that occurred across different cases and acquired their importance from having appeared out of variability. Both of these are important and beneficial when conducting qualitative studies (Patton, 2002). Research has shown that time perspective is influenced by several different variables, such as age, gender, socioeconomic status, ethnicity, psychological wellbeing, work states, and culture (Andretta et al., 2013). Due to this, the large paucity of research on time perspective in audiology and therefore the exploratory nature of this study, a small sample of adults with variability were recruited. For example, adults that differed in gender, age, ethnicity, career stage, and culture were invited to participate. In including participants with such variability, detailed information, uniqueness, and shared patterns were obtained, which is important for newly introduced topic to audiology.

Finally, simple random sampling was used specifically for the focus groups in this study. This form of sampling ensures each individual in a population has the same probability of being chosen for a specific study, and that the selection of a person does not impact the selection of any other person (Omona, 2013). Within this study, all individuals who agreed to

participate in a focus group discussion underwent a randomisation selection process to determine which of them would be included in the focus group discussions.

Participant Selection Criteria

The inclusion criteria for the study included:

- Adults between 35 years and 74 years of age. Adults within this age group were selected as this study required developed skills of metacognition, as participants needed to think about their cognitive processes, and reflect on all time dimensions, such as their past, present, and future. Research has shown that metacognitive efficiency is significantly better in middle-aged adults, compared to younger or older individuals (Filippi et al., 2020) Furthermore, there are several causes of hearing loss within South Africa affecting younger adults too, such as ototoxic medications for treatment of human immunodeficiency virus (HIV), tuberculosis, and cancer as well as exposure to excessive noise via occupational or recreational exposures (Joubert & Botha, 2019). These have been identified in younger adults due to the improvement in the technology utilised to detect hearing loss at earlier stages (Joubert & Botha, 2019). In addition, the number of adults between the ages of 32 years and 50 years presenting with hearing loss is increasing (Packer, 2015). Adults older than 74 years were excluded due to studies having shown that there is often an age-related decline in cognitive capacity in individuals 75 years and older (Yan et al., 2020). Finally, the wide age range supports the maximum variation sampling that was used in the study.
- Adults who were patients of a specific private practice in Johannesburg at the time of the study. This was specified due to the researcher being an audiologist at this site, implementing an emic perspective to the study, and using convenience sampling.
- Adults who had a full audiological assessment by a qualified and registered audiologist. A full assessment is defined as including otoscopic examination, tympanometry, pure

tone audiometry, and speech audiometry. This was selected as in contrast with a simple hearing screening, a full diagnostic assessment thoroughly examines several malfunctions of the complex sensory organ system, known as the ears in this case (Hoth & Baljić, 2017). Therefore, in addition to the correct diagnosis of hearing difficulties, undergoing a full test also imparts holistic information that guides the audiologist in providing beneficial audiological management to patients (Hoth & Baljić, 2017).

- Adults who had been diagnosed with a hearing loss, ranging from mild to profound in severity, by a qualified and registered audiologist. Such patients were selected, as all these severities of hearing loss are aidable and audiological interventions are therefore sought out to assist these individuals, thereby reducing their listening efforts and assisting with effective communication (Sereda et al., 2015). Additionally, receiving a diagnosis by a qualified and registered audiologist was essential, as qualified audiologists have been specifically trained to correctly identify, diagnose, treat, and monitor disorders of the auditory system (Glob J, 2017).
- Adults who had been fitted unilaterally or bilaterally with amplification (hearing aids or bone anchored hearing aid systems). These adults were included, as whether one or two hearing aids, conventional or non-conventional hearing aids were required, these adults had undergone audiological help-seeking behaviours and intervention plans.

The exclusion criteria included:

- Children, adolescents, or young adults, due to metacognitive efficiency being disproportionately lower in comparison to adults who are middle aged (Filippi et al., 2020).
- Adults who were not patients of the specific private practice in Johannesburg, at the time of the study.
- Patients who had undergone a hearing screening and not a full audiological evaluation.

- Patients who had hearing within normal limits and were not candidates for hearing aids.
- Patients who had not been fitted with any form of amplification.
- Patients with pre-existing and diagnosed dementia which could possibly render them unable to provide responses related to the different time frames in their lives.

Sample Size

In contrast to quantitative research, qualitative studies tend to have a smaller sample size, to allow for the in-depth investigation and analysis of information-rich cases (Vasileiou et al., 2018). Experts in qualitative research have claimed that there is no simple or direct answer to the question of how large a sample size should be. As a result, recommendations have been made to obtain a sample size that is big enough to permit the unravelling of novel and rich information about the phenomenon of interest, but also small enough to enable in depth case-oriented analysis (Vasileiou et al., 2018). Consequently, fifteen participants who met the inclusion criteria were involved in this study, with all of them participating in a semi-structured interview and being invited to participate in a focus group. Participants were specifically recruited by the audiologist looking through her hearing aid patient files, and determining whether or not patients met the inclusion criteria. If they did meet the criteria, their files were placed aside and they were contacted via email, which has been further discussed within the data collection section of this study. As these were the patients of the researcher, their personal information was protected and only viewed by the researcher herself. Within each focus group, the aim was to include a maximum of six of these individuals. Using the same participants who participated in the individual interviews was used as a means of gathering consensus as well as shared ideas amongst participants. Additionally, it has been recommended to include between six and ten participants in a focus group as any more than twelve restricts the opportunity of the participants to engage in the discussion and share their

insights (Omona, 2013). Within the study, one focus group had three individuals and the other had four. This worked well for this particular study, due to the fact that all of the participants had a hearing loss, and therefore group discussions even with hearing aids on can be demanding and often difficult, especially when being done online, which was the case in this study. This is because online platforms can often be delayed which affects lip reading abilities, and sound quality can also vary depending on Wi-Fi, data connection, and signal. Hence, having smaller focus groups was beneficial and allowed for improved and effective interaction amongst all participants.

Additionally, data saturation was applied to the sample as it is a key principle within qualitative research, and allows for an indication of data validity (Saunders et al., 2018). It has most often been used in qualitative research that implements a grounded theory approach, however, it has also been utilised outside of this, to validate sample sizes in different qualitative research studies (Saunders et al., 2018). Overall, an original estimate of the sample size is vital for planning and organisation of the study, however, it is also crucial to constantly evaluate the suitability of the final sample size, throughout the research journey (Malterud et al., 2016). More explicitly, findings presented within a final research paper will prove whether or not the sample size retained appropriate information power to formulate novel knowledge, regarding the aim of the study (Malterud et al., 2016). In this study, the researcher analysed the data using the Framework Method, and it was found that no novel information was being obtained after the fifteenth individual interview that had been conducted. Moreover, based on data analysis, the researcher recognised that additional data collection would result in similar, if not, the same themes and conclusions. As a result of these reasons, data collection was terminated.

Participants' Description

Table 1

Information about Participants included in the Study

	Gender	Age	Age/Year of diagnosis	Age/Year of hearing aid fitting	Degree/Type of hearing loss (R – right ear, L- left ear)	Individual interview	Focus Group
1	Male	38 years	36 years 2019	38 years 2022	R: Hearing within normal limits across frequency range. Moderate to moderately severe conductive hearing loss (CHL) at 6000Hz and 8000Hz. L: Mild sloping to profound CHL	Yes – Online	Yes – Online
2	Male	52 years	21 years (right ear) 1991 44 years (left ear) 2014	47 years 2017	R: Dead ear L: Hearing within normal limits sloping to a severe sensorineural hearing loss (SNHL)	Yes – Online	Yes – Online
3	Male	50 years	48 years 2021	48 years 2021	R: Hearing within normal limits sloping to a moderate SNHL. L: Hearing within normal limits sloping to a profound SNHL.	Yes – Online	Yes - Online
4	Female	50 years	48 years 2020	48 years 2020	R: Hearing within normal limits across frequency range. Moderate loss at 6000Hz and 8000Hz. L: Hearing within normal limits sloping to a moderate SNHL. Conductive components at 4000Hz and 6000Hz.	Yes – Online	No
5	Male	63 years	61 years 2019	61 years 2020	R: Mild sloping to a moderately severe mixed hearing loss (MHL). L: Mild sloping to a profound MHL.	Yes – Online	No
6	Male	36 years	7 years 1993	11 years 1997	R: Mild sloping to moderate SNHL.	Yes – Online	No

					L: Profound fairly flat SNHL across the frequency range.		
7	Male	72 years	72 years 2022	72 years 2022	R: Hearing within normal limits sloping to a moderately-severe SNHL. L: Hearing within normal limits sloping to a moderate SNHL.	Yes – Face to face	No
8	Male	37 years	35 years 2020	36 years 2020	Bilateral, moderate sloping to moderately severe SNHL.	Yes – Face to face	Yes – Face to face
9	Male	50 years	42 years 2014	48 years 2020	R: Mild sloping to moderate hearing loss. L: Moderate sloping to severe MHL.	Yes – Online	Yes – Online
10	Male	60 years	57 years 2020	58 years 2022	R: Hearing within normal limits from 250Hz to 3000Hz. Moderate high frequency SNHL L: Hearing within normal limits from 250Hz to 2000Hz. Moderate high frequency SNHL.	Yes – Online	Yes – Online
11	Female	66 years	64 years 2021	64 years 2021	R: Mild flat SNHL across the frequency range. Notch at 6000Hz. L: Moderate flat SNHL across the frequency range.	Yes – Face to face	No
12	Male	63 Years	25 years 1984	52 years 2011	R: Mild sloping to a severe SNHL. L: Hearing within normal limits sloping to a moderately severe SNHL.	Yes – Face to face	No
13	Female	65 years	63 years 2020	63 years 2020	R: Hearing within normal limits sloping to a moderate SNHL. L: Hearing within normal limits sloping to a moderately-severe SNHL.	Yes – Online	No
14	Male	45 years	43 years 2020	44 years 2021	R: Hearing within normal limits from 250Hz to 2000Hz.	Yes – Online	Yes – Online

15	Female	39 years	39 years 2021	40 years 2022	Moderate high frequency SNHL. L: Hearing within normal limits from 250Hz to 2000Hz. Moderate sloping to moderately severe high frequency SNHL, R: Moderately severe sloping to profound SNHL. L: Moderate in low frequencies rising to normal hearing in mid frequencies, sloping to a moderately-severe SNHL in high frequencies.	Yes – Online	No

It was noticed that mainly males consented to participating as opposed to females (see Table 1). Hence, females mostly responded stating that they had other work or life commitments and therefore could not participate, and a few did not respond to the emails at all. Similarly, the two focus groups consisted only of males as most females did not consent to participating. When probed by the researcher, it was suggested by some females that they felt comfortable with one-on-one interviews but preferred not to share their information and thoughts in a group setting. Moreover, others stated that they struggle to hear in groups which is why they preferred not to participate in them. The males in the study did not express these concerns and were mostly happy to partake in the focus groups. In fact, one of them saw it as an opportunity to meet others with a hearing loss, and perhaps keep in touch as a form of social support. Whilst there was a lot of variation between the participants of the study, which is line with the maximum variation sampling used, the above information revealed that the study lacked variability within the area of gender.

Research Site

This study was conducted at a private practice in the south of Johannesburg. The reason for selecting this site was because they are well-established and focus on assisting a variety of

South African patients who have hearing, listening, and communication difficulties (Calligaro & King, 2019). They also provide many audiological services like full audiological assessments for all ages, and hearing aid fittings. Additionally, they are brand independent, meaning that they can fit a variety of different hearing devices, such as conventional, bone-anchored devices and implantable bone conduction devices, from a variety of different companies, based on the hearing loss, lifestyle, and budget requirements of their patients. This practice also works with ear nose and throat (ENT) specialists, by conducting hearing tests, both pre-operative and post-operative, as well as working together to fit patients with conventional and frequently unconventional hearing aids such as implantable bone conduction devices (Calligaro & King, 2019). Due to this specialised service, the practice helps patients from several areas and provinces of South Africa. Amongst other benefits, the latter is a large advantage for using the practice, as it allows for possible representation of the South African population across many different areas.

Additionally, the researcher elected to conduct the study in the private sector due to several reasons. Firstly, the researcher is currently a speech therapist and audiologist at this research site and therefore the idea about this topic was inspired by working within this setting. Therefore, because the researcher works at the research site, and was exploring and investigating behaviour from inside the system, an emic perspective to this study was taken (Olive, 2014). Therefore, the researcher specifically invited adults with whom she has previously worked, to participate in this study. The first reason for selecting the researcher and audiologist's own patients was due to the convenient sampling approach that was taken. The second reason was because these adults already had a professional relationship and rapport with the audiologist, and this may have fostered the feeling of comfort and willingness to participate in the study. Evidence has shown that if the researcher and participants have shared experiences together, there is an increased likelihood that the researcher's understanding of the

participants accounts, and the interpretation of their language used within data collection, will be enhanced (Ritchie & Lewis, 2003). Familiarity with the participants also assists the researcher in making judgments regarding how to explore different issues more thoroughly (Ritchie & Lewis, 2003). Similarly, another reason was because the researcher and audiologist had already, prior to the study, been through the hearing aid journey with these adults, and had already fitted them with hearing aids, meaning that there were no expectations around hearing aids or service provision. In addition, the research may have been beneficial for these adults as it can be considered an extension of the services already provided to them by the audiologist. The above reasoning correlates with findings from a South African study, which state that integrating clinical research in the private practice setting is often gratifying and intellectually stimulating (Mashaphu & Chiliza, 2016). Therefore, by using an emic perspective and conducting the study at the researcher's work site, important diversity was added to the daily tasks of working with patients, which is fulfilling (Mashaphu & Chiliza, 2016).

Whilst there are positives to using an emic perspective, too much familiarity with participants may be a limitation (Bonner & Tolhurst, 2002). To mitigate potential issues related to coercion and obligations, the researcher made use of a reflective journal to note down feelings, thoughts, and actions that were had during data collection and analysis. Thus, the researcher critically evaluated and reflected on the means of data collection and analysis, regarding assumptions and expectations (Bonner & Tolhurst, 2002). In addition, the services provided to participants were not contingent on their participation in the study. Similarly, participation was emphasised as being voluntary within the participant information sheet, and individuals were informed of no repercussions or penalties in general and in terms of the services they receive at the practice, should they choose not to participate or withdraw from the study at a later stage. This was again reiterated during the interviews.

Furthermore, within the private practice setting, the researcher could explore the novel topic on a smaller scale, initially with familiar individuals and different variables that are known to the practice, which allowed for this phenomenon to be explored either as being important within audiology or not. Within the private sector, fewer challenges with waiting periods, resource availability, financial difficulties, and general audiological accessibility may exist, in comparison to the public sector (Mashaphu & Chiliza, 2016). Therefore, by conducting this study on a smaller scale initially, these variables could be slightly more contained. The findings also provided guidance about research ideas on a larger scale that would potentially allow improvement in healthcare delivery to patients within the public health community. To further support this, private practice-based research is beneficial and functional as it provides data that can enhance the speed of implementing novel evidence-based practices into the direct care of patients (Mashaphu & Chiliza, 2016). Therefore, it is evident that conducting this exploratory study on time perspective within this setting may have been beneficial and may potentially assist with the development and fast implementation of novel information on the topic and importantly, the improvement of service delivery to patients within all sectors. Hence, by conducting a successful study within a private audiology practice, the issues of equity, access and quality of health services to all South Africans can be addressed (Breytenbach et al., 2015).

Finally, and a very important reason for conducting the study on adults who were previously seen by the audiologist and researcher, was because of South Africa's Protection of Personal Information Act (POPI Act), which highly emphasises the importance of protecting the personal information of all individuals (Protection of Personal Information Act (POPIA), 2021). Hence, by recruiting participants from another site or other audiologists, the personal information of potential participants would have required to be explored by the researcher.

However, in using the researchers own patients, this Act was complied with, as the researcher and audiologist already knowingly had access to their information.

Data Collection

Pilot Study

Prior to carrying out the main research, a pilot study was conducted. Pilot studies are frequently used within research surrounding health (Malmqvist et al., 2019). They are vital to the research process as they assist with the research design and adaptations required for the main study. More specifically, a pilot study includes a small test study that is conducted prior to the main study, to test the effectiveness of the research design, instruments, research environment and data collection methods. By doing so, essential modifications to these different areas can be implemented before conducting the main study (Malmqvist et al., 2019). The modifications informed by the pilot study are vital as they can influence understanding and facilitate in the formation of quality research. Furthermore, these modifications could not be possible if in-depth attention has not been paid to the pilot study (Malmqvist et al., 2019).

Within this specific research, the pilot study was conducted at the same site as planned for the main study. This allowed for feedback to be obtained regarding the site of research. Additionally, a patient who fitted the inclusion criteria was consulted and requested to participate in the pilot study. With consent, this individual participated in the semi-structured interview and provided feedback regarding the types of questions asked, the clarity of the questions, and the order of the questions. Information was also obtained on the duration of the interview from the perception of this participant. After the interview was completed, a discussion was had regarding the different online platforms, namely, Microsoft Teams, Skype, and Zoom, to determine which would be the best for this study considering the requirements of this research, the hearing loss of participants, and their communication challenges. The participant who took part in the pilot study works via online platforms daily due to his job

requirements. He was therefore able to provide feedback on all three platforms regarding the complexity of joining the online meeting, the clarity of the speech, the ease of working on the online platform, the chat box feature, and the quality of the video. All the feedback and advice obtained was noted by the researcher and used as a guideline to make modifications to the main study.

More specifically, the individual interview was conducted, and important feedback was obtained about the questions asked, the order of the questions, and the clarity and wording of the questions. Moreover, helpful feedback regarding the time perspective introductory paragraph was given and which online platform would be best to use for the study. Based on this feedback, a few changes were made. These included changing the order of the questions asked within the interviews. For example, instead of initially asking participants what their belief on time in general is, it was advised to first ask the participants which time perspective they resonate with, and how they do so. This was advised by the pilot study participant as he stated that because the participants will have received information on the different time perspectives at the start of the interview, they will already be thinking about which one they fit in with, and by targeting this question first, more accurate and representative answers would be obtained, as they would not be distracted or lose their train of thought by answering other questions first. Moreover, a simple but descriptive mind map was created with a summary of the five time perspectives and their definitions to make available to the participants during their interviews and focus groups so that it could be related back to. Additionally, the wording of the different time perspectives was changed to explain each perspective in a neutral manner. This was advised by the pilot study participant as he felt that if the time perspectives were worded as they had been previously, participants would not answer honestly as they would not want to relate to the “bad” or “negative” time perspective, out of fear of judgement and this would then skew the study results. For example, initially, the present-fatalistic time perspective

was described as individuals who have an attitude toward life and the future, that is miserable, fatalistic, and helpless. With the advice of the pilot study participant, the researcher reworded this time perspective as a tendency to passively exist in the present, stemming from the belief that life is governed by fate and what will be will be. These individuals can feel that decisions are questionable, as predetermined fate is a guiding role in their life. Hence, he felt that it would be advisable and beneficial to reword the perspectives to a more neutral manner, as seen above. In terms of the online platform, the participant advised using either Zoom or Microsoft Teams but not Skype. He explained that Skype isn't a commonly used platform nowadays and that it often has more network and connectivity issues than other competing online platforms. This advice was valuable to the researcher, as the participant works on online platforms daily and is therefore able to provide helpful feedback for the purpose of the study. This participant was not included within the main study. Whilst the pilot study was extremely helpful in guiding the study, it must be noted that using only one participant for this pilot study may be viewed as a limitation, due to the intention of the researcher in interviewing a maximum variation of participants within the study sample. Nevertheless, this participant was able to provide constructive advice on various parts of the study, which assisted the researcher.

Data Collection Procedure

To obtain the necessary data to address the aims and objectives of the study, two data collection methods were utilised, namely individual semi-structured interviews and two focus group discussions. Evidence has shown that using more than one method of data collection is valuable, as it allows for cross-validation of findings (M. Johnson et al., 2017).

Prior to collecting any data, the owners of the research site were provided with the necessary information regarding the study, so as to obtain permission and consent to conduct the research at the selected private practice (Appendix B). Once permission was obtained, then participants that met the inclusion criteria were recruited by the researcher. To do this, the

researcher reviewed each of her hearing aid patient files, to determine who met the inclusion criteria for the study.

Once these adults were identified and recruited, the researcher contacted them via email. Specifically, the researcher sent out emails to twenty five possible participants. Within this email, the potential participants were given a brief explanation of the study. Attached to the email was more detailed and in-depth participation information sheets and consent forms (Appendices C, D, and F). Within these forms, they were given a detailed explanation of the nature of the study, and the expectations regarding participation. They were also informed of their right to withdraw from the study at any stage without any repercussions. In addition, a detailed paragraph describing time perspective and what it means was included in the participation information sheets, to allow for the individuals to read about the phenomenon of interest, become familiar with the concept, and develop a good understanding of it and the study. These forms were analysed using the Flesch-Kincaid Reading Ease Test and a reading score was obtained. Necessary adjustments were made, and the final score revealed that the forms can be easily understood by individuals 18-19 years and older. After a few days, the individuals who replied or acknowledged receipt of the email were again contacted via email or WhatsApp messenger to confirm if they received the email and if they were interested in participation or not. When individuals replied via email stating that they would or would not like to participate, they were sent an email reply to acknowledge their decision and to organise data collection procedures, if they had chosen to participate. Regardless of how they revealed that they would like to participate in the study, such as face to face interviews or online interviews, they were required to provide written consent by signing the consent form provided.

Once the participants were selected and consent was obtained, the researcher then set up a date and time for the semi-structured interviews to take place. For face-to-face interviews, the participants were given several options of dates and times for the interview. The face-to-

face interviews took place at the private practice, as it is familiar to the participants. On average, the interviews took approximately 30-45 minutes in duration. Some participants could not physically get to the practice and therefore online interviews were conducted and recorded, with the written permission of the participants. In these cases, the online interview was conducted via Microsoft Teams, which was an ideal platform to use according to the advice obtained from the pilot study. Additionally, due to possible difficulties that may have occurred with regard to hearing what was being said on the online call, the researcher always left her camera on to allow participants access to lip reading and facial cues. Moreover, if the participants had hearing aids with streaming capabilities, they were reminded to use this to assist with hearing speech more easily on the online call. One individual who participated online struggled immensely to hear the questions, and as a result, the chat box was used to assist her in fully understanding the questions. During the individual interviews done in person, COVID-19 rules were followed, such as wearing a mask/visor, social distancing, and enabling ventilation by opening the windows in the room. These precautions were taken despite South Africa no longer being in lockdown. Moreover, according to the mask mandate at that time, masks were still to be worn at the stage of data collection.

After the individual interviews were conducted and reviewed by the researcher, two focus groups were held with a maximum of four of the above individuals in each group. To select these individuals, a random selection process was implemented whereby all individuals who agreed to participate in the focus group discussion had their names put into a hat, and eight of these names were drawn. Random selection is important as it allows each individual who agrees to participate, an equal chance of being selected as a participant in the focus group (Cherry, 2020). Once these individuals were selected, they were contacted and informed. They all participated except for one who could not, due to time and work constraints. These focus groups were conducted after the individual interviews and transcriptions were conducted.

Although the individual interview data had not yet been analysed in detail, by doing the transcriptions, the researcher was able to gather information on the ideas, areas, issues, and possible themes that were arising. Therefore, within the focus groups, the researcher was then able to further explore the similar themes, areas, ideas, or issues that were identified in the individual interviews. The information about the focus groups and the consent to participate in them, was included within the main email, so that all the information was available to the individuals in one email. The focus groups took approximately 45 minutes in duration. The date and time of the focus groups were decided upon by the individuals. Most participants wanted to participate but were unable to physically attend. As a result, both focus groups were done online via Microsoft Teams. Due to participants possibly struggling to hear, the researcher had her camera on the entire time to allow for lip reading and visual cues. The participants were also invited to turn on their cameras if they felt comfortable in doing so. If not, the researcher clarified any answers or questions through verbal repetition in a slow and clear manner. Furthermore, the participants were encouraged to use the streaming capabilities available on their hearing aids, if possible.

In terms of language, English was the main way of collecting data. This is because the lingua franca of the private practice is English. Lingua franca refers to a common language or dialect regularly utilised to allow for the possibility of communication between individuals who do not share a native language or dialect (Rowley-Jolivet, 2017). Despite this being the lingua franca, it must be noted that within this private practice, patients from different cultures and races are seen, whose first language is not English and therefore the researcher was aware of the possible need for an interpreter. The role of the interpreter is not merely to translate, but to develop a trusting relationship between themselves, the researcher and the individual for whom they are interpreting (Plumridge et al., 2012). Moreover, their roles consist of making the environment comfortable by smiling and using positive body language, to make the

interviewee's feel at ease. Additionally, their knowledge and understanding of culture and the community is highly beneficial (Plumridge et al., 2012). It must however be noted that interpreters were not required. When organising dates for the different interviews, the researcher stated that interpreters could be organised for those whose first language was not English. However, all those individuals explained that they wanted to participate in English. For some who were Afrikaans speaking, it was noticed that they code switched during the interviews. Nevertheless, an interpreter was not necessary as the researcher is able to understand and speak Afrikaans.

Finally, and importantly, due to the COVID-19 pandemic the necessary precautions were taken (World Health Organization (WHO), 2021b). Before any participant entered the interview room, they first needed to sanitise. Within the individual interviews, both the researcher and participant wore masks. Moreover, the researcher and the participant sat 1.5 meters apart in order to adhere to social distancing rules (WHO, 2021b). In addition, the windows opened to allow for ventilation and the movement of fresh air. As the two focus groups were done online, COVID-19 precautions did not need to be taken. There was however one participant that attended the online focus group together with the researcher. Hence, in that session, social distancing, and ventilation of the room was implemented.

Data Recording

In order to allow for effective data collection, analysis and interpretation of the findings, the interviews and focus groups were recorded. Written notes were also taken by the researcher intermittently. Informed consent was obtained by the owners of the practice and all the participants regarding audio and video recording, prior to implementing it (Appendices B, E, G, and H)

Specifically, audio recordings were used for the individual interviews. Research has shown that audio recordings are a better method than transcripts or field notes as a method of

data collection (Tessier, 2012). Moreover, through audio recordings, all the information said within the interviews is captured, and the researcher can also hear intonations of voices. Online interviews were done with eleven of the participants, and ten of them willingly switched on their camera's whilst one decided not to. Although intonation was not directly analysed, having access to it assisted with overall accurate analysis and interpretation of results (Tessier, 2012).

In reference to the focus groups, both audio and video recordings were used. These focus groups were done online via Microsoft Teams. In the first focus group, all three participants turned on their cameras, and in the second group, two of the four participants turned on their camera's. Due to these being done online, the sessions were recorded via the online platform with the permission of the participants. The addition of video recordings is essential within focus groups due to the larger amount of people present (Muswazi & Nhamo, 2013). Hence, with a video recording there is less chance of the researcher becoming confused with regard to which participant said what, during data analysis and transcription. Furthermore, video recording allows the researcher to obtain non-verbal information. Although these non-verbal cues were not actively or directly analysed, the presence of them was essential for accurate data analysis and interpretation (Muswazi & Nhamo, 2013). For example, certain facial expressions supported certain verbal information.

In addition to the audio and video recordings, written notes were also taken. This is because taking notes often supports the information obtained through recordings, it assists with data analysis and is readily available to the researcher (Muswazi & Nhamo, 2013). Nevertheless, this cannot be the only way in which data is collected because essential details are often left out, participants can become distracted by the excessive note taking and therefore, the effective interaction between the researcher and participant can be disrupted (Muswazi & Nhamo, 2013). As a result, note taking was done intermittently during interviews.

Measures and Equipment

As previously stated, the adults who fitted the inclusion criteria were invited to participate in semi-structured, open-ended in-depth interviews, so as to explore the research question. As stated above, when they could not physically attend the interview or if COVID-19 posed any risks, an option of an online interview was provided. This online interview was still semi-structured, open-ended, and in-depth in nature. This was selected as the data source for this study as it is an effective and commonly used method within health service research (DeJonckheere & Vaughn, 2019). This method normally includes a dialogue between the participant and researcher, guided by an interview protocol that is flexible and augmented by remarks, probes, and follow-up questions. Hence, it was an effective method because it enabled the researcher to obtain open-ended data which thoroughly explored the feelings, opinions, and thoughts of participants regarding the specific topic (DeJonckheere & Vaughn, 2019). This method additionally allowed for the participants to delve into personal and occasionally delicate situations and issues. Finally, evidence has shown that semi-structured interviews can be an effective tool for health care providers in order to comprehend the experiences, ideas, and beliefs of varying individuals (DeJonckheere & Vaughn, 2019). Within this specific study, a guide for the individual interviews was used (Appendix I). This guide was developed based on the aims and objectives of this study and formed a reference point for the researcher and allowed for the flow of the interview. As stated above, this guided semi-structured interview enabled open-ended data to be obtained as well as feelings and opinions regarding the topic.

To obtain as much information as possible and explore the topic in detail, two focus groups were held after the individual interviews. Within qualitative research designs, focus groups are commonly used as they are able to gather in-depth understandings of social issues (O.Nyumba et al., 2018). Hence, this method is aimed at collecting data from an intentionally chosen group of individuals, as opposed to individuals from a statistically representative

sample of a larger population. Additionally, within these discussions, the researcher is able to gather a group of individuals to converse about a certain topic, with the intention of drawing from the multifaceted personal experience, perceptions, attitudes, opinions, and beliefs of these individuals through an interaction that is moderated (O.Nyumba et al., 2018). It is important to note that focus groups were selected over group interviews for this study because focus groups promote stronger interactions between all participants in the group, whereas group interviews promote strong interactions between the participants and the researcher as opposed to strong interactions between the participants themselves (Brown & Edmunds, 2011). Hence, using focus groups allowed for participants to interact with one another and share experiences about the phenomenon of interest. Within this specific study, the two focus groups were moderated by the researcher. Hence, the researcher assisted with the effective interaction of the focus groups by using previously organised open-ended questions, opening comments, questioning sequence, and an appropriate physical setting (Appendix J). By utilising the above, the interaction flowed naturally and spontaneously amongst the participants (Gundumogula, 2020). This was all done via online platforms, due to many of the participants not being able to attend physically.

Ethical Considerations

It is the responsibility of the researcher to carry out a study in a manner that is ethical. As a result, ethical considerations were highly prioritised within this research study. To ensure this, the Declaration of Helsinki was used as the guiding statement (Peters, 2020). This declaration was selected as it forms the foundation for ethics with regard to medical research and is the most commonly used and recognised source of ethical guidelines within such medical research (Carlson et al., 2004). Prior to beginning with the study, ethical clearance was sought and obtained (Appendix A) from the Medical Human Research Ethics Committee of the University of the Witwatersrand (Clearance certificate number – M211125).

Informed Consent and Voluntary Participation

The first ethical principle that was implemented was informed consent and voluntary participation. Establishing consent occurs along a process, which involves individuals giving voluntary consent, understanding what is being requested of them, and finally being competent to provide consent (Roshaidai & Arifin, 2018). More specifically, this means that for individuals to participate in a study, they need to be informed about the research in an adequate manner, they need to understand the information provided and finally, they should comprehend their freedom of choice to decide whether they would like to participate or not (Roshaidai & Arifin, 2018). In this specific study, informed consent was implemented by providing potential participants with a self-constructed participation information form and consent form. In these forms, the researcher was responsible in fully informing the participants of their roles, obligations, and responsibilities as well as any information that may have influenced their choice to participate in the study. Therefore, a detailed explanation of what "participation" includes, was provided. Potential participants were given sufficient time to read over the forms and ask any questions. Moreover, within the focus group consent form, participants were made entirely aware of the expectations of the group and the dedication of the researcher to try and ensure privacy and confidentiality as much as possible. This was done by including a section within the consent form which stated that participants will respect the privacy of all the participants and the confidentiality of everything discussed within the focus group. In addition, according to the Flesch-Kincaid Reading Ease Test, these consent and information forms could be easily understood by individuals 18-19 years and older. In providing forms that allow for readability ease, the researcher could ensure that the potential participants comprehended the information provided in an appropriate manner (Samadi & Asghari, 2016). This in turn permitted participants to make an autonomous decision regarding participation in the research, which enabled an ethical informed consent process (Samadi & Asghari, 2016). Finally, the

consent forms needed to be completed in a written manner by the participants and returned to the researcher, before beginning with the study.

Anonymity and Confidentiality

In addition to informed consent, the researcher ensured that anonymity and confidentiality were maintained as much as possible. Within the individual interviews, these were protected by not revealing the participants identity or names during data collection, data analysis, and reporting of findings. Therefore, numbers allocated to participants were used for any anonymous quotes that were incorporated into the write-up of the study. Participants were assigned these numbers based on alphabetical order. Furthermore, all the interviews were conducted individually within a quiet and private room at the study site, or via Microsoft Teams again in such a room. Additionally, transcription of the data was done in a private room using headphones to avoid any outsiders hearing the recordings (Roshaidai & Arifin, 2018). Whilst this was also done for the focus groups, it is important to note that ensuring confidentiality within these groups is difficult and not always possible. This is because the researcher or moderator of the groups has restricted control over what the participants may share outside of the group (Sim & Waterfield, 2019). To mitigate these potential issues, the researcher held a short briefing at the start of the focus groups which involved discussions around the rules and nature of the group, the need to respect privacy and confidentiality of fellow participants, and the expectations of the group regarding discussions around the topic of interest. In holding this briefing at the beginning, participants were given the opportunity to reflect on their choice to participate. Hence, if they then decided that they would not like to participate, they had the opportunity to withdraw before the interactions began (Sim & Waterfield, 2019).

The Protection of Personal Information (POPI) Act falls within this ethical consideration. The purpose of this Act is to ensure the effectiveness of the constitutional right to privacy, by protecting people’s personal information when obtained and handled by a

responsible person (POPIA, 2021). Moreover, this Act provides individuals with rights and solutions to safeguard their personal information from any processing that is not in agreement with this Act (POPIA, 2021). As mentioned, the researcher implemented protocols to comply with this Act. Firstly, participants were not required to provide identifying details such as their names or dates of births. They were merely asked to provide their names with their signature when completing the participation and recording consent forms for the researcher to be aware of who consented to participate. Thereafter, no identifying information was disclosed or used during the data collection, data analysis, or report writing process. In addition, assigned numbers were used during the data analysis and write-up process, to assist the researcher in recognising different participants. Furthermore, whilst direct quotes were used in the research report, no information that could identify the participants was used. It must be noted that demographic information such as the age, gender, and degree of hearing loss of participants was requested in the interviews because of the maximum variation sampling strategy that was used and the fact that time perspective can be impacted in different ways by such variables. Hence, documenting information like age and gender of participants can provide important information on the possible impact of these variables on time perspective in general. All the data obtained, both demographic and content based were securely stored in a safe location, specifically a password protected computer, with access to the researcher only. Finally, and as discussed previously, the researcher aimed and succeeded in using her own patients as participants to this study, because the researcher already had access and permission to view their personal and audiological information.

Scientific Requirements and Research Protocols

This is an additional ethical consideration that is important, as it forms the basis of medical research and involves in depth knowledge of the current literature, techniques of experimentation, and appropriate sources of knowledge (Peters, 2020). In order for this

consideration to be met, it is important for researchers to clearly explain and justify their research design within their proposal (Peters, 2020). In this study, the research design and protocols were described and justified in a detailed manner.

Protection and Welfare

Another essential ethical consideration is that of the protection and welfare of participants. The researcher was expected to protect the participants from any potential distress or harm (Roshaidai & Arifin, 2018). Furthermore, the researcher informed the participants of possible risks of participating in the study. Within this study, the participants presented with a hearing loss that required intervention and as previously stated, hearing loss and its daily implications can lead to stress and negative emotions. Therefore, these adults could have run the risk of experiencing anxiety and emotional distress within their interviews, focus groups, and upon completion of the member checks. The researcher was mindful of this and therefore created a distress protocol (Appendix K). Hence, if any distress was identified, the protocol was to be followed and the participants' existing counselling services would have been employed if they had already been used for specific participants. Alternatively, the researcher provided a contact number or alternate channel for communication for all participants. Specifically, all participants were made aware of the pro-bono referral that could have been made to a counselling psychologist. This psychologist was aware of the details of the study and agreed to assist any participants who experienced distress as a result of the interviews or focus groups (Appendix L and M). Whilst this was available, no participants required this form of assistance. One participant shared feelings of anxiety and possible depression, and as a result the distress protocol was implemented. However, he stated that he was attending psychology at that point. Based on the distress protocol and the discussions with him, the interview did not need to be terminated. Moreover, the researcher followed up with him a few weeks after and he reported doing well and that he found the study beneficial to him. Whilst this was the case,

it must be noted that this patient presented with these feelings before this study, and throughout his journey. The audiologist was aware of this and his actions taken to seek emotional assistance. Furthermore, within this research, the participants possessed the right to withdraw from the study at any stage without any penalties or negative implications on the service provided to them by the private practice. Regarding member checks, the participants could withdraw any data that they no longer wanted to share, after checking the transcripts.

Feedback and Debriefing

The next ethical consideration was feedback and debriefing. The researcher will share the results with the participants by providing them with the abstract of the study and inviting them to contact the researcher, should they want to discuss the study further. This falls into the sections of post-trial provisions and research registration, publication, and dissemination within Helsinki's principles (Peters, 2020). In the focus groups specifically, the researcher implemented debriefing before, during, and once the focus group had ended. This involved reiterating the importance of privacy, anonymity, and confidentially and commenting on any issues that arose during the discussion (Sim & Waterfield, 2019). Additionally, the researcher remained on the call for a few minutes after the focus groups had completed to allow for participants to address any questions or concerns (Sim & Waterfield, 2019). Therefore, debriefing and feedback was a major consideration within this study.

Cultural Considerations

Cultural considerations were another ethical consideration in this research. As known, culture includes the shared meanings, morals, values, and opinions acquired by people as members of a certain society (Multi-Regional Clinical Trials, 2021). Therefore, culture is a form of life for specific groups of individuals. In saying this, culture can mean something different to different individuals and it can therefore be difficult to generalise, specifically because one person can belong to, and identify with a variety of cultures. More explicitly,

factors that contribute to this include, ethnicity, gender identity, language, race, and profession (Multi-Regional Clinical Trials, 2021). In this study, the researcher sought to apply considerations such as cultural awareness, cultural competency, and cultural humility. Cultural awareness involved the researcher being mindful that different events and experiences make individuals who they are. Cultural competency involved the researcher providing services that met the multilayered needs of their participants by not only showing an understanding of the participants themselves but by also applying this awareness in the research design, implementation, and result interpretation (Multi-Regional Clinical Trials, 2021). For example, all individuals of different languages, such as Afrikaans or isiZulu, were offered an interpreter. Additionally, when cultural traditions were mentioned in interviews, the researcher asked questions regarding such traditions to have a better understanding and awareness of diverse cultures. Moreover, the forms provided to participants were all analysed using the Flesch-Kincaid Reading Ease Test, to ensure a reading score appropriate for all participants, even those whose first language was not English. Finally, cultural humility consists of researchers being able to take their awareness of the differences that individuals experience and provide research-related services based on this awareness. This also includes the researcher evaluating and comprehending how individual assumptions, values, biases, beliefs, and cultural identities can impact on research and medicine practices. In support of this, cultural considerations are highly applicable to research because diversity is vital to the transferability of study results and essentially, the usability of findings (Multi-Regional Clinical Trials, 2021). Cultural considerations were further applicable to research because participants may have exposed a variety of diverse personal experiences, challenges, and cultural values to each individual encounter. Finally, by the researcher being aware of cultural considerations, there was a high likelihood of positive research collaborations and positive research participation (Multi-Regional Clinical Trials, 2021). Evidently these considerations are especially important within

South Africa, which has a multi-cultural society. In addition, the practice from where adult patients were invited to participate has a diversity of different races, socio-economic statuses, cultures, and linguistic profiles. Evidently, this ethical consideration was important within this study.

Rigour and Trustworthiness

Research shows that qualitative studies are indeed more complex than traditional studies and investigations (Cypress, 2017). This is because planning as well as application are simultaneous, and research designs and methods can often change. Whereas quantitative research pursues a strict, structured, and predetermined design with all of the methods already prescribed (Cypress, 2017). Within qualitative research, rigour and trustworthiness are often discussed. Although prior literature has uncovered doubts regarding the credentials of qualitative research, studies have revealed that if the work is done correctly by basing it on developed methods and instruments, then any qualitative work can form part of very valuable evidence (Forero et al., 2018).

Specifically, trustworthiness, or rigour of research studies implies the degree of confidence in the data obtained, the analysis and interpretation of the data, and the methods utilised to confirm the quality of that particular study (Hadi & José Closs, 2016). To determine and verify trustworthiness, a strict criteria within qualitative research was established which consists of four elements, namely credibility, dependability, confirmability, and transferability (Forero et al., 2018).

Credibility. The purpose of this is to obtain confidence that the results gathered are reliable, true, and authentic (Forero et al., 2018). To ensure credibility, several strategies are often implemented. These include, interviewing process and methods, creating investigators authority, obtaining referential adequacy materials, extended and diverse engagement with each setting, member checking, and finally peer debriefing (Forero et al., 2018). To ensure

credibility within this study specifically, the researcher conducted member checks. Member checks are important for obtaining credibility of results and therefore verifying, validating, or assessing the trustworthiness of findings (Birt et al., 2016). This is because in many qualitative studies, including the current one, the researcher collects and analyses the data which may result in researcher bias. Hence, by implementing member checks and actively including the participants in inspecting and confirming the results, this researcher bias may be reduced (Birt et al., 2016). In this study, the method of member checking involved returning the transcribed verbatim transcripts to the participants. Therefore, each participant received the transcription of their own transcripts to review. This provided numerous benefits for both the researcher and participants, like allowing for the potential addition of novel data, removal of any data that they no longer wanted to have utilised, and finally for affirming factual information (Birt et al., 2016). Participants reported that they agreed with the transcriptions and one participant reworded a response. Whilst this is an important aspect of qualitative research, upon reading of the transcripts, participants may have experienced some distress, as emotional events may have been triggered (Birt et al., 2016). The researcher was however aware of these potential ethical issues and if any distress did occur whilst performing this task, the distress protocol was to be followed and all participants would be reminded of the counselling services available from the psychologist, who was the pro-bono referral for this study. Fortunately, this was not required with any participants.

Dependability. The purpose of dependability is to ensure that results are repeatable if they had to transpire within the same context and same unit of participants (Forero et al., 2018). To ensure dependability, several strategies are commonly used. These consist of step by step replication of the data, detailed descriptions of the research methods, and finally forming an audit trial (Forero et al., 2018). Within this study, dependability was ensured by the researcher

thoroughly and carefully reporting on all the processes of the study within the research report, to enable an external researcher to replicate the study and obtain similar findings.

Confirmability. The purpose of confirmability is to share confidence that the findings of the study would be confirmed and verified by different researchers (Forero et al., 2018). The two strategies that are normally implemented to ensure confirmability, are triangulation and reflexivity (Forero et al., 2018). Within this study, triangulation was used. Triangulation is the use of various data sources or methods to permit a thorough understanding of the phenomenon at hand (Carter et al., 2014). Hence, within qualitative research, triangulation is the strategy used to assess validity through the merging of information from varying sources. There are four different types of triangulation namely: method triangulation, data source triangulation, investigator triangulation, and theory triangulation (Carter et al., 2014). In terms of this specific study, investigator and theory triangulation were used. Firstly, investigator triangulation includes the participation of two or more researchers within the same study, to allow for numerous observations and research conclusions. This permits the confirmation of results as well as differing perspectives which is known to add depth to the phenomenon being investigated (Carter et al., 2014). Within this study, investigator triangulation was implemented as the data collected was analysed by the researcher and then reviewed by the two supervisors who guided this study. This confirmed that the data had been properly analysed and understood to ensure a representative and reliable research report. The second form of triangulation that was used is theory triangulation, which makes use of various theories to both analyse and interpret the data collected (Carter et al., 2014). Hence, with this form of triangulation, different theories facilitate the researcher in either contradicting or supporting the results (Carter et al., 2014). As seen within the theoretical framework, multiple theories were mentioned and used within this study.

Transferability. The purpose of transferability involves expanding the degree to which the findings can be applicable and shifted to varying situations, times, and contexts (Forero et al., 2018). Finally, data saturation and purposive sampling are frequently used to enable transferability (Forero et al., 2018). Within this specific study, purposive sampling was selected as the sampling strategy to assist with transferability. Moreover, as previously, data saturation was also considered and applied, to ensure this aspect of trustworthiness.

Data Analysis

The Framework Method was used as the research analysis approach. This method is becoming more widely used within health research, as an approach to manage and analyse qualitative data (Gale et al., 2013). Literature has shown that the Framework analysis method shares several features with various other qualitative analysis methods, including thematic analysis. However, the benefit of Framework Analysis over the other methods is that it provides the researcher with a structure and clear stages to the process of analysis, so that readers and reviewers of the research can be sure about the systematic stages that were utilised to draw interpretations from the data (Gale et al., 2013). Another advantage of this method is that unlike other methods, it is not affiliated to any specific philosophical, theoretical, or epistemological approaches. It is rather a flexible tool that can be altered for use within numerous qualitative approaches whose goal is to formulate themes (Gale et al., 2013). Thus, it can be modified for use in either deductive or inductive approaches, or a combination of both. Whilst this method is most frequently used to thematically analyse semi-structured interviews, it can also be used successfully for other types of data, like focus group interviews, field notes, or diary entries (Gale et al., 2013). Moreover, as there is no set protocol or procedure for the analysis of narrative data, the elements of narrative information obtained within this study were analysed within the Framework Method, which has extremely similar steps when comparing it to a narrative thematic analysis approach (Butina, 2015). Within the Framework Method there is a

step-by-step procedure that was used for data analysis which is explained below (Gale et al., 2013):

Stage 1: Transcription

This stage describes that audio recordings and verbatim transcriptions of the interviews are required. During this stage, the transcripts need to have enough line spacing and large margins to allow for making notes and coding at a later stage of the process. This stage is recommended for new researchers as it offers a great opportunity for them to become deeply engaged in the data (Gale et al., 2013). Hence, within this study, the data recorded from the interviews and focus groups was cautiously transcribed by the researcher. This was done by listening to the recordings and typing out each word that is said. The researcher then re-listened to all of the recordings to ensure that the data was accurately transcribed.

Stage 2: Familiarisation with the Data

This stage involved the researcher becoming familiar with the data in the form of audio or visual recordings, written transcripts, or any reflective notes. This stage is essential in ensuring accurate interpretation of the data (Gale et al., 2013). Within this study, the researcher relistened to the recordings obtained in the individual interviews and focus groups, not only to ensure correct transcription, but also to ensure familiarity of the data.

Stage 3: Coding

After the researcher is familiar with the data, it is necessary for him/her to read each line of the transcript and provide a label or paraphrase that explains what has been interpreted as essential, within the passage (Gale et al., 2013). In inductive studies, such as the one at hand, “open coding” is used at this stage, which involves coding anything that may be applicable and significant from as many perspectives as possible. It is important to know that codes can refer to values, substantive things, impressionistic elements, or emotions (Gale et al., 2013). In the

current study, the researcher engaged in open coding when analysing the individual interview and focus group data.

Stage 4: Developing a Working Analytical Framework.

This stage involves the researcher grouping the codes developed into different categories that are clearly defined. This process creates the working analytical framework of the study (Gale et al., 2013). In the current study, the researcher made use of tree diagrams and computer tables to group the codes previously developed, into clearly defined categories.

Stage 5: Applying the Analytical Framework.

The fifth stage is where the researcher applies the working analytical framework by indexing successive transcripts using the recently developed codes and categories. To speed up the process and ensure easily accessible data, researchers often use Computer Assisted Qualitative Data Analysis Software (CAQDAS) (Gale et al., 2013). In this study, the researcher applied the working analytical framework by indexing transcripts. The CAQDAS was not used by the researcher.

Stage 6: Charting Data into the Framework Matrix.

Due to the large amount of data obtained in qualitative studies, it is essential for researchers to effectively handle and summarise this data. To do this, a spreadsheet is utilised to create a matrix in which data can be charted. It is important to include interesting and descriptive references into the matrix (Gale et al., 2013). Hence, as stated above, the researcher of the current study developed a detailed document in which the data was charted.

Stage 7: Interpreting the Data.

This final interpreting stage has been explained as a long process. To facilitate this stage, it is advisable for the researcher to use a notebook or journal to write down ideas, opinions, and early interpretations of the data. In doing so, the researcher can slowly identify and interpret similarities and differences between data, create typologies, carefully interrogate

theoretical ideas, or recognise connections between different categories (Gale et al., 2013). The researcher in the current study therefore made use of a book to note down early interpretations and ideas about the data, as well as compare them to theory and other participant responses, which assisted in interpretation throughout the study.

Results

Based on analysis of the interviews and focus groups using the Framework Method, the following results were obtained and reported below. They have been reported in the form of themes and sub-themes according to the aims and objectives of the study.

Due to time perspective forming the basis of this study, the five different time perspectives were discussed with the participants. As part of the interviews, they were asked which time perspective they resonate with. All participants shared this information and identified with one or a few time perspectives, based on the time perspective mind map shared with them (see Figure 3). Hence, when these participants are referred to as having a certain time perspective within the results and discussion of this study, it is based on their perception of their own time perspective and has not been measured formally by the researcher.

Themes and Sub-Themes:

Objective 1

To explore patient perceptions of the theme of time associated with audiological help seeking behaviours and intervention outcomes, with specific focus on initial consultations, the hearing aid decision-making process, hearing aid uptake, and the journey of amplification.

Time: It's Valuable and Running Out

Upon exploring the theme of time, all participants had strong opinions regarding the concept of time in general, even before delving into the specific aspect of time within the audiological journey. Thus, various participants stated that time is a vital component of life that needs to be used wisely, as it is running out. As said often and by participant two, "time ticks on, there is no controlling it, time waits for no one." Hence, there was a general feeling about using time in a meaningful manner before it is too late. As expressed by the eleventh participant, the belief was therefore to "do something meaningful and productive" as "you don't have forever; you can die tomorrow." With further regard to using time wisely, many

individuals, specifically the future orientated ones, discussed that time moves forward and as a result, only the present can be influenced which in turn influences the future. Presently, there is no way to change the past as it has already occurred however, it is vital to make use of current time due to its perceived inevitable impact on the future. Hence, when asked about time, participant ten shared that, “time in general, one it goes forward, what is done is done, but secondly, you can only influence the present. What you do now has consequences in the future.”

Within the above discussions, the appreciation for time was also shared amongst various participants. Many expressed this by saying that they “appreciate time” and participant thirteen stated that after being ill with Covid-19 in the last year, she tries to “treasure time.” Moreover, when several individuals heard the word ‘time’, they automatically expressed ideas of routine, punctuality, and respect for time. Routine appeared to be an important facet of some individuals lives and the fourth participant mentioned, “I am very precise, if I am half an hour late, my whole day is chaotic. I have a routine that things get done by” and participant twelve explained that he does not “deviate from this ritual” that he has in his daily life. The idea of respecting time was also a shared feeling amongst many participants in the sense of individuals being on time for commitments in life, whether it be social, personal, or work based. The nineth participant explained this in a manner that agreed with the views of others as he said, “I think when you respect time, you respect the other person. I don’t believe in this thing of saying African time, so it is okay to be late, it is disrespectful in my view. So, when it comes to time, I am very punctual, and I respect time and respect other humans too.” Within both focus groups, the same ideas around time being valuable and running out were shared and all participants agreed with one another. Thus, when time was mentioned by the researcher, all the individuals shared their time related beliefs and views which influences the way that they live their lives in general and regarding their audiological journeys.

Past Experience is the Best Teacher

When discussing time, the need to learn from one's past was a common theme that arose. Hence, many individuals believed that the past tends to have an influence on presently made decisions. Participant ten expressed this by saying, "so the past is experience and there is always things to be learnt, whether it is positive or negative." Hence, learning from the past was viewed as essential because "the past gives us an opportunity to improve on the present and the future" as said by the nineth participant. Not only was learning from one's own past viewed as essential, but the topic of general history also came up as vital. Therefore, it was mentioned by participant ten that "history in general for humankind and your own personal history is really important to consider and does influence the decisions you make today."

Whilst past influence was apparent, it was additionally mentioned that for one to truly learn from the past, analysis of past behaviour needs to occur. Therefore, participant fourteen explained that "you actually have to analyse your past behaviour and make specific changes to it to go into the future." For the thirteenth participant who identified with a past negative time perspective, it was felt that the past could lead to a certain amount of fear in the present and future. This was found within this patient's hearing aid journey, where fear often hindered her help seeking behaviours and the effectiveness of intervention which was the use of hearing aids. Hence, she often goes to the "fearful side" of things due to her past and has actually "developed a procrastination behaviour" due to living in fear. The idea of choice was however brought up by certain individuals who explained that even though the past may not have been ideal, everybody has a choice in how they behave and make decisions. Participant eleven said that "you've always got a choice you see; you have a choice. Sometimes you make very bad choices which you learn from, and you learn not to make them again and you try to explain them to your children and grandchildren." Within the second focus group specifically, all participants also explained how individuals learn from their past and should attempt not to

repeat the mistakes already made. They similarly felt that one should pull both negatives and positives from the past and use that going forward in life.

Younger Age as a Barrier to Seeking Audiological Assistance

This was a theme discussed by several participants. In terms of age, it was felt that time and its consequences were often only thought about by older people. Hence, when an individual is younger, the future consequences of current actions are not frequently thought about. The latter was the case for many individuals who felt that their young age hindered them from seeking the audiological help needed, in terms of going for a hearing test and getting hearing aids or aural rehabilitation services. The fourteenth participant experienced the above and said, "so time is not really thought of especially at a younger age, you would actually only when you're a little older think about the consequences of going forward in time." Whilst the latter often occurred, the importance of increasing awareness of the presence of hearing loss at all ages, was highlighted in this theme. It was mentioned that for some individuals, audiological help was not sought at their young age due to social stigma and societal influences, however, for many, they lacked awareness on the fact that hearing loss could occur at younger ages. Therefore, many individuals agreed with the fourteenth participants statement that "age would actually have a massive impact based on your experiences, that would have a massive impact on decisions going forward."

Age-Related Expectations About Hearing Loss

In close relation to the above theme, many participants discussed age-related expectations about hearing loss.

Deterioration of Hearing Acuity with Aging. One age-related expectation that often came up was the natural progression of aging with regard to hearing acuity. Hence, participants showed awareness about how hearing abilities often worsen and deteriorate as one gets older. Participant fourteen explained this by saying, "Well I just got older, and I think that's the matter

of the fact with regards to audiology." This possible deterioration of hearing loss due to age was therefore an age-related expectation experienced by all participants.

Isolation Over Time due to Hearing loss. Another age-related expectation that came up, was isolation as one gets older and loses hearing ability. The awareness of this isolation appeared to be present for most of the participants as they mentioned isolation as a fear if they did not seek help for their hearing loss. Hence, the second participant said, "I think it got to a point where I realised if I didn't seek help, I was going to disappear further and further into a cocoon." In summary, most participants felt this sense of isolation due to their hearing loss.

Emotional Challenges Related to Hearing Loss. Finally, emotional challenges arose for participants with regard to their age and hearing loss. As formerly mentioned, the individuals exhibited knowledge on the common presence of age-related hearing loss, however, many of them experienced emotional challenges due to incorrect age-related expectations, in the sense of realistically having a hearing loss at a younger age than expected. Consequently, many of them were surprised in a negative manner, to discover that they had a hearing loss at their age. Hence, participant fourteen said, "I wasn't expecting my hearing to go so soon, I mean I am only 43 years." The thirteenth participant shared a similar experience and expressed that she is "a little bit too young, a little bit heart sore that I have got all this negative sort of health issues." An emotional challenge encountered by many was related to acceptance difficulties, specifically regarding the diagnosis of a hearing loss at their current age. This was experienced by participant eleven who said, "I am helpless, there is nothing you can do about it and that is the worst part, you have to accept it, but it is selected acceptance. It is very difficult to think I am turning 66 this year and one ear is half dead, there is very little and the next can go worse." Seemingly, emotional challenges related to hearing loss were common for the participants in this study.

Early Hearing Detection and Intervention.

This theme was identified in the responses of several participants. For many, although they felt that they had a hearing issue at earlier stages of their lives, many of them delayed seeking help, which in turn inhibited early detection and intervention. Many stated that in hindsight, they wish they had sought help sooner and participant six expressed this by saying, "if I think back to it, I should've done something a long time ago." Hence, there was a general belief amongst participants that delaying help-seeking behaviours for audiological issues can negatively impact on progress, quality of life, and emotions. Consequently, there was a shared notion that it is better to identify and treat hearing loss earlier and avoid prolonging the assistance. Participant fifteen said, "if you take long to get help, it will worsen the progress but if you get help quickly, your life will be better." This same participant expressed that if someone does not get hearing aids at the point of recommendation, "it can affect them" as it is "very strenuous to stay without hearing."

Family and Friend Influences on the Audiological Journey.

Family History of Hearing Loss. In terms of seeking audiological help, many participants mentioned that a family history of hearing loss impacted the timing of their help seeking behaviours. For some, having a family history encouraged them to seek help within good time, be proactive, and refuse denial of a hearing loss. Participant ten explained this by saying, "I always said that if ever had a hearing loss, I would be proactive and go and seek help as may be appropriate at that time and not wait for it to become a massive social problem or family problem." For others, their family history did not make them proactive but rather fearful, which ultimately delayed their audiological help-seeking behaviors. This is because they did not witness the best audiological experiences, especially with hearing aids when it came to their family. For example, the eleventh participant said, "I know my grandfather had a hearing aid which he could switch on and off and we said oupa oupa sit aan jou fontjie [Afrikaans:

grandad, grandad, put on your machine] and that was one thing that bothered me about hearing aids." Noticeably, many participants shared information on the impact of family history of hearing loss.

Encouragement and Advice to Seek Audiological Assistance. For many of these participants, loved ones often encouraged and advised them to seek audiological help, whether this was done in a positive or negative manner. The first participant's family said, "you really need to go, it is becoming ridiculous." Additionally, participant seven stated, "I would say it is probably three to four years now that I think my wife has been hinting that I should go for a hearing test." In terms of positive encouragement, a few individuals whose family members had a hearing loss and experience with assistive listening devices, encouraged them to seek help as soon as possible in terms of a hearing test, getting hearing aids, or aural rehabilitation. The nineth participant stated that, "at the beginning I was scared but you know, he encouraged me that I will improve." Whilst direct familial and friend influences were reported, participants also suggested indirect influences that their loved ones had on them. Hence, some individuals thought of their families and friends and the impact that their own hearing loss had on them. Hence, participant ten mentioned that "it took me another year to actually realise the degeneration over that year had actually meant that using the TV volume and making it louder was not actually comfortable for my family." In summary, for these participants, their family and friends played an important role in their audiological help-seeking behaviours and intervention outcomes.

Objective 2

To explore patient perceptions of the possible impact of time perspective on audiological help seeking behaviours and intervention outcomes, with specific focus on initial

consultations, the hearing aid decision-making process, hearing aid uptake, and the journey of amplification.

Unique Time Perspectives Reveal Unique Behaviours.

Table 2 is a summary of how many individuals resonated with each of the five-time perspectives. Some felt that they had a mixture of time perspectives, and they therefore discussed each one that resonated with them.

Table 2

Time Perspectives of Participants

Time Perspectives	Participants and their Primary Time Perspective	All Participants Who Identified with the Time Perspective
Future-orientated	2, 3, 4, 9, 10, 11, 12	5
Present-fatalistic	5, 15	7, 8
Present-hedonistic	1, 6	2
Past-negative	8, 13	8, 13
Past-positive	7	2, 11
Mixture of time perspectives	14	1

Future-orientated Individuals Plan Ahead. As seen above, this was the most common time perspective amongst participants, with regard to their general lives and audiological journeys. There were several common traits identified amongst the individuals that are future orientated. Such traits include family orientation, work orientation, less focus or positive focus on the past, future planning, as well as awareness of future consequences of current decisions. In terms of family orientation, some individuals explained that the present and future of their families was important to them, and this therefore influenced their current decision-making behaviours and therefore their future orientation time perspective. The nineth participant explained this by saying, “If I did not go for a hearing aid it would’ve affected my job, which is my future and my family’s future.” For many, future planning was also vital as they “worry around making the right decisions for the future because of the consequences that

the decisions may hold" as expressed by participant ten. Hence, much focus was placed on the future consequences of present-day actions. This related into the work orientated traits of many of these individuals, as they often explained that without future planning and thinking ahead, in general and regarding their hearing issues, their jobs could not be done effectively, their achievements and goals could be hindered, and the expectations of their job titles could not be upheld. Hence, participant nine explained his awareness that without proper hearing, "I wouldn't achieve what I wanted to achieve at work." The importance of a future orientated time perspective within the working world was emphasised by several participants within the focus groups. These individuals said that they mostly sit in meetings for work or are required to engage socially with others, and as a result they need to participate effectively. To do so, they typically felt that they needed to take on a future orientated time perspective and get hearing aids so that they could continue with their work and think of their future selves. This was confirmed by participant nine who said, "I could not participate in those meetings in the manner that I should or that is expected of me because I couldn't hear the discussions and now you have to rely on your next door neighbours to give you an answer and think that's when I decided for future orientation, for me to be able to participate, I need to do something about my hearing." When this was voiced, everyone else within the focus group nodded in agreement and shared that they felt the same way. Closely related to the latter, many of these individuals therefore focus less on their past and more on their future, or if they do focus on the past, it is generally with a positive outlook. This was confirmed by participant ten saying, "I do not tend to worry about the past or bad things but look forward."

Present-fatalistic Individuals use Fate as their Guidance. The main premise held by these individuals was the attitude of, "what will be will be." Hence, the participants who identified with this time perspective revealed their believe in fate and that life is planned, so a significant amount cannot be done to change what is bound to happen in life. Participant seven

explained this explicitly by saying, “I certainly believe that there is not too much that you can do to change things, what’s going to happen is going to happen I think.” Furthermore, participants who occupied this time perspective, felt that whilst certain behaviours could be conducted, avoided, or analysed, there was not too much that could be done in terms of the fate of the matter. The fifth participant explained the above by saying, “I believe in what will be will be, you can try to manage and do whatever you want to do but fate can’t be changed.” The general idea regarding this time perspective in the focus groups was similar. Participants mostly felt that these individuals may not always easily seek help or undergo appropriate intervention, as it depends on if they are actively seeking a solution as well as on their mood or temperament at that time. Participant three therefore expressed that, “it depends on what their mood is, are they in a low mood or a high mood and then make a decision on that.” The first participant, also spoke from experience and said that “You have got to be looking for it, you have got to go out there and actually make the decision to try hearing aids. If you are just sitting around and waiting, maybe you won’t get them.” Hence, the majority of participants within this study were in agreement with each other on the above beliefs regarding this time perspective.

Present-hedonistic Individuals Live in the Moment. Within this study, participants believed that a common characteristic shared by such individuals was the desire to live for and in the current moment. Hence, for these individuals, their focus is on the here and the now as opposed to the past or future. They therefore appear to take each day as it comes, and refrain from disrupting their “living in the moment”, by any intense positive or negative thoughts of the past or the future. As nicely put by participant one who resonated with this time perspective, he “takes the bull by the horns” and lives by each moment. Whilst these individuals enjoy living in the moment, they may acknowledge that it is not the most effective or helpful perspective to have in certain areas of life, such as work. Hence, participant six who identifies as present-hedonistic explained the following: “I don’t really like to think too far ahead,

especially from a workplace perspective, even though I should be." The first participant also admitted that he doesn't know if its "always a good thing" to have this as a predominant time perspective in life.

Past-negative Individuals See the Cup Half Empty. When analysing data on the past negative time perspective, three main sub-themes were identified.

Excessive Focus on the Past Affects Current Decisions. For these individuals, the past plays a huge role in influencing their current lives. Out of all the time constructs, these individuals admitted to focusing a significant amount on their past, and not normally with a positive outlook. Therefore, the negative past of these individuals holds large value in influencing their current decision making. Participant eight said, "I have a problem with the past, as I am going through the psychologist, it's because of, I don't take things positively because of what happened in my past." Another past negative participant, specifically participant thirteen, confirmed the above by saying, "I do tend to sort of go to the negative before I see the positive, I did work with a professional sort of around this and it is from basic childhood upbringing and things like that and still think it shapes who I am today." Due to the large negative focus they place on the past, these individuals often require psychological assistance and benefit from it, as mentioned by various participants. This was discussed by the participants as essential due to the influence that their past has on their present decisions, which has been perceived to impact their future.

Regret About Actions Not Taken. Feelings of regret was another subtheme identified within the participants who have a past negative time perspective. Hence, it was noticed that due to their past being a negative one, they present with regrets in terms of this as well as their management of their past and decisions that were made. Participant fourteen said, "If I recall my past, I feel regret about paths not taken." Regret was therefore identified as a negative feeling associated with the past of several participants.

Acceptance Difficulties of Hearing Loss. Acceptance difficulties of hearing loss diagnosis were noted as a challenge for individuals with a past negative time perspective. Hence, participants who have this as their primary time perspective, admitted to having major difficulty with accepting their hearing loss and the management needed. These feelings were shared by participant eight who expressed that, "it is difficult to accept, and it is difficult for me to move on with this." According to the participants, these acceptance difficulties made their hearing aid journey a large and lengthy challenge.

Continual Emphasis on Negativity. Within the focus groups specifically, many participants shared and agreed that these individuals are likely to focus on the perceived disadvantages and negatives around hearing aids as opposed to the advantages. Hence, they stated that they are likely to concentrate on social stigma, cost, and appearance to name a few, as opposed to how beneficial the hearing aids could be for them. Participant ten expressed that this time perspective "is going to be a massive inhibitor to actually making that decision because it is going to be against your grain and it is not going to be a positive decision, you are going to find everything that is wrong with it." Due to the latter, the participants all felt that with a past negative individual, the hearing loss journey would be difficult as it would be challenging for these individuals to seek and receive help from the start. Owing to this extreme focus on negativity, participants believed that their approach to everything would be negative and one of possible resent, which indicates that they would likely struggle to view the hearing loss journey as positive, which could impact on their ability to have an effective intervention outcome. Participant three therefore said, "there is a negative connotation in it, I would say they want to blame something, or they would most probably be resentful about it and usually when you are approaching something in a resentful manner, you are not going to be buying into it 100%." Participants therefore identified that the focus on negativity could act as an

inhibitor to seeking audiological help and following through with intervention in an effective manner.

Past-positive Individuals See the Cup Half Full. The essence of this time perspective is a positive and nostalgic attitude toward the past. Hence, these individuals were perceived to reminisce on the good old days and view their past with happiness. When further analysing this time perspective, three main subthemes were noted.

Family orientated. For such individuals, family and friends were perceived to be essential in their lives. Hence, participants and those specifically with this time perspective stated that they value their family largely and enjoy maintaining relationships with them. The seventh participant expressed the above by saying, “My friends are definitely a big part in my life.” Participants therefore revealed the trait of being family orientated, as a defining feature of this time perspective.

Caution in Decision-Making. The second subtheme that was observed is caution. Although the past is viewed as positive for these individuals, and happy relationships exist between them and their loved ones, they often tend to be cautious. Hence, they generally have an attitude of, “better to be safe than sorry.” Participant seven expressed his past positive time perspective and caution by saying, “I do tend to be a bit more cautious than a lot of people; I think it has held me back sometimes”. During the focus groups, caution was too brought up and agreed upon by participants as potentially holding these individuals back in terms of seeking audiological assistance or effectively engaging in intervention. The nineth participant thus said that “they may become cautious in doing whatever they want to, they may or may not do it so it is not just one given answer.” Hence, participants felt that these individuals’ decision making and action taking depends on whether they can associate a past positive experience to a present decision that needs to be made.

Desire to Reminisce on the Past. This theme manifested in some individual interviews, but mainly in the focus groups. Hence, participants felt that a big motivator for these people to seek audiological help, was that they could possibly reminisce on their positive past and recapture memories of their past through hearing aids and appropriate audiological intervention. According to the third participant "there is a connotation that you are reminiscent about the past, so you look at past positives, I like to do that because it makes you feel good, it gives you reason to go further." Additionally, participant two said, "powering themselves into getting the same quality of life that they had before", is what would potentially guide them down a positive path regarding their audiological journey.

Time Perspective May Indicate Help-Seeking Behaviours and Intervention Outcomes

Based on discussions around time perspective, it was noted that many individuals felt that time perspective could be a predictor and indicator of audiological help-seeking behaviours and intervention outcomes for different reasons. For example, some felt that it is crucial because, as said by participant three, "time is the essence in anything that we do", others explained that these time perspectives reflect the personality of individuals which ultimately impacts on their behaviours. Participant ten reflected this by saying, "quite honestly, it is actually significant in decision making" when discussing time perspective. Moreover, participants generally felt that "someone's belief on time can affect if they get hearing aids" as explained by the fifteenth participant. Due to the latter, it was suggested that the concept of time be studied further within the field of audiology. Participant fourteen explained the importance of obtaining the correct data to study this topic accurately as "the more data you have, the more equipped you are to make better decisions, you just need the right data, it is a matter of seeing that the data is correct."

The above information was also mentioned and agreed upon within both focus groups when discussions were had around how people with different time perspectives behave, act,

and think differently. It was therefore believed that they need to be approached differently in order to get the correct help. This was expressed when the second participant said, “I do think that your headspace definitely gets impacted by where your thinking lies.” Participant one also said, “it would definitely help to study this as an indicator as it depends on how you approach people.” Consequently, further studies within this area were suggested by participants as they view time perspective as a possibly important and essential factor within the audiological journey that needs to be studied and implemented in practice. Therefore, as said by participant ten, “if the audiologist who is working with the patient actually understands the decision mindset and the time perspective that the individual tends to have, it helps them frame the discussion with the consultation that much better to actually helping the person make the right decision for them.”

Time is an Important Aspect of Help-Seeking Behaviours and Intervention Outcomes

As seen above, time perspective was discussed as an important factor to consider in behaviour and decision making. However, within the focus groups, there was also emphasis placed on time in general and how it could also be an aspect in the hearing loss journey. Some participants mentioned time in the sense of delaying help seeking and making decisions to actually seek the audiological help. According to the tenth participant, “from realising that maybe actually you need to do something to actually making the decision, there’s a time period involved there.” Therefore, the same participant emphasised that, “it’s not only a time perspective thing, but it’s also actually the time to adjust to what the reality is so that you can actually make the decision that is going to impact your life.” The latter was the case for many participants in this study. However, participant fourteen in particular discussed time as a positive indicator in his case, as he sought help fairly quickly and experienced finances as a bigger negative indicator, as opposed to acceptance challenges. He therefore said, “I mean it’s like you’ve got a problem with your hearing, find out that you need them and then just get

them." In summary, both time and time perspective have been perceived by participants as being possible indicators of audiological help seeking behaviours and intervention outcomes.

Time Perspective Changes with Age

As mentioned above, age and time in general are closely linked and have an impact on each other. Therefore, participants discussed their beliefs on the interactions between age and time perspective. In particular, the idea of moving from one time perspective to another as one ages was mentioned several times. Participant ten said, "I think that what also happens with age is that people move from a primary time perspective to another." Hence, it was felt that when one is younger, one can possibly be more hedonistic and then as one ages, one can often move to a more future orientated time perspective. This was not always said to be the case, however, it was perceived that individuals move to a more future orientated outlook than previously, even if it is not their primary time perspective. This theme was also discovered in the focus groups, in which there was an agreement amongst the participants that everyone has a core time perspective which impacts on how they behave, however, that this time perspective can change as one gets older or other time perspectives can be more prominent as one gets older. Participant one said, "I totally agree with all the comments that is definitely about age and the kind of pressures you go through, and you can probably move between them, but your core is probably going to stay the same." Henceforth, there was an agreement that time perspectives can change, or one can move between them based on stages in life and experiences that have occurred. Participants therefore felt that at different stages in life, individuals within the hearing aid journey may need to be approached in different and more specific manners according to their time perspective at that point.

Different Audiological Approaches are Required for Different Time Perspectives

Whilst many individuals perceived time perspective to be an important construct within audiology, awareness was shared regarding individuals each having their own time

perspectives and that these need to be approached differently. Therefore, the participants explained that for effective management of individuals, their respective time perspectives need to be identified and approached correctly by audiologists. Participant one said, “I think it would be very important because you know, there are certain personalities.” The fourteenth participant shared this feeling by saying, “I think you would learn a more focus type of thing, like where to focus your efforts on or your marketing on that would show you where you should focus more on and what sort of people are seeking help.” As a result, participants provided their thoughts on how individuals with different time perspectives would react and behave with regard to audiology.

Future-orientated Individuals Would Likely Seek Audiological Assistance. All participants felt that these individuals would seek audiological help, by going for hearing tests or getting hearing aids if that was recommended by their audiologist. The second participant who described himself as primarily future orientated said, “That was the case with myself, I said I need to get intervention now, so that I don’t leave it too late.” Additionally, participants felt that these help seeking behaviours would occur fairly easily and quickly, without too much convincing required. It was felt by most, including participant seven that “they would think of the future and think it would help them. I think they would definitely go for it sooner than anybody else.” Similarly, the general belief amongst participants was that individuals with this time perspective think ahead and want to identify and resolve any issues now, so that their future is not impacted in a negative manner. Therefore, they were often described as, “very active and thinking ahead”, as put by participant eight.

Another common factor that came up about these individuals, was that many of them are often motivated by social situations. Therefore, their belief is that if one wants to participate in life socially, hearing aids or other interventions would be beneficial. Moreover, if one wants to work effectively and reach work goals, hearing intervention would again be of benefit. The

tenth participant experienced this and said, “My decision-making is, I need them now because it is actually going to be better for me in future engagements in social and business environments and they can actually help me.” Similarly, participant six mentioned that “it’s quite obviously important, if you want to reach your goals especially from a work perspective you have got to look at how your hearing is going to be affected and what the consequences are going to be if you don’t do something about your hearing.” Hence, many participants suggested that these individuals tend to look at how the advantages of seeking assistance and possibly getting hearing aids outweighs the disadvantages of seeking and receiving the help. In summary and according to the participants, these individuals may not require as much convincing and supportive counselling as those with other time perspectives, in terms of their audiological journey and doing what is best for them.

Present-fatalistic Individuals may be Pessimistic Toward Audiological Intervention. Upon data analysis, the impression obtained from participants was that these individuals would have some form of hesitation or pessimism toward the hearing loss journey. Hence, most participants felt that these individuals would probably seek the help, however, they would take longer to do so and may need extra counselling or convincing by the audiologist. The above was supported by participant seven stating, “I think they would come but they would be very hesitant, and I think they would need quite a bit of pushing by somebody to do it.” Similarly, the first participant said, “Ya they will probably stew on getting hearing aids a lot longer and probably waste a bit of time.” Thus, a few participants believed that whilst these individuals may eventually seek help, it will take a significant amount of convincing, because they don’t “give a damn”, as said by participant eleven. The fifth individual expressed the need for convincing them by saying that, “maybe they might be a little bit pessimistic about it, I think convincing might help them.”

It was agreed upon that these individuals may take longer in seeking and receiving assistance as they may have difficulties in accepting a hearing loss, or alternatively, having a hearing loss may not be a great deal for them. In support of this, participant six said, “I think it will take them a while to actually accept that they will need hearing aids.” Similarly, the second participant felt that “they would throw their hands and say I am going deaf, life sucks and probably not go out and look for assistance.” Due to the latter, some participants, specifically participant nine, viewed this as a “dangerous” time perspective as it involves no or minimal planning and guidance in life. Hence, it was suggested by some that in terms of audiology, these individuals may need to rethink their way of life.

Interestingly, the few individuals that regarded themselves as having a past-negative time perspective, viewed all other time perspectives, including present fatalistic, as being positive. Therefore, participant thirteen, who identifies as past negative said, “they would also be quick to get help and hearing aids I would say, because like you say, it is governed by fate so they will be more accepting of what is going down and how and why.” Another interesting outcome was that participant ten specifically mentioned that his decision making regarding his hearing aid journey was future orientated, but his approach to and acceptance of his hearing challenges was fatalistic. He therefore said, “so my decision making is more future orientated, but my approach and my acceptance is possibly a bit fatalistic.”

Due to widespread belief that these individuals may seek help, although it may take longer and would require more effort, participant fifteen suggested that testimonies from others would assist these individuals in seeking help at a more appropriate time. This participant specifically said, “if they can get the test and speak to someone who had the same problem, they can understand that the hearing aids are helpful as long as they can get a testimony, because some people they believe in something that they see or they hear from someone.” As

seen above, participants agreed on the actions of such individuals and how their time perspective should be approached.

Present-hedonistic Individuals may not Prioritise their Hearing Challenges. In terms of the present-hedonistic time perspective, many participants felt that these individuals are likely not to be too concerned about a possible hearing loss. Hence, audiological difficulties are not at the top of their priority list. Participant eleven declared that "This is a chancer, hy worrie nie [Afrikaans: he doesn't worry], they don't care about the future, if he goes deaf, he goes deaf, if he doesn't, good luck, bad luck." Similar to this train of thought, participant fourteen said that "hedonistic would be like oh well screw it, they would live for the here and now depending on how extreme their hedonism is, they wouldn't care about it until it because such a big problem, then they might say oh well, so I can't hear." In relation to the latter, participant two said that these people, "might not see it as a huge issue I guess because they living in the now and oh I will worry about that tomorrow if it becomes a real problem but for now I can cope with it or other people must adapt and deal with me." Hence, many participants established that these people would therefore not seek help easily out of their own will and would probably "need a lot more convincing", as said by participant twelve. They would probably only seek help if something drastic were to occur. Therefore, it was perceived that they would feel as though they could cope without the assistance and therefore seeking audiological help wouldn't be a priority. Participant seven voiced the above by saying, "I think they would possibly be a bit hesitant and wait a while, not too worried, probably wouldn't be too worried about their hearing disappearing, probably until something drastic came along." Additionally, the third participant mentioned how having a hearing loss, which is seen as a disability, and getting a hearing aid could "hold them back" in terms of the traits and view on life associated with their time perspective. He specifically said this because, "they are risk takers, self-indulgent, I would assume that a person like that, because you know having hearing

aids its almost, you now have a disability, and I don't think this person would accept the fact that they have a disability."

Despite this, a handful of participants felt as if these people would actually accept and seek help easier and quicker, as they live in the here and now and take advantage of the present. Hence, they would want to live their best lives within the present moment. Due to their risk-taking nature, they may not view seeking help or wearing hearing aids as a big deal and may therefore feel calm about taking action. Participant five said, "I think if I look at the taking advantage of the here and now at all costs, that they might be easier to convince for hearing aids and test quicker and easier." Of the people who felt the latter, were again those with a past negative time perspective. As mentioned above, it was consistently observed that these individuals view any other time perspective as positive, apart from their own. Hence, one of these participants, specifically the thirteenth one said, "I think they would also be relatively quick again because they enjoy living in the moment and are risk taking. They will take the risk of being teased or it is not going to work." Participant eight explained present-hedonistic as a positive time perspective because these people may not experience the negative thoughts and emotions that someone who has a past negative time perspective may. Hence, he said, "You just live your life and that one is very good because it takes your mind out of so many things, like you won't get things like anxiety and those stressors because you just like this is fine and whatever. I think they will accept it fine."

Whilst some believed that with this time perspective people would be hesitant or take longer, a few mentioned that these individuals may seek help quicker if they knew the benefits of wearing hearing aids and seeking help for a hearing loss. Participant six said, "I think these people would be quicker to jump on board if they see the benefits." Again, there was a shared perception about this time perspective held by the participants, although a few interestingly voiced contrasting ideas.

Past-negative Individuals are Likely to Avoid Audiological Assistance. When discussing this time perspective, different opinions were shared. However, the majority of participants felt that people with a past-negative time perspective would not seek help or get hearing aids easily. Hence, there was a feeling that intervention would be difficult to conduct with these patients, therefore impacting on the outcome. This is because these individuals would be hesitant, cautious, and focus a significant amount on the negatives of a situation. They would therefore view the disadvantages as outweighing the advantages of seeking audiological help and intervention. Participant ten expressed this by saying, "they would probably be unhappy about getting a hearing aid or about getting help for hearing loss because there will be some negative experience that they will be focusing on, that they don't want to live through again, so they probably going to go into avoidance mode." The third participant agreed by saying that the "past-negative is a negative viewpoint, it is a person that most probably sees the glass half empty rather than half full."

Several participants additionally explained that these people often focus on social stigma more so than other time perspectives, which could hold them back. Therefore, they have a strong "fearfulness of being attacked or teased", as said by participant thirteen. These assumptions were confirmed by the participants who identify with this time perspective themselves. The same participant said, "they would do what I am doing, very nervous, very cautious, procrastinating, again like I said, a very strong feeling of vulnerability of being teased." Participant eight felt similarly and said, "people will tease you, they don't understand that this is something that is very sensitive, they think they are maybe playing, and they will tease you, so the more I meet those people in my life, the more they put stress in my life." Furthermore, some suggested that this time perspective is often associated with mental health issues such as anxiety and depression, to name a few. The eighth participant who identified with this time perspective said, "your mind is loaded with negative things" and "this is why

there are things like suicides and depression." Participants therefore emphasised the need to increase awareness on hearing loss and intervention, to reduce social stigma and negative attitudes and make it easier for such individuals.

Whilst most participants viewed this time perspective as a huge challenge in terms of seeking help and effective intervention, one or two participants viewed the negativity as a motivator to seeking help and undergoing intervention. These few participants felt that these individuals may seek help as they have nothing to lose. Therefore, as many things in their lives are viewed as negative, they may as well try the hearing aids, as they may or may not help them, and life cannot get much worse. Participant two explained this by saying, "life has been terrible to date and perhaps if I get hearing aids it will help me and it will change everything. It might direct someone to at least trying them out because well what have I got to lose, things have been so lousy to date, it can only get better." Similarly, a handful of participants thought that feelings of regret or resentment may steer these individuals into seeking help with regard to getting their hearing tested, but probably not as far as purchasing hearing aids. Participant seven said, "not resenting, having people tell them you need to hear, that would maybe drive them to get it. Probably also regretting that they hadn't done it sooner or before." In terms of approaching these individuals, the participants stated that they would need more counselling and guidance regarding audiological help-seeking and the hearing journey in general. It was therefore advised that audiologists emphasise and focus more on the benefits of seeking audiological assistance as well as effective intervention. Hence, these individuals may benefit from more informational and supportive audiological counselling, as perceived by the participants. Participant nine mentioned that "they would need some guidance and counselling on why you are doing what you doing and why you must go through the test and what are the possible results."

Overall, most participants, including the first, believed that such individuals are "going to be the most difficult" in terms of seeking help, following recommendations, and obtaining effective outcomes from intervention such as hearing aids or aural rehabilitation. As they are often stuck in a negative mindset, it was felt that something huge needs to occur for them to change their thinking and view the positives in things. This was agreed upon in a focus group when participant two said, "Again, your history influences who you are now, so if you are too caught up on the past, it is going to a take a big leaver to change that into thinking well things can improve going forward, so you do need a damascus moment." In summary, this time perspective was mainly perceived in an undesirable light by participants.

Past-positive Individuals May Optimistically Approach the Audiological Journey. The widespread idea amongst participants was that these individuals would seek help and get hearing aids or follow through with intervention, due to their overall positivity and holding family relationships in high regard. This was expressed by participant seven who said, "I think they would probably go quite easily, especially being motivated by family relationships." The fourteenth participant also mentioned that "someone with a past positive outlook would be more inclined to seek help quicker." It was felt that these individuals seem to be aware of the potential negatives of life, however, they prefer to hold a positive stance. Hence, they will often say, "I dealt with things in the past it's going to be easy to adjust to this because look at what I had to already adjust to", as expressed by participant ten. There was also a belief that because of their positivity toward past experiences, they will strive to take action, whatever it may be, to assist themselves. Participant eleven expressed the above by saying, "I think they will try and do something to better the future."

Some participants stated that whilst they agree that these people would seek and get help, they felt that they may be slightly hesitant and cautious in this process. Hence, the first individual explained that "they will be pretty easy, they are positive people, they are going to

go and come see you, maybe a bit on the fence to buy them in the end but they are still going to explore the opportunity." Similarly, participant three proposed that whilst they will seek help and purchase hearing aids, "they won't jump into it, they will have to either convince themselves or their family must." This too was thought by participant seven who identifies as a past positive individual, as he said, "being cautious as well, getting older, they may be a bit hesitant in getting the things." As seen above, these individuals value their families and enjoy maintaining relationships with loved ones. However, as they highly value the thoughts of friends and family, they may also focus on social stigma and what others think of them, which could prevent them in making the right decisions. Hence, participant four mentioned that "they will rethink getting hearing aids, definitely will rethink it but also it will be a question of who is going to notice or who is not going to notice, they worry about what other people may think."

Similar to the past-negative time perspective, it was believed that audiological counselling would be important as well as the opportunity to speak to other individuals with the same issues. It was suggested specifically by participant nine that speaking to other individuals with the same difficulties "helps because these people like relationships with others, so this might work." Finally, a few participants touched on memories and the importance of these for individuals who have this time perspective. Hence, they were perceived to either seek help with their hearing to recapture their memories or so that they could make memories now and look back fondly on them. It was thus advised that audiologists should focus on the latter when conversing with such individuals, to assist them in choosing the correct intervention for their hearing loss. This was explained when the second participant said, "they will tend to try recapture that hearing that they previously had or the experiences they previously had, so a hearing aid may easily be sold to a past positive person on the basis that you can at least achieve some of what you used to have." In close similarity, participant fourteen explained that "they would want to experience and hear almost like the present, they would want to live for the here

and now so that in the future they could actually have fond memories." In summary, this time perspective was mainly perceived in an optimistic light by participants.

Objective 3

To explore audiological experiences that may relate to different aspects of time and time perspective.

Challenges with Acceptance of Hearing Loss

In this study, most participants explained that they found it difficult to accept and process their hearing loss at first. Participant nine expressed his difficulties by saying, "I never believed that number one, I could have a hearing loss and I saw a glim picture in terms of the future, so it took me time for me to adjust to it." Participant six felt similarly and shared, "I never really accepted my hearing loss, that's why I never wore my hearing aids." Through data analysis, it was observed that whilst individuals from different time perspectives often found it tough to accept their loss, individuals who present with a past-negative time perspective, viewed their hearing loss as a massive deal and were highly affected by it in emotional ways compared to individuals with other time perspectives. Hence, they acknowledged having exceptional difficulty with accepting their hearing loss and struggled longer in their hearing aid journey as compared with others. Thus, participant thirteen said, "I was totally obviously devastated."

Making excuses for a possible hearing loss was a common action amongst many of the participants. Participant ten reported, "I accepted that I had a hearing loss, but I felt that it was not bad enough to get hearing aids." Similarly, participant thirteen said, "I called it white noise because my head was busy, it didn't slow down so if you spoke to me over there and I didn't hear you, it was because my mind was elsewhere." Therefore, there appeared to be an "element of avoidance" amongst many of the participants, including participant thirteen, regarding admitting and accepting the presence of a hearing loss and the necessity for intervention. For

some, knowing that hearing aids were a solution to their hearing loss, assisted with their acceptance and attitude toward hearing loss. Participant nine explained this feeling by saying, "when you said it would be permanent but that you could restore it with scientific things, I said fine, I will accept it." Participant thirteen expressed that it was, "a sigh of relief, there is help out there for hearing." Thus, being offered a solution to hearing loss was expressed as a relief for many participants and positively influenced acceptance of their hearing challenges and the need to effectively implement intervention.

A few of them explained that certain lifestyle situations forced them to accept their hearing loss. These situations included work and family. Specifically, participant six shared, "I have fully accepted it now, especially having a little boy, a child, I have to accept it, when he talks to me, I don't want to miss out, so I have to accept it." Despite individuals who struggled to accept their hearing loss and often had excuses which acted as barriers to acceptance, there were one or two participants who didn't take long to accept their hearing loss. Participant four said, "I accepted having a hearing loss, I didn't take long to process it. It was a quick process, done and dusted." Likewise, participant fourteen said, "It didn't really take me long to accept the hearing loss, the tests were clear." Nevertheless, the majority of these individuals found it tough to accept their hearing loss and required audiological or lifestyle assistance to facilitate them in accepting it and doing what was needed to improve their hearing and overall participation in life.

Delay in Audiological Help-Seeking

Closely related to the above, delaying help seeking was identified as an experience by many of the participants within their audiological journey's. Several reasons for delaying their audiological help seeking were mentioned.

Negative Impact of Financial Capacity. Finances were discussed as a huge influencer on help seeking behaviours. Whilst many participants went for their initial hearing tests either

by their own convincing or that of their families, they often delayed purchasing hearing aids due to the devices being expensive. Moreover, some individuals reported that themselves or others had a perception of the price of hearing aids from the beginning, and this caused them to delay the entire hearing aid journey. Hence, participant eleven stated that, “this one woman said hearing aids are actually the price of a house, so I explained that it is not really the price, and you know if you have medical aid, they do pay a certain amount but that there is obviously a balance you have to pay but it is not the price of a house.” It was thus made apparent by participants that financial capacity often delays individuals in seeking the audiological assistance required.

Influence of Medical Personnel. Another factor identified in delaying help seeking is the influence of medical personnel. A few participants reported feeling misguided by other health professionals in terms of their audiological issues and management thereof. Hence, they felt that they were not given accurate and helpful advice regarding the importance of seeking help from an audiologist, and the importance of timing in terms of help seeking and intervention. Participant eleven was informed multiple times that there was nothing that could be done for her hearing challenges and so, “for a long time, a long time, I didn’t do anything.” Participants therefore made it apparent that medical personnel are influential in the hearing loss journey.

Denial of Hearing Loss Severity. Numerous participants admitted that they knew they had a hearing loss, either due to self-perception of hearing issues, family influences, or due to medical audiology tests that they had undergone for work purposes. Although this was the case, many felt for several years that their hearing was not severe enough to get tested or undergo intervention. Participant three explained that “at some point once a year, I had to do a hearing test from being a pilot at one stage then also involvement in your industries that require medicals, so the thing is I always knew I had a hearing problem, but I never had a feeling that

it was that bad because the thing is, you hear." Another believed that she was misguided by a health professional on the severity of her hearing loss when undergoing an occupational audiology test. Interestingly, some individuals explained that deep down, they knew their hearing loss was present and becoming debilitating to a point, however, they experienced denial and created multiple excuses. In summary, denial was a common aspect of delaying audiological help-seeking behaviours.

Importance Placed on Social Stigma and Status. Social stigma and status were explained as a major element in delaying help seeking behaviours. Participants explained that having hearing aids at any age, specifically a younger age, has a negative stigma associated with it and this negative stigma and social opinion impacts negatively on patients and their motivation to seek assistance. The following was stated by participant six, "my age, peer pressure, obviously you don't want to flaunt a hearing aid when you are going to high school you know, it is also status." Social stigma was thus described as a recurring issue that negatively influences the hearing aid journey and its timing, for countless people. Participants suggested that the extent to which this issue persists and is influential, can change based on the time perspective an individual has. As seen above, social stigma acts as a large inhibitor specifically for those with a negative time perspective. Within discussions, it was also mentioned that the negative social stigma attached to hearing aids, may come from a lack of awareness of the public, especially in previous years. However, participants believed that with new technology and access to information, more positive and realistic attitudes toward hearing loss intervention should be established. The sixth participant said, "I do think when I was that age, I don't think there was a as much information as now with the technology there is more information to be researched." To summarise, many participants emphasised the need to make audiological information more accessible to the public so as to reduce negative social stigma and opinions.

Regret Surrounding Audiological Help-Seeking Delays. When delving deeper into this theme, a sense of regret amongst many participants was palpable. This regret did not delay the help seeking behaviours but was rather a result of delaying the audiological help seeking process. As previously mentioned, many participants knew they had a hearing loss but delayed seeking help, and as a result revealed feelings of regret for not having sought audiological help earlier. In hindsight and having their hearing devices now, their feelings of regret are large as they realise all the years that they struggled and missed out on in life. Participant one said, "I think I actually left it too long." Participant six had a similar feeling and said, "If I think back to it, I should've done something a long time ago." Consequently, delays in seeking audiological help have led to present and future feelings of regret for many of these participants.

Benefit of Hearing Aid Trials in Intervention Outcomes

Based on data analysis, it was apparent that almost all participants delayed seeking help initially, in the sense of having a hearing test conducted. However, for many, once they had undergone the initial audiological assessment and discovered their hearing loss, they quite quickly trialed hearing aids, if possible, regarding their lifestyle circumstances. Almost immediately after their hearing aids trials, they got fitted with hearing aids. Participant three who underwent this process said, "We went straight ahead with the trial and fitting." Therefore, the participants perceived the trial as being highly beneficial to the process, as it eased their hesitations and allowed them to understand what they were getting into regarding amplification. Consequently, this trial was advised for all participants but especially those with past-negative, present-fatalistic, and present-hedonistic time perspectives who were perceived to require more information, convincing, and motivation to undergo intervention and obtain good outcomes thereof. Additionally, it was noticed amongst most participants that once the trial was done, they went ahead with purchasing the hearing aids as they became aware of all that they had been missing out on and experienced less activity limitations and participation

restrictions whilst wearing the hearing aids. Participant two confirmed this by saying, “It was almost immediately after the hearing test that I got the hearing aids, a few days. I adapted well to the hearing aids; it was a revelation for me.” Therefore, for these individuals, the delay in seeking help was often more related to going for the initial hearing test as opposed to purchasing the hearing aids, as all of them underwent hearing aid trials and found this a vital stage of the hearing aid process. Importantly, other factors such as finances, social stigma, and now ideas of time perspective were raised as influencing decision making and help seeking behaviours as well as the timeframes thereof.

Work and Academic Pressures Encourage Timeous Intervention

Many participants explained that their work and academic environments influenced them to get hearing aids and often sped up this process. This is because they were required to sit in meetings or attend social events. Hence, participant six said, “obviously with the industry I am in, hospitality, it became a lot more obvious that I needed to do something about it, especially from a meeting perspective.” It was even explained by the fourteenth participant that attending lectures to obtain a career was becoming an issue due to hearing. He specifically shared that, “when I went to college, I was having trouble with the lecturers, hearing them and that’s what actually decided me on getting hearing aids.” Hence, for these individuals, work and academic pressures pushed them into getting hearing aids faster, out of fear that they could perform poorly in such environments, which would impact their future.

Objective 4

To obtain possible advice on how audiologists could consider the aspect of time and time perspective within the audiological and hearing aid journey of their patients.

Increase Awareness of Hearing Detection and Intervention

A common theme that arose amongst participants was the need to increase awareness within a few realms. They felt that there was a general lack of awareness amongst the public

about hearing loss prevalence and occurrence in individuals of any age. There was further mention of the lack of awareness on an audiologist's role as well as how often one should visit an audiologist. It was thus advised by various participants that audiologists should increase awareness on hearing loss in general, such as the symptoms of it, at what ages it can occur, and so on. Moreover, the presence of assistance was highlighted as an important component. More specifically, individuals expressed that they often felt as if they suffered from a hearing loss, but that they were not aware of the presence of help for this loss. Participant eleven clarified this by saying, "I think people should be made more aware that there is help, you don't have to wait until you are almost deaf, the first signs of hearing loss you should do something about it." By increasing awareness, participants believed that hearing loss could be identified earlier and managed sooner and more effectively. Participant fifteen shared these thoughts by saying, "I never thought of going to see the audiologist then, maybe this would've been sorted long ago." The idea of increasing awareness as early as in school was brought up and discussed. Hence, participant twelve explained that education should include knowledge about ears, especially with regard to protecting the ears and hearing, when thinking about occupations in life. Therefore, if students desire to work in any noisy industries, they should have knowledge on the dangers of noise on hearing, as well as how to engage in protective audiological behaviour. He therefore stated, "I think start them young, start young. I think they must start this stuff at school."

Not only was increasing awareness of the general public mentioned but increasing awareness of doctors and other health professionals was discussed too. This was explained in the sense of correct and timeous referrals made to audiologists by other health professionals. Hence, it was felt that often doctors attempted managing audiological issues themselves as opposed to making a referral to an audiologist or ear nose and throat specialist, thereby delaying help-seeking and effective management. It was also mentioned that even though a hearing loss

may have been detected by some health professionals, the severity of this was not explained to the patients and they were therefore not referred to the necessary professional. Participant eleven therefore believed that medical professionals should be "made more aware of what they are saying to patients about hearing loss." In terms of occupational audiology, a participant explained that routine hearing tests are often done when working in noisy environments, however, it was felt that this is purely for formalities, and patients who do present with hearing difficulties do not obtain the necessary recommendations and referrals to effectively manage their loss. It is apparent that increasing awareness is a vital piece of advice provided by participants.

Psychological Training in Audiology Degrees

Through discussions on the topic, the psychological nature of time perspective was made clear. Due to time perspective being a psychological construct and because audiological counselling often needs to be done with patients in the audiological journey, some participants advised that psychological training within the audiological degree would be helpful. The eleventh participant therefore stated that audiologists "need to be half psychologist, that is actually, you need to have basic psychology in your training." Hence, it was mentioned that through psychological training, audiologists would have an improved foundation of understanding people and their traits, so as to assist them effectively. Therefore, through such training, an audiologist would be facilitated in having a "psychological understanding of a person, where he is in his life", as explained by participant five. In summary, participants shared the importance of continuing with psychology as a subject at university when training students to be audiologists, with more focus placed on the counselling aspect of psychology, if possible.

Development of a Time Perspective Tool

As previously discussed, time perspective was viewed as a valuable construct amongst many participants in this study. Most of them therefore expressed the importance of further studying and considering time perspective as an indicator of audiological help seeking behaviours and intervention outcomes. This was because many of them felt, after having discussed the topic, that the five different time perspectives could indeed influence the behaviour of individuals within audiology, and management of hearing issues. As a result, developing a time perspective tool was suggested by many of the participants. Within this tool should be specifically constructed questions, which would allow an audiologist to determine which time perspective a person is. This would assist them in understanding patients better and more holistically as well as how to approach the hearing loss journey with them. Participant five said, “I think asking specific questions will help because that will help understand where they fit in and see that as almost a tool to either convince them or to make them more comfortable with your recommendations.” Participant ten agreed by saying, “it would be a good thing for you to be able to assess very quickly and informally where their primary time perspective might be and the only way to do that is to have some deliberate questions around that which exposes that primary time perspective.” Additionally, the same participant within the focus group said that developing a time perspective tool kit could “guide an audiologist in one understanding the individual, and then two how to work with the individual to making the right decision” and this would indeed be “very very useful.” All participants within this focus group agreed and developing a time perspective tool was mentioned as a piece of advice by participants in both focus groups and individual interviews.

This time perspective tool of questions was recommended by many to be used at the beginning of the consultation, and therefore be included in the case history aspect of the consult. Hence, participant two said, “a couple of probing questions to start with is the best

way to do it." Similarly, the third participant indicated that doing an interview at the beginning of the session, "would be the time to also put someone at ease and also ask a few questions, based on trying to evaluate what type of person you are dealing with." Participants therefore perceived that the latter would assist in revealing the time perspective of an individual which would facilitate the audiologist in managing and counselling patients in an appropriate manner. This is because, discussions were had around how individuals with each time perspective would approach situations as well as how they would respond to certain information or recommendations. Hence, participant fourteen explained that "knowing what sort of person they are based on the time perspective would actually help, again it is the data, so coming up with yes okay these people are most likely to act in such a way would give you the right way to counsel them."

In terms of the deliberate questions to be asked, participant two suggested to include, "a couple of probing questions to start with just to find out how long have you been experiencing the issue, what are you hoping to achieve, do you know of anyone who has a hearing aid, do you know of anyone who has benefitted from it, have you seen how cool they look because you can't see them." Thus, through this tool, each individual's primary time perspective may be revealed, and as discussed, this is essential as each individual's time perspective may influence them to behave in a certain manner. For example, the general idea amongst participants was that individuals who are future orientated often do not require a significant amount of convincing to take on the correct recommendation for their audiological needs. Whereas there is an idea that someone who is past negative will require more counselling. Hence, participant thirteen stated that, "with the past negative or the ones that are slightly more work, not in a bad way, is to give them the more positives on how hearing aids works." It therefore seems important for audiologists to discover this time perspective and take it into consideration when working with patients. By doing the latter, participants perceived

that audiologists may discover the barriers to acceptance of individuals within the hearing aid journey and work on this effectively. Additionally, participant seven mentioned, “I think if you go into it then you would be able to see possibly with certain people what is holding them back.” In agreement, participant two shared that, “the ability to find as many ways as you can to get through the barriers to acceptance” will be of great use when going through the audiological journey with participants. In addition, an observation made by the researcher during one of the focus groups was that one participant who has a past negative time perspective, admitted to having this time perspective within the individual interview but not in the focus group, perhaps because there was shame or embarrassment. In summary, the development of this tool was brought up and discussed by many participants as a vital piece of advice to the inclusion of time perspective within audiology.

Patience is Appreciated in the Practice of Audiology

Additional advice that was provided by participants, was that of exhibiting patience and providing individuals with time to process their hearing challenges and the action that is required to assist them. Whilst there was acknowledgement on the need to intervene earlier, it was also stated that if an individual is rushed, the effectiveness of management can be negatively impacted. Hence, some participants, including participant fourteen, mentioned that audiologists should “give people more time to think about it.” Within this idea of time giving and patience, individuals shared their appreciation for time given to them within consultations. Hence, they valued the time given to them to discuss and understand everything associated with their hearing, as opposed to being rushed out of the consultation due to the schedule of the health professionals. Hence, individuals can process and make better decisions if they are given the time and information needed by the audiologist. Participant four explained this by saying, “seriously, you took the time to explain everything. Maybe a doctor situation they would rush you off because they need to see the next patient. Although you knew you had

another patient waiting, you still took your time and explained everything step by step. Take time, have patience." Some participants therefore expressed that not only should time be given to patients to process their hearing loss and the journey that they may need to embark on, but audiologists should strive to give individuals the time that they deserve within consultations to ask and answer questions and put them at ease about their audiological situation.

Solution Selling Differs Based on Time Perspectives

Within one of the focus groups, sales methodology and solution selling was mentioned and discussed amongst the participants as being essential for audiologists and how they approach their patients and present hearing solutions. The sales methodology and importance of implementing solution selling was suggested by participants as essential and effective, and a methodology that does not make light of an audiologist's role. Hence, the participants explained that solution selling involves identifying what a person needs and then selling them a solution that would best suit these needs. It was further felt that solution selling is needed to convince individuals to trial hearing aids, if that is the best option for them, and then the trial can be used as a proof point to the recommendations made. Moreover, participants shared that how the selling is conducted, will change according to the time perspective of individuals. Participant ten specifically said, "the whole sales methodology is actually quite correct if you are looking at solution selling but I think that it is around how do you actually get to understand what are the actual needs, what are the selling points that are going to trigger the patient to concede to maybe I need this thing, maybe it will be good for me, irrespective, and it is going to differ according to each of their time perspectives." The participants within this focus group all agreed with the latter. Therefore, according to these participants, solution selling is a methodology that should be implemented, in an ethical manner, to assist patients through their hearing aid journeys.

Discussion

As previously mentioned, an exploration of time perspective within audiological service provision forms the basis of this study. The findings obtained regarding time perspectives and the audiological journey provide much needed insight and discovery into time perspective as being a possible indicator of audiological help-seeking behaviours and intervention outcomes. As discussed within the literature review of this study, the prevalence of disabling hearing loss globally, and in South Africa continues to increase (Joubert & Botha, 2019). Despite the ever rising prevalence of hearing loss, research has shown that many individuals delay help-seeking behaviours and intervention for their hearing loss (Clements, 2015). Findings from the current exploratory study have confirmed the latter, as most of the participants expressed avoiding help-seeking behaviours and intervention for their hearing loss. Literature has revealed some psychological, environmental, and physiological factors that contribute to audiological help-seeking behaviours, intervention uptake, and outcomes (Clements, 2015). However, there has been a large scarcity of exploring time perspective as a psychological factor in the audiological journey, with specific regard to it possibly being an indicator or predictor of audiological help-seeking behaviours and intervention outcomes.

As formerly explained, time perspective refers to the division of human events and experiences into the three time frames of the past, present, and future (Precin, 2017). Hence, the vital dimension of time perspective impacts on the behaviour, decision making, and functioning of individuals. This is because time perspective is described as being comparable to a personal trait as individuals consistently exhibit a tendency toward certain actions, thoughts, and emotions (Keyser, 2017). Time perspective has then been further divided into five different subscales known as future orientated, present-hedonistic, present-fatalistic, past-negative, and past-positive time frames, which have all been previously described in detail (Keyser, 2017). Whilst participants were initially not aware of time perspective as a construct,

they all found it to be interesting and rather thought-provoking in general, and specifically regarding the audiological journey. Hence, many of them admitted that they had not thought of the element of time and its impact on audiological help-seeking behaviours and intervention outcomes, until they participated in this study and time was brought to their attention. In doing so, many felt that whilst they were not aware of time or time perspectives, it is important and valuable to understand, due to the possible large impact it has on audiological help-seeking behaviours and intervention outcomes.

In human development, time perspectives and determinants form a vital component of consciousness and personality structure (Bolotova & Hachaturova, 2013). Consequently, an individual's time perspective indicates his or her ability to handle tough life situations, and to select different coping strategies to deal with these situations. It has therefore been suggested by researchers that people can only develop their personalities when they are conscious of time, and when they have mastered and created their own time and perceptions of time (Bolotova & Hachaturova, 2013). Within the current exploratory study, participants explained time perspective as being similar to personality traits, and that time perspective could indeed form an essential part of one's personality and therefore how one reacts to and handles difficult life events and situations, such as a hearing loss in this case.

Timing of Audiological Behaviours is Impacted by Many Predictors, Including Time Perspective

As previously mentioned, literature has explained many considerations that influence audiological help seeking behaviours and intervention outcomes, like going for hearing tests and success of rehabilitation uptake. Such considerations include self-perceived hearing challenges, social influences and pressures, advice and recommendations from family members or health professionals, recognition and acceptance of hearing loss, work environments, and increased activity limitations and participation restrictions in relation to hearing loss (Ramma

& Sebothoma, 2017). However, the decision making to seek any help, including audiological help, is a complex process. Literature has shown that some of the key reasons why people with a significant hearing loss delay seeking audiological help are due to acceptance challenges of hearing loss, perceived stigma of family members, as well as negative attitudes toward hearing loss and rehabilitation thereof (Ramma & Sebothoma, 2017).

Within this study, even though time perspective was the issue being studied, considerations such as social pressures, stigma, self-reported hearing loss, familial and friend influences, influences from health professionals, and limitations to activities all came up as influencing the audiological help seeking and intervention outcomes of many participants. Additionally, literature shows that seeking and undergoing audiological help and intervention is often delayed as although hearing loss often has a negative effect on quality of life, it is not seen as life threatening (Ramma & Sebothoma, 2017). Thus, as discussed in the literature review, audiological assistance is only sought after when individuals simply cannot communicate, even in optimal listening environments, and thus their challenges become debilitating (Jonsson & Hedelin, 2018). The results of this exploratory study unraveled similar ideas in that numerous participants knew they had a hearing loss at certain stages of their lives but procrastinated in seeking audiological assistance as they felt that they could cope and adapt to life. This interestingly relates to the precontemplation stage of the hearing aid journey, as explained by the Ida Institute (2019), in the literature review. As the communication and listening demands of life became more difficult, such as work meetings, family gatherings, and taking part in conversations, they felt that they had to seek audiological assistance and undergo intervention. Similarly, research conducted by Ramma and Sebothoma (2017) found that the strongest determining factor for seeking audiological assistance, was self-perception of hearing loss, especially when this hearing loss impacts on daily functioning and activities. In this study, comparable findings were obtained in that the activity limitations and participation restrictions

associated with hearing loss, played a huge influential role on the help seeking behaviours for many participants regarding their hearing. Hence, data interpretation in this exploratory study, revealed the strong idea that when hearing loss has a noticeably negative impact on the ability to participate in work, family life, and hobbies, individuals tend to be motivated to seek help and undergo intervention for their hearing loss. Therefore, the latter reflects the preparation and action stages of the hearing aid journey as described by the Ida Institute (2019) and confirms how all individuals with hearing loss frequently pass through these stages, although at different times compared to each other.

In addition, social stigma and pressures have manifested in literature, as being influences to consider when looking at audiological help seeking behaviours (Ramma & Sebothoma, 2017). This too was a consideration perceived as important by participants in this study, as for many of them, social stigma around hearing loss and hearing aids, frequently influenced them in a negative manner and contributed to their delay in seeking audiological assistance and intervention. The findings from this study emphasised the significance of making audiological information accessible to the general public so as to reduce social stigma, as this clearly has a large impact on delaying help seeking behaviours. With better access to correct information, public opinions on audiological issues and intervention may switch to a more positive outlook, which may in turn encourage earlier help seeking behaviours by individuals who require audiological assistance to better their quality of lives. This may be beneficial for all individuals and especially those with a past negative time perspective who appear to be affected by social stigma on an extremely high level, as seen within the results of this study.

Whilst researchers have studied other influences such as gender, education level, family history of hearing loss, and age, with regard to audiological help seeking behaviours, different outcomes have been established. When Ramma and Sebothoma (2017) conducted research,

they did not find an association between such influences and the probability of seeking help for hearing related difficulties. However, within this current exploratory study, whilst not all these considerations were mentioned, there were discussions around age and a family history of hearing loss, as being contributors to the audiological help seeking journey. In terms of age, prior studies found that it is more common for older individuals to seek help for their hearing loss, as opposed to individuals who are younger in age, especially if their hearing difficulties are complex (Clements, 2015). The current study yielded similar findings in that many participants said that the younger they were, the more reluctant they were to seek help due to their age and the common perception that younger individuals don't have hearing loss, and it is an impairment that occurs in old age. Nevertheless, whilst the older individuals did seek help in this study, some of them still experienced reluctance and avoidance attitudes, which prevented them from seeking assistance at the early onset of their hearing loss.

As seen above, there is mounting evidence that many different dynamics impact on the timing of seeking audiological assistance. However, there is a paucity of research on time perspective as a possible component within the area of audiology. As previously declared, time perspective appears to have an important influence on human behaviours and decision making. It has therefore been studied in various other health related behaviours in different areas of health and associations have been made between the different time perspectives and different behaviours, whether healthy or unhealthy (Hall et al., 2015). Only one study has been identified as recommending research on time perspective within the audiological field, and that was a study conducted by Manchaiah (2013). It was advised that time perspective be studied as a possible predictor of help seeking behaviours and rehabilitation outcomes with regard to hearing loss and the hearing loss journey (Manchaiah, 2013). Within the current exploratory study, although participants did not have knowledge on time perspective beforehand, once it was discussed with them and they had a good understanding of the psychological construct,

they mostly felt that it could form part of the many considerations that impact on help-seeking behaviours and the timing thereof. They further expressed the belief that each different time perspective would influence the audiological help-seeking behaviours and intervention outcomes in different ways. Therefore, numerous participants believed that if time perspective impacts on general life behaviours and decision making, then it could very well predict audiological help-seeking behaviours and intervention outcomes and should therefore be explored further.

Early Hearing Detection and Intervention may Prevent the Negative Consequences Associated with Hearing Loss

As seen within the current study and as previously proposed, many participants delayed seeking audiological assistance and undergoing intervention, due to a variety of reasons. In hindsight, these same individuals described the benefits of seeking audiological assistance and partaking in intervention, as early as possible. There was therefore a shared feeling of regret amongst many of the individuals for not having sought help earlier, as they strongly believe that delaying help seeking and intervention can have negative impacts on emotions, quality of life, and progress. Consequently, by detecting a hearing loss and intervening early, such negative impacts may be avoided at present and in the long run. These findings correlate with prior literature which states that the negative consequences of hearing loss, such as mental health issues, cognitive decline, decreased quality of life and social isolation, can possibly be avoided or lessened should early intervention be sought after (C. E. Johnson, 2018). In terms of feelings of regret, a recent study showed that two thirds of individuals with hearing loss, regret not seeking assistance through the use of hearing aids, earlier (Sivantos, 2019). As seen within this current study, as well as current literature, frequently, early hearing detection and intervention in adults, may not occur, as although people may feel the possible presence of a hearing loss, they do not realise how beneficial a hearing aid and intervention in general can

be for their overall quality of life (Sivantos, 2019). Once, they have decided to seek help and undergo intervention, even though often delayed, many then realise what they have been missing out on and tend to wish that they had got help for their hearing loss sooner (Sivantos, 2019). Regret about audiological management and general life was felt mainly by individuals with a past negative time perspective, but regret about the timing of audiological intervention solely, was delineated upon interpreting responses from individuals of all different time perspectives. The results of this current study therefore revealed the idea that studying and understanding time perspective as a consideration that influences the timing of help seeking and approaching individuals with different time perspectives in the correct manner, may allow for improved early detection and intervention of hearing loss, and therefore a reduction in the negative consequences associated with it.

Time and Time Perspective were Strongly Perceived as Indicators of Audiological Behaviours

In delving deeper into the topic, it was noticed that once participants had a good understanding of time perspectives and its five dimensions, there was a strong belief amongst many of them that time perspective could indeed indicate and predict audiological help-seeking behaviours and intervention outcomes. Firstly, this was felt because all participants believed time in general to be valuable, and essentially the essence in anything that humans do in life. Therefore, all participants agreed that their perceptions and views on time, influences how they live their lives in general, as well as how they approach their audiological journey. Time being the essence in all that is done in life is a belief that has been widely mentioned within literature. Hence, research has shown that most of human activity is bound by time, both in a chronological as well as psychological manner (Sircova et al., 2014). In connection with the beliefs of participants, time perception including aspects such as pace of life, synchrony, perceived duration and different temporal perspectives, are all deeply instilled into humans and

their behaviours (Sircova et al., 2014). Therefore, participants felt that time in general could indicate behaviours, with specific regard to audiological help-seeking behaviours and intervention outcomes. They explicitly discussed time in terms of the delay in seeking help and intervention for hearing loss. Hence, the time at which a hearing loss may be suspected to the time one decides to accept and seek assistance, was mentioned several times as an important consideration. The latter too has been a popular topic within audiological research, and it has been noticed globally, that a prolonged delay exists between the time that a person first becomes aware of hearing challenges, and when they actually decide to seek audiological assistance from a hearing healthcare professional (Clements, 2015).

Based on the information provided to participants on time perspective, the majority of them believed that time perspective could most definitely be an indicator of life behaviours, and in this case, behaviours related to audiological help-seeking and intervention outcomes. Specifically, participants expressed that the certain time perspective that individuals possess is significant in their decision-making process, and can impact their time of seeking help, their choice to comply or not with audiological intervention, and ultimately their audiological journey and the effectiveness of it. In these discussions, individuals explained how their own time perspectives may have played a role in their journey up until this point, without them realising it prior to participation in this study. These findings correlate with literature which states that firstly, time perspective impacts highly on current and future behaviours, and secondly, that specific time perspectives are related with specific behaviours and outcomes (Carney & Patrick, 2017). For example, literature has shown that those with a future time perspective, tend to have more goals in general, increased motivation to target these goals, and commonly engage in health-promoting behaviours and actions (Carney & Patrick, 2017). Due to time perspective being viewed as a possible indicator, participants emphasised the importance of approaching these individuals differently within their audiological journey's.

Additionally, studying this topic further, especially in a quantitative and larger manner, was advised by several participants because of the strong belief that it could act as a predictor in audiological help seeking behaviours and intervention outcomes. This adds to a research suggestion which stated that because time perspective has been studied as a predictor in other health conditions, it would be valuable to investigate the time perspectives of individuals with hearing loss and how they could possibly predict audiological help-seeking behaviours, treatment outcomes and their hearing loss journey in general (Manchaiah, 2013).

Different Time Perspectives may Result in Different Approaches to the Audiological Journey

Future Orientated Individuals Plan for their Futures and are Therefore Likely to Seek Audiological Help and Undergo Intervention

Prior research described people with a future time perspective as planning for the achievement of future goals, and having purpose in life (Keyser, 2017). Participants within this study agreed with the latter as future orientated individuals were perceived as those who plan for their future, make decisions to reach their goals in terms of family and work, are aware of the consequences their current decisions may hold for the future, and place less focus on the past. Therefore, there was a belief that the behaviours and decision making of these individuals are motivated by the future time construct. Hence, thoughts of the future, highly influence current perceptions and actions for them. Consequently, studies have shown that they place extra focus on future goals and rewards, and are happy to delay gratification, so as to accomplish their greatest goal in life (Precin, 2017). Due to this, findings of this study revealed that individuals would seek audiological help fairly easily and quickly, without excessive convincing required. Hence, participants perceived that these individuals would want to seek audiological help and obtain intervention as opposed to avoiding it, so as to better their future and prevent the impact of hearing loss on their present and future, in terms of the goals to be

achieved. In close relation, research has shown that individuals with a primary future orientated time perspective are less likely to behave in a risky or harmful manner, and more likely to take part in protective health behaviours (Sansone et al., 2013).

As stated in the literature review, these individuals select coping strategies such as self-control and consideration of different ways to solve a problem (Bolotova & Hachaturova, 2013). Literature and findings within this study may therefore suggest that regarding audiology, these individuals are likely to seek audiological help such as trialing and fitting hearing aids or undergoing aural rehabilitation, if that is the recommendation suggested by a health professional. Additionally, they consider the possible solutions to their difficulties in a rational manner (Bolotova & Hachaturova, 2013). As a result, it may be helpful for audiologists to discuss the current and future benefits of following through with audiological recommendations versus not following through. This will allow for patients to have a good understanding of their options to make a rational decision about their hearing. Such advice was provided by the participants within this study, based on their understanding of the future oriented time perspective and what would benefit these individuals.

Both in literature and in this study, having a future oriented time perspective was viewed as important, because their cognitive and behavioural coping strategies, may enable, encourage, and equip them to actively take on conflict and challenging life situations (Bolotova & Hachaturova, 2013). Participants in this exploratory study therefore felt that these individuals would often seek audiological assistance and have good intervention outcomes, due to these coping strategies. Their cognitive coping strategy means that they will identify their hearing loss, and highly consider different options that will benefit their hearing and future endeavors, such as getting hearing aids. Moreover, as their behavioural coping strategy means that they manage a complicated life event, such as a hearing loss diagnosis, by taking action and therefore modifying the action that they take, participants felt that they would be the

individuals to effectively act on their hearing loss. Thus, once they become aware of their hearing issue, they would take it upon themselves to seek audiological help and undergo audiological intervention, to resolve the issue as best as possible and improve their future.

Present-hedonistic Individuals Live in the Moment and may Not Prioritise their Hearing Loss Through Seeking Audiological Assistance and Rehabilitation

As seen in the results, participants felt that those with a present-hedonistic time perspective tend to live in the moment and focus on the here and now. They don't place too much attention on the past or future, and rather take each day as it comes. Literature supports these findings, as prior studies have explained that such individuals, tend to concentrate on current pleasures, they live for the present and seek current excitement, without thinking much about future consequences of current decisions (Keyser, 2017). Due to their enjoyment of present excitement and desires, they will not forego current comfort for any future aspirations (Keyser, 2017). The consensus amongst participants within this study was that these individuals would not likely be too worried about a possible hearing loss and would not willingly seek audiological help without a significant amount of convincing. This is because help seeking and obtaining hearing devices, are often done to better the present and future and again these individuals don't focus much of their attention on their future and consequences of current decisions. Obtaining audiological assistance would therefore not be at the top of their priority lists. Participants expressed an element of risk-taking amongst such people, as they said that even if a hearing loss is present, these individuals would take a risk of not getting help as they would implement coping strategies for different situations. It was felt that only if something drastic were to occur, would these individuals seek help, but up until then they would risk furthering audiological difficulties and experiencing any negative effects associated with hearing loss. This approach may come from the fear that seeking help and possibly getting hearing aids could hold them back and make them sacrifice current pleasures. Similarly,

literature has described these individuals as risk takers as they strongly believe life is only lived once, and this should impact on the way that this life is lived (Jochemczyk et al., 2017). It was therefore theorised that a present-hedonistic time perspective tempts risk taking behaviours, as perceiving benefits of decisions as immediate, makes taking risks more attractive. Additionally, research has shown that risk-taking behaviours are more largely impacted by time perspective than personality traits (Jochemczyk et al., 2017). In contrast to literature, some participants within this study felt that the very same risk-taking nature described above as preventing them from seeking help, could be the very reason for them to seek audiological help. Hence, it was believed that because they are risk-takers, they may not view wearing hearing devices as a big deal, in comparison to others, and may therefore accept and use them effectively, to better their current living and pleasures of life. In studies on time perspective, positivity associated with risk-taking traits and behaviours has not been widely discussed.

Present-fatalistic Individuals Focus on Fate as The Guiding Role in their Lives and may Therefore be Pessimistic in Seeking Audiological Help and Intervention

In the current study, participants suggested that these individuals believe that what will be will be and that not much that can be done to change things that are bound to happen. Therefore, participants agreed that fate is the influential force in the lives of these individuals. Literature provided similar evidence in explaining that these individuals believe that life is guided by fate and that the present and future are already predetermined and cannot be altered by human decision-making and behaviour (Keyser, 2017). More specifically, they consider the future as being controlled and affected by external forces or an external being. As a result, the attitude that they acquire towards the future is that there is no point in stressing about it, as there is nothing that can be done to change it (Keyser, 2017).

The results of this study revealed a general feeling that these individuals would be hesitant or pessimistic toward seeking and obtaining audiological assistance. Due to their

fatalistic view, they may therefore take long to seek audiological assistance as well as accept a possible hearing loss. Hence, they believed that even if these individuals knew they had hearing challenges, they probably wouldn't take action as they feel like nothing can be done to change their diagnosis. Therefore, it was perceived that they may have little faith in audiological intervention and how it may assist with their hearing impairment. In researching this time perspective, findings exposed similar ideas. It was reported that these people have a helpless, pessimistic, and disheartened attitude towards their lives and future (Chen et al., 2016). Due to the latter, there was a general agreement amongst many participants that their help seeking behaviours would be significantly delayed and that they would probably waste time. This links to a study done on time perspective and time management, which explains that people with this time perspective have difficulties with time management behaviours, like planning, making schedules, perceived control of time, and developing goals and priorities (Bajec, 2019).

In contrast, a handful of participants felt that these fatalistic traits may be a positive influence, as they believe that life is governed by fate, which would mean that they are destined to have a hearing loss. Therefore, they may have the same outlook about getting hearing aids or intervention. They will therefore go with the flow and accept their hearing difficulties and the need for intervention, easier. This information correlates with Bajec (2019), who revealed that individuals who perceive that they have little control over their lives and future, tend to accept chaos, uncertainty, and confusion easier. Therefore, in this manner, they may view their hearing loss and need for audiological assistance as part of their fate, and they will therefore go ahead with help seeking and intervention.

Past-negative Individuals Maintain a Cynical View of their Past and may Therefore not seek Audiological Assistance and Intervention Easily

In this study, participants felt that those with a past negative time perspective tend to focus negatively on situations, due to their negative view of the past and the unpleasant

memories that are provoked when reflecting on the past. These findings agreed with literature which states that such individuals hold a pessimistic and cynical attitude toward their past (Keyser, 2017). Feelings of regret were also described by participants in the sense that these individuals may regret the management of their past and the decisions they made. In prior studies, this theme was also prevalent as these individuals tend to feel regret and guilt regarding the actions conducted in their past (Keyser, 2017). Many of them express that in hindsight they would have preferred to do things differently (Keyser, 2017). Closely related to the latter, these individuals are often disposed to mental health challenges, in the sense of anxiety, depression, aggression, low self-esteem and unhappiness (Keyser, 2017). Participants in this study were in agreement with literature as a few suggested that having this time perspective may be associated with mental health issues. Additionally, the few participants who identified as being past negative themselves, did describe feelings of sadness, anxiety, fear, poor confidence, concerns about social stigma, judgment, and even depression.

Due to the latter, most participants felt that these individuals would not easily seek audiological assistance, such as going for a hearing test, getting therapy or hearing aids. Hence, a general idea arose that intervention would be challenging with these individuals, thereby affecting the outcome of intervention. Similar findings were observed in literature regarding the general behaviour of these individuals. Hence, research shows that the behavioural and cognitive decisions made by these individuals is often negatively impacted on by their past negative time perspective (Ge et al., 2020). Therefore, they often don't engage in behaviours that would be helpful to their quality of lives and wellbeing (Ge et al., 2020). Moreover, within this current research, it was gathered that these individuals would avoid their hearing loss, and not cope or seek help in an appropriate manner or within good time. According to literature, this time perspective has been associated with an increase in helplessness, increased levels of

emotional distress, as well as maladaptive coping strategies in difficult situations (Unger et al., 2022). Relationships between literature and the current exploratory study were therefore found.

Despite this, some participants in the current study felt differently about this time perspective. Although the above perceptions were the most common, a few individuals felt that the past negative attitude would actually motivate people to seek and receive audiological help, as there is nothing further to lose or life could not get worse. Whilst the latter may be a motivator, it is not positive or healthy and can be considered a maladaptive coping strategy or way of thinking (Unger et al., 2022).

Past-positive Individuals Preserve a Nostalgic Attitude Toward their Past and may Seek Audiological Help and Intervention, Especially with the Encouragement of Loved Ones

In this study, it was mostly felt that those with a past positive time perspective would view their past as positive, and have pleasant memories, which could facilitate their decision making. This corresponds with literature which says that these individuals are opposite to past negative individuals, as they have a positive, cheerful, and nostalgic view of their past (Keyser, 2017). Therefore, they remember their memories in a gratifying manner, are happy people, and don't often suffer from mental health challenges (Keyser, 2017). These individuals were therefore perceived as seeking audiological assistance in terms of having a hearing test, undergoing therapy, or getting hearing aids, by the participants in this study. This was explained because they have a positive outlook on their past and may want to relive their memories and recapture their past. Hence, they tend to try and find the positives in all situations. This information reflects prior research findings which revealed that such people try to remain hopeful in difficult situations by finding the positive parts of such situations, enabling them to avoid similar situations and mistakes in the future (Bolotova & Hachaturova, 2013).

Additionally, participants in this study agreed with literature in the understanding that these individuals hold their family and friends' advice in high regard. They are therefore known

to seek social support from family and friends, when selecting coping strategies for tough life situations (Bolotova & Hachaturova, 2013). Moreover, participants in this study explained these individuals as being slightly cautious which could impact on their timing and effectiveness of seeking and undergoing audiological assistance. Literature has described caution and a better to be safe than sorry approach as being one of the aspects of this time perspective that may hold these individuals back in certain aspects of life (Collingwood, 2016). Therefore, it has been concluded that possibly including loved ones in the hearing loss journey may reduce these cautious feelings and positively impact on the audiological journey.

As mentioned above, these people concentrate largely on pleasurable past events and enjoyable memories, which ultimately influences their decision making and behaviour (Burzynska & Stolarski, 2020). This was too recognised by the participants within this study, which guided their belief that these individuals should be approached by audiologists within the positive past realm. For example, within the solution selling approach, audiologists should speak to these individuals about recapturing their past and reliving their past pleasant memories, through audiological assistance such as hearing aids.

In the table below is a summary of suggestions that were put forward by participants as well as ideas drawn from the researcher based on data interpretation, regarding collaborating with individuals who have different time perspectives in terms of their audiological journey.

Table 3

Advice for Audiologists on Approaching Individuals with Different Time Perspectives

Time Perspective	Approach to Individuals with Certain Time Perspectives.
Future orientated	• These individuals would benefit from understanding the advantages and disadvantages of getting assistance versus not getting assistance. • A hearing aid trial would assist these individuals in understanding the benefits of amplification, currently and for the future. • They enjoy planning their future and many are work orientated, therefore discussions around the future as well as consequences of not obtaining assistance now would assist. • There is a consensus that whilst the above may assist, these individuals don't generally need extensive counselling or convincing of recommendations.
Present-fatalistic	• As these individuals may procrastinate and take time to get assistance, lengthier and more in depth discussions on the benefits of hearing aids and following recommendations may help them seek help faster. • A hearing aid trial may be extremely beneficial for such individuals because they often need a lot of motivation and convincing to undergo intervention willingly and effectively. • It may be helpful to give them time but to remind them of the consequences of not seeking help early. Participant fourteen said, "remind them of the aspect of time and say look if we don't start corrective behaviour now, the possibility is that it could get worse, things don't get better outside of miracles." • Remind these individuals that, "time is part of entropy, things degrade, so don't take too much time to think about it, but give them time to think about it, it's a fine line, it is a balance", as said by the fourteenth participant. • Providing them with patient testimonials was suggested to assist them in seeking help and following through with recommendations. Hence, participant fifteen said, "speak to someone who had the same problem, they can understand that the hearing aids are helpful, as long as they can get a testimony, because some people they believe in something that they see or they hear from someone."
Present-hedonistic	• As these individuals may procrastinate and take time to get assistance, discussions on the benefits of hearing aids and following recommendations may help them seek help faster. • A hearing aid trial may be especially beneficial for such individuals because they often need a lot of motivation and convincing. Hearing aids, if they are the correct intervention, may also help these individuals live more in the moment and stop them from missing out on daily life situations. • It may be helpful to give them time but to remind them of the consequences of not seeking help early. Participant fourteen said, "remind them of the aspect of time and say look if we don't start corrective behaviour now, the possibility is that it could get worse, things don't get better outside of miracles." • Remind these individuals that, "time is part of entropy, things degrade, so don't take too much time to think about it, but give them time to think about it, it's a fine line, it is a balance", as said by the fourteenth participant
Past negative	• Placing more emphasis on discussing the benefits of hearing aids with these patients may be helpful. • Providing more detailed information on why certain recommendations have been made and the importance of these, may assist these patients. • Intensive audiological counselling regarding social stigma and how to deal with these challenges may need to be implemented.

	• Asking individuals who have hearing aids to become evangelists for those with a past negative time perspective, to assist them in possibly getting hearing aids or the intervention that's needed, may be helpful. Participant ten said, "one ends up being a little bit of an evangelist for getting the right help." • A hearing aid trial may be especially beneficial to these patients, as they often need more motivation and convincing to take on a recommendation. Moreover, trialing hearing aids before purchasing them may put their minds at ease and reduce anxieties around this form of intervention. • They may need a referral to a psychologist, depending on the extent of their past negativity and how it is influencing their daily decision making.
Past-positive	• Basing hearing aid and intervention discussions around how the devices can assist in recapturing the individuals past and allow them to relive desired memories, may be useful. • A hearing aid trial is important to conduct with these patients as they may be able to practically see how they can help them recapture their past, and it can also help ease their cautious tendencies before buying the hearing aids. • Potentially aiming discussions around family, or including the family in the hearing loss journey, may be helpful, as they value family relationships.

Time Perspective Fluctuates as People Age and Pass Through Different Phases of Life

When exploring time perspective in literature and in this study, the theme of age and time perspective relations was regularly mentioned. In this study, participant responses revealed the perception that as one ages, one can move from one time perspective to another. This perception relates to information declared in the literature review, which explains that time perspective can certainly evolve and change as one ages (Laureiro-Martinez et al., 2017). More specifically, several participants felt that when one is younger, one possibly takes on a more hedonistic time perspective, and as one ages, a less hedonistic and more future-oriented time perspective is applied, even if this is not one's primary time perspective. Due to this shifting in time perspective, the participants emphasised that individuals would need to be approached differently by the audiologist, depending on their stage of life and what their primary time perspective is at that stage. These findings compliment literature which explains that older individuals approach their lives in a less hedonistic manner, as compared to younger individuals (Laureiro-Martinez et al., 2017).

Concerning the future orientated time perspective, research suggests that in youth, time is seen as extensive and unlimited, and therefore, long-term goals are prioritised, as they

improve future opportunities (Laureiro-Martinez et al., 2017). These findings differ to some suggestions made in this study, when again participants believed younger individuals to be more hedonistic in nature due to their young age, wanting to live in the moment, and not being too concerned for their future. Thus, some participants proposed that as they age, mature, and take life more seriously, a future orientated time perspective will be adopted. However, prior research has found that as individuals age, time is viewed as limited and reduced, and as a result social support and emotional regulation which are short-term goals, receive the ultimate priority (Laureiro-Martinez et al., 2017). Interestingly, some participants believed that whilst time perspective can change with age and according to different circumstances, the core time perspective of an individual will remain the same. This belief relates to the statement of time perspective likely developing with age, but being a reasonably stable viewpoint (Laureiro-Martinez et al., 2017). Whilst different opinions exist, the researcher delineated an overarching belief that time perspective can fluctuate as one ages and goes through different life stages.

A Balanced Time Perspective Fosters Optimal Human Functioning, Well-Being, and Positive Outcomes in Life

As mentioned before, having a balanced time perspective or ideal optimal temporal perspective can assist in coping with challenging and complex life situations (Boniwell & Zimbardo, 2012). This is because having a balanced time perspectives allows for flexibility, which enables an individual to move between the situations of the past, present, and future depending on the requirements of different life events and circumstances (Bolotova & Hachaturova, 2013). Whilst having a balanced time perspective was not specifically discussed within this exploratory study, some individuals explained that they resonate with a few of the time perspectives. One individual even said that he feels that he has a bit of them all. Some participants also discussed that one's time perspective could change with age, and with life situations, such as different pressures, stressors, or life experiences, however, it was felt that

one has a core time perspective that would probably remain more prominent than the others. Therefore, some participants felt that shifting the time perspectives of some individuals would be helpful in positively influencing their decision making regarding audiological help seeking and intervention. They specifically felt that shifting some individuals time perspective to more a future oriented one would be of benefit to them, specifically within their hearing loss journey. On the contrary, not all individuals discussed shifting time perspectives, but rather stated how health professionals, such as audiologists could shift their own approaches to accommodate the different time perspectives of their patients.

As a result of the latter and time perspective being a psychological construct, a few participants emphasised the importance of audiologists undergoing psychology training within their degrees. Such suggestions were made because time perspective and several other psychological constructs play a role in audiology, and audiologists therefore need to know how to handle this effectively, whether it is approaching it themselves or referring out for treatment. The psychological treatment that research has shown regarding time perspective, is moving individuals to a balanced time perspective through time perspective therapy. Having a balanced time perspective significantly improves well-being and allows for good psychological health (Mooney et al., 2017). Such individuals are also known to show increased care about their future, as they are more proactive in future planning in comparison to individuals who deviate from a balanced time perspective. Those who deviate more and have a high past negative time perspective, may have their behavioural and cognitive decisions influenced in a negative manner (Ge et al., 2020). However, through psychological assistance such as time perspective therapy and dispositional mindfulness, the negative influence of a past negative time perspective can be controlled and worked on (Ge et al., 2020). Clearly, it would be helpful for individuals to have a balanced time perspective, as being able to shift between different temporal orientations can be implemented as an adaptive or coping strategy, when life is

demanding (Mooney et al., 2017). This is applicable with hearing loss, as it is often experienced as a difficult life situation, and therefore based on literature and findings from this exploratory study, it would be beneficial for patients to be able to flexibly switch between the time perspectives, so as to improve their well-being and the positivity of their hearing loss journey outcomes. If individuals struggle with the latter, audiologists may need to refer them for time perspective therapy in which they can be professionally assisted by a psychologist to develop a balanced time perspective.

Increasing Awareness of Audiological Services may Prevent Delays in Audiological Help-Seeking and Intervention Behaviours

In addition to the above, further advice was given by the participants to audiologists, in terms of increasing awareness related to audiological services and practice. Increasing the awareness of the public, and specifically health professionals too, such as general practitioners regarding hearing loss, how to identify it, how to manage it, and when to refer, was a common recommendation made. This increase of awareness was suggested as many participants felt that other health professionals lacked awareness on hearing loss, and therefore contributed to delaying the help-seeking behaviours and intervention of these participants. Therefore, numerous participants in this study frequently revealed a lack of awareness regarding who to seek help from, when to seek help, and ultimately where to obtain appropriate audiological services. This forms part of the preparation phase of the hearing aid journey as mentioned by the Ida Institute (2019), which explains how many individuals reach a point of readiness to seek help, although they are unsure or uncertain of how to do so. In specific reference to health professionals, the participants believed that if they had been given the correct information and guided better, their knowledge and timeframe of seeking audiological help and undergoing intervention, may have been shorter and they may not be in the position they are today. This information supports prior research which states that health professionals, such as general

practitioners, may contribute to delayed audiological help-seeking behaviours, due to a possible lack of awareness regarding early referrals for hearing loss, as well as general management of hearing loss (Easton & Leverton, 2018). Therefore, many individuals with a hearing loss may not seek help early on, as they have been advised by the general practitioner to wait until their audiological symptoms get more severe to warrant intervention. However, literature has explained that general practitioners need to refer all adults, in spite of their age, for an audiological assessment, should they present with any form of hearing challenges or even any hearing difficulties that may be suspected (Easton & Leverton, 2018).

Based on the above, research shows that it is not acceptable practice to delay the referral of an individual with hearing issues, until these issues become more severe. In agreement, this exploratory study emphasised the significance of increasing the awareness of health professionals, in terms of hearing loss, by providing clear advice on when as well as who to refer patients to. By increasing the awareness and audiological knowledge of hearing professionals, the wellbeing, and health of patients will be holistically approached and managed. Additionally, the negative associations with hearing loss as mentioned in the literature review and results of this study, like emotional challenges, social stigma, and third party disability, may be reduced with increased audiological awareness for all. Moreover, participants may begin their hearing aid journey at a more appropriate time, they may pass more effectively through the stages of the journey and reach the ideal permanent exist stage more timeously. According to literature, audiologists can work together in creating and improving training resources on hearing loss, for health professionals so that they may understand the experiences of their patients and manage hearing loss in a confident and effective manner (Easton & Leverton, 2018). Training resources may be particularly useful within the context of South Africa, as literature has reported similar findings to the participants within this study, regarding the widespread lack of awareness regarding hearing loss,

audiological health and audiological service provision, in the country and the need to correct this issue (Joubert et al., 2017).

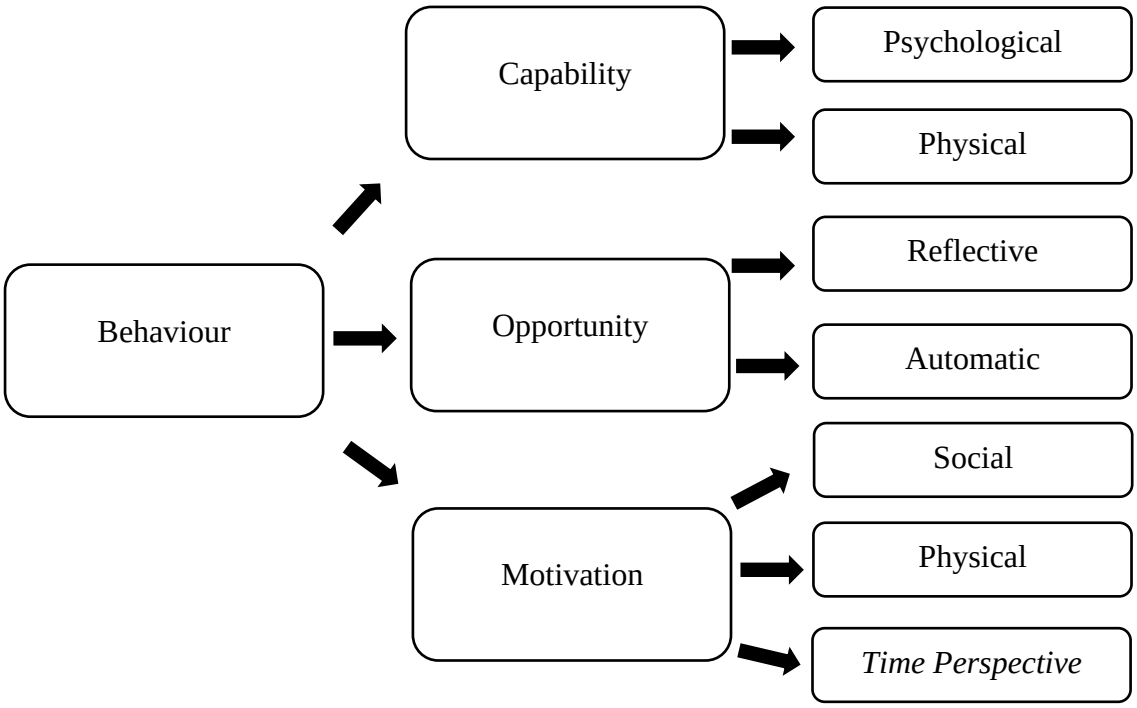
Time Perspective Theory may Fit well into the Motivation Aspects of both the COM-B and SST Models

To effectively facilitate individuals with hearing loss, it is important to discuss different influential theories of behaviour. As discussed within the theoretical framework, the COM-B model of behaviour explains that at any moment in time, a certain behaviour will only take place when the specific individual has the capability (C) and opportunity (O) to undertake the behaviour and is also more motivated (M) to execute that behaviour in comparison to other behaviours (West & Michie, 2020). Whilst many features within capability, opportunity and motivation have been accounted for, time perspective as a potential feature has not been studied. The motivation component of the model indicates the internal processes, like planning, aspirations, and impulses, which impact on the choices, decision-making, and behaviours of individuals (Willmott et al., 2021). Based on the time perspective theory and this exploratory study, time perspective has been viewed as an essential construct in influencing feelings, thoughts, and behaviours. It could therefore form part of the motivation aspect of the COM-B model, as seen italicised in Figure 6, as one's time perspective, may affect one's motivation to perform a certain action. Within this specific study, and based on foundation research on time perspective, it has been strongly perceived that time perspective will influence and possibly indicate audiological help-seeking behaviours and intervention outcomes. Therefore, if a desired behaviour, which in this case is seeking audiological assistance and partaking effectively in intervention, is not occurring, then perhaps investigating the determinants of this behaviour, including motivation and potentially time perspective, needs to occur, to provide guidance on any changes that need to be made so as to allow for this desired behaviour to occur. In doing so, information may be obtained on whether an individual's time perspective needs to

be altered to a more balanced one, or if audiologists need to alter their approach to different individuals based on the possible motivational aspect of time perspective. Perhaps it would therefore be useful to consider time perspective within the motivation aspect of the COM-B model of behaviour. Closely related to the latter, the SST is a life span theory of motivation that explains how individuals select their life goals, which are in accord with their position in life and is targeted at improving life satisfaction (Sullivan-Singh et al., 2015). This theory explains that time perspective highly impacts on human motivation and considers the interaction between three-time dimensions as vital in understanding adult development (Desmyter & De Raedt, 2012). As seen within this study, the different time perspectives have been shown to impact on the motivation of individuals to make certain life decisions and take on certain behaviours, in general and with specific regard to audiological decisions and behaviours. In contrast to other developmental theories of adulthood, the SST takes into consideration future time perspectives, and not only considers past experiences (English & Carstensen, 2016). It has been gathered within this exploratory study that future time perspectives and how perceptions of the future and time can change, is important in how decisions and behaviours are conducted. Based on the interpretation of participant responses and an understanding of these two theories, time perspective and motivation appear to be linked and can impact on various audiological behaviours differently, depending on the specific time perspective of an individual. Therefore, it is important for audiologists to have a good understanding of these theories and how they apply to the audiological journey.

Figure 6

Adapted Version of the COM-B Model



Note. From "Capability, opportunity, and motivation: an across contexts empirical examination of the COM-B model", by J. Willmott., B. Pang and S. Rundle-Thiele, 2021, *BMC Public Health, 21*(1014). Copyright 2021 by The Author(s). Adapted.

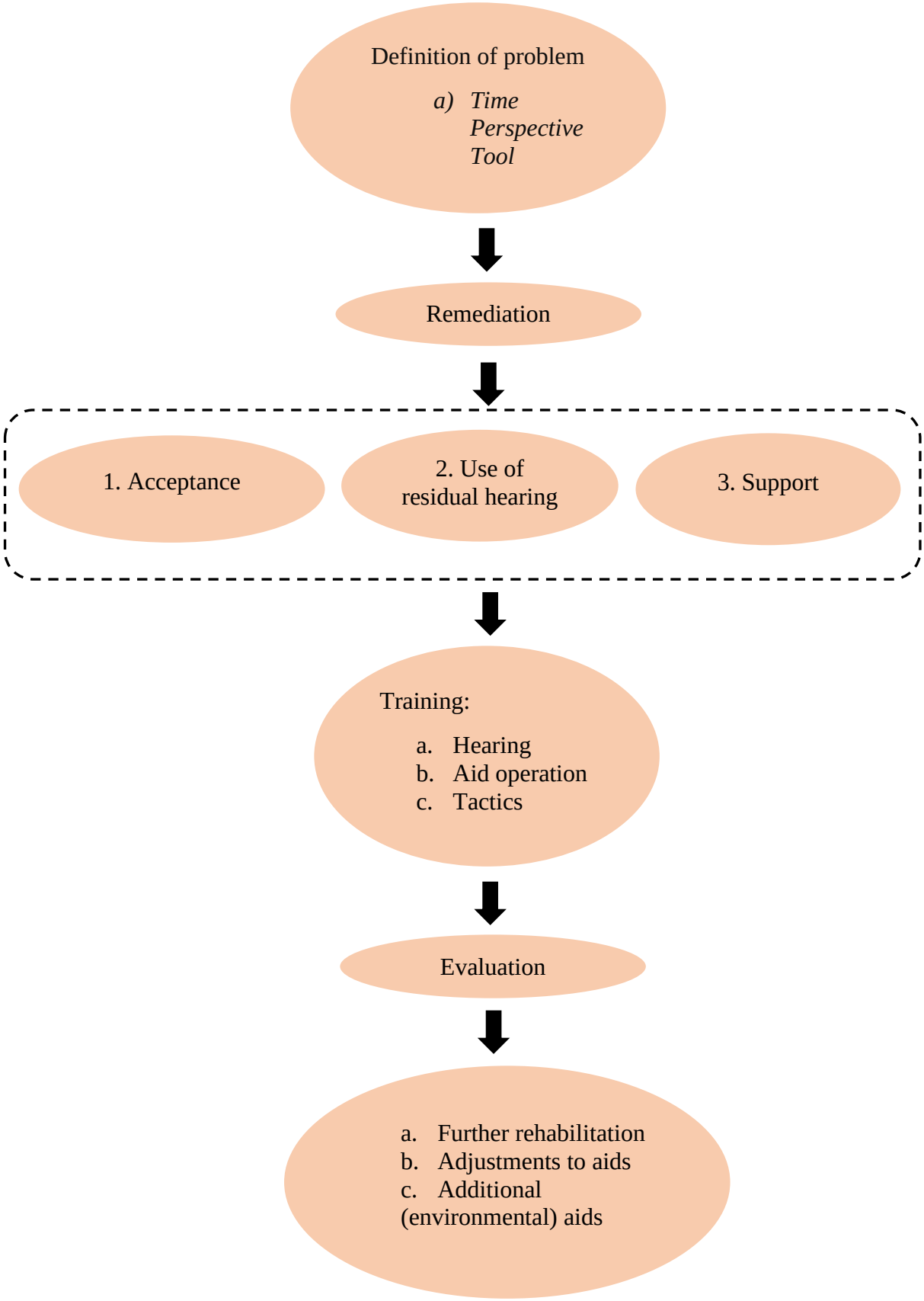
Time Perspective may fit well into the Problem-Solving Model of the Rehabilitation Process Set out by Maltby

In further discussing relevant theory, the problem-solving model of the rehabilitation procedure for those with a hearing loss, set out by Maltby (2019), could possibly benefit from the addition of time perspective. As mentioned in the literature review, the first vital part of the process is the definition of the problem and involves the audiologist investigating and obtaining important information through the case history (Maltby, 2019). Indications were deduced through data interpretation of the current study, to possibly include an investigation into the time perspective of patients, within the initial phase of the hearing loss journey, which in this

case, would be the definition of the problem. Participants proposed that within the case history and informal discussions of the initial session, certain guided questions could be asked by the audiologist, to obtain a clear idea of the time perspective that a certain individual holds. This was viewed as essential, as literature and many participants felt that time perspective can indicate and often predict thoughts, feelings, and behaviours in life, including health related ones. As the goal of this first stage is to assess the hearing impairment and its nature, holistically, explorations into the lives of patients is needed, with specific regard to their work, home, and social environments, as well as their activity limitations and restrictions (Maltby, 2019). Therefore, as part of this investigation, participants believed that audiologists should consider exploring the time perspective of patients, as only when the hearing issue and related issues are properly and holistically defined, can audiologists implement an appropriate approach to remediation. To achieve the latter, it may be beneficial to add in a time perspective tool based on the time perspective theory into the first stage of this rehabilitation model, as seen italicised in Figure 7 below.

Figure 7

Adapted version of the Problem-solving Model of the Rehabilitation Process



Note. This Problem-Solving Model of the Rehabilitation Process in Audiology shows the possible addition of the time perspective tool in the first step. From *Principles of Hearing Aid Audiology, 3rd Edition (*3rd ed., p. 279), by M.T. Maltby, 2019, Cambridge Scholars Publishing. Copyright 2019 by Maryanne Tate Maltby. Adapted.

Significance of Audiologists' Considerations on the Similarities Between Time Perspective and Psychodynamic Theories

As previously discussed, the psychodynamic theory emphasises the unconscious motives that underlie personality and behaviour (Bornstein, 2022). Similarly, time perspective theory explains how time perspective is a basic psychological concept and unconscious cognitive paradigm that underlies the decision making, personality, goal setting, and behaviours of individuals (Sobol-Kwapinska et al., 2019). One of the core assumptions of the psychodynamic theory states that many psychological processes occur outside of the conscious awareness of a human (Bornstein, 2022). Time perspective is seen as one of these unconscious psychological processes, which has been viewed within literature and this current study, as highly influential on the motives, feelings, and behaviours of people. Hence, participants felt that this unconscious psychological construct could highly impact on audiological behaviours. Moreover, participants explained that the implications on audiological behaviours would be influenced by the specific unconscious time perspectives that they have. The second assumption within the psychodynamic theory which relates to the time perspective theory, is the great importance of early experiences (Bornstein, 2022). Specifically, this theory discusses that early childhood experiences have a large influence on one's adult personality development (Bornstein, 2022). This relates highly to the past-negative and past-positive time perspectives, as individuals who possess these perspectives tend to focus a significant amount on their past, and often feel as though their past events have impacted on their current behaviours and decision making, in general and regarding their audiological journey. The final assumption of

the psychodynamic theory is psychic causality which discusses that nothing within ones mental life occurs by chance or at random (Bornstein, 2022). Therefore, there is a strong belief, that thoughts, emotional responses, actions, intentions, and behaviours, derive from a combination of biological and psychological processes (Bornstein, 2022). Time perspective, and its impact on the latter, may indicate its inclusion in the psychological processes of individuals when making decisions. It may therefore be important to consider these two theories in audiological help-seeking behaviours and intervention outcomes.

Inclusion of Time Perspective into the ICF Framework may Assist with Holistic Care of Patients

Time perspective could be related to another theory, namely the ICF framework. As seen within the current study and literature, individuals with a hearing loss often delay seeking audiological assistance due to various reasons (Clements, 2015). Upon interpreting data from the current study, it was often found that only when severe activity limitations and participation restrictions were being experienced due to hearing loss, did the individuals then decide to seek assistance and undergo intervention. Hence, for many, help was regularly sought when they felt like they could not cope effectively with the impact of their hearing loss on daily life activities and when they began to feel more emotional challenges and isolation from life situations than usual. Examples include the negative impact of hearing loss on the effectiveness of doing their jobs, isolation from social events, and the negative impact on partaking in daily hobbies. These experiences relate to the literature put forward by the ICF specifically in terms of activity limitations and participation restrictions that occur due to hearing loss (Meyer et al., 2016). The ICF explains in detail how the negative impact of hearing loss on the general functioning of an individual goes beyond body structure and function. Hence, personal factors, activity limitations, and participation restrictions have a larger influence on the seeking and outcomes of hearing intervention of those with a hearing loss, in comparison to the hearing loss

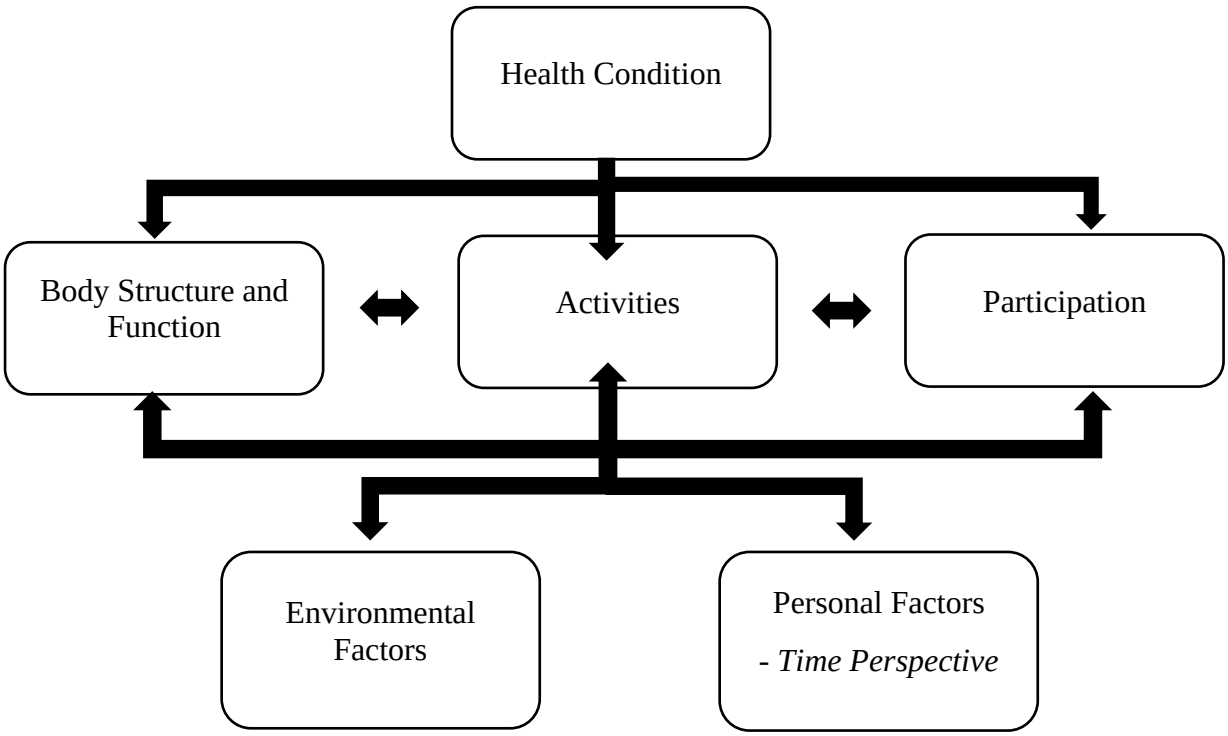
alone (Meyer et al., 2016). Studies have therefore explained the benefits of considering all aspects of the ICF framework within the audiological journey. Research has recommended that within the first session where case history is taken, audiologists should make use of various open-ended questions regarding the lifestyle of an individual, in addition to the usual hearing structure and function related questions (Meyer et al., 2016). This recommendation too came up in the current study, regarding time perspective elements. Therefore, participants mentioned that deliberate questions within the case history phase of the journey, should be asked to reveal an individual's time perspective, or an idea of it. This could fall under personal factors within the ICF Framework and therefore indicates that whilst looking at all aspects of the framework when working with individuals and their hearing loss, time perspective can be explored within the personal factors section of the ICF. In asking certain lifestyle questions and investing time in the case history process, the audiologist may obtain a detailed understanding of the patients personality and his or her needs, which can be of great assistance in terms of intervention and the outcomes thereof (Meyer et al., 2016). Based on the current study, including such questions and if needed, alternate questions, may expose the time perspectives of an individual in addition to the above, which may only add benefit to the audiological management of the individual. In addition, research has shown that dedicating a good amount of time to the case history, and truly seeking information about the personality, lifestyle, family and friend influences, and psycho-social wellbeing of a patient, may assist with building trust and a good rapport with the patient (Meyer et al., 2016). According to the research at hand, an individual's time perspective should form part of this information that audiologists delve deeply into, during case history, as any true understanding of a person as a whole, can allow for improved trust, confidence, and rapport between the patient and audiologist. Moreover, research in audiology has revealed that a good patient-clinician rapport, forms the basis of patient centered care, which in turn has been connected to better intervention outcomes, patient satisfaction, and adherence to rehabilitation

(Meyer et al., 2016). This research reflects findings from the current study, as several participants expressed their gratitude in terms of the time and effort taken by the audiologist to understand them as people first, and then their hearing loss and management thereof. Due to the rapport built, they therefore explained feeling more comfortable with their diagnosis as well as taking on the recommendations and adhering to treatment provided by their hearing healthcare professional.

As per Figure 8, this study suggests that there are also environmental factors of the ICF which are essential to consider, in addition to the personal factors, and this may speak to Bronfenbrenner's Ecological Model for Human Development. Hence, whilst time perspective was the main theory guiding this study, it is important to consider that all behaviours in life occur within specific contexts, and these contexts, system structures and the interactions that occur amongst them, can highly influence behaviour and human development. Within this study, different system structures were mentioned and discussed by participants. These include familial, psychological, socioeconomic, and cultural. Therefore, in correlation with literature, the findings from this study revealed that it is vital to acknowledge and understand the audiological behaviour choices of individuals, by looking not merely at their immediate environment, but also at the exchanges that take place within their larger environments. Importantly, this relates to the inclusion of the time perspective tool within the ICF model, as seen italicised in Figure 8, as various studies have explained that time perspective is actually influenced by different variables, including socioeconomic status, culture, and ethnicity to name a few. (Andretta et al., 2013). Evidently, within the audiological journey, audiologists should delve deeply into the time perspectives of individuals, whilst considering contributing factors such as their environments.

Figure 8

Adapted version of the International Classification of Functioning, Disability and Health



Note. This is the international Classification of Functioning, Disability and Health, with the possible inclusion of the time perspective construct. From "What Is the International Classification of Functioning, Disability and Health and Why Is It Relevant to Audiology?", by C. Meyer., C. Grenness., N. Scarinci and L. Hickson, 2016, *Seminars in Hearing*, *37*(3), Learning outcomes, Figure 1 (https://doi.org/10.1055%2Fs-0036-1584412). Adapted.

Introducing a Time Perspective Tool into the Audiological Journey could be Beneficial for Patients and Audiologists

In adding to the above information, individuals within the current study expressed the need to use a time perspective tool within the beginning of sessions. This tool can be guided by the Zimbardo Time Perspective Inventory (ZTPI). This instrument is commonly used to measure and assess the central experiential dimensions of time, including the past, present, and the future (Skogen & Nesvåg, 2019). Therefore, within this instrument are 56 questions which

are used to evaluate the time perspective of an individual, encompassing past, present, and future time perspectives. This inventory is at present being used on an international basis, for varying purposes in fields such as behavioural economics, sociology as well as psychology (Skogen & Nesvåg, 2019). Whilst this inventory can provide detailed and accurate information on the time perspectives of individuals, it may be too long to administer within audiological settings. As a result, within the current exploratory study, it was advised by participants, to come up with a time perspective tool that guides deliberate questions within the case history section of the audiological journey, to reveal the time perspectives of certain individuals. Therefore, the findings of this study may indicate the need to use questions similar to those within the ZTPI, with regard to general life and audiological issues, so as to gain a better understanding or at least an informative idea on what the time perspectives of patients are. However, due to some individuals possibly having difficulty with deliberately exposing their time perspectives, as seen in the results, it may be important to use this tool without the knowledge of the participant regarding the search for his or her time perspective, so that a true reflection on the specific time perspective can be obtained. If done correctly, this tool may be highly beneficial for audiologists and patients, as the approach to their hearing loss and intervention will be tailor made to them, by considering their time perspectives.

Solution Selling can be an Ethical and Adaptable Means of Selling Hearing Aid Solutions to Individuals with Different Time Perspectives

Upon discussing time perspective and the possible impact it has on the hearing loss journey, solution selling as part of a sales methodology was brought up. As previously discussed, solution selling may offer more ethical options, as opposed to product selling. Therefore, in relation to the above, developing and using a time perspective tool may ethically and effectively guide this solution selling. Many participants believed that implementing sales methodology and solution selling specifically within the journey is vital and useful and by no

means devalues the role of an audiologist as a medical health professional. It was specifically mentioned that solution selling within audiology would involve recognising the needs of patients and then selling them solutions that would be best for their audiological requirements and life in general. Literature expressed solution selling as an important and ethical practice to be used by audiologists, as it aims to provide a total hearing solution to patients by combining the audiologists, the practice, different services, and the product (von Borstel, 2021). This approach therefore does not focus solely on the product but rather on providing patients with the best personalised and most optimal total hearing solution for their hearing loss and their lives (von Borstel, 2021). As a result, participants believed that this solution selling is important in convincing patients to trial hearing aids, if that is the recommended option. Whilst solution selling was mentioned as a popular sales methodology, participants declared that time perspectives would need to be considered within the audiological approach of solution selling, in order to offer a holistic hearing solution. Therefore, audiologists would not only need to identify the audiological needs of participants but also their time perspectives, so as to ethically sell them a hearing solution, such as hearing aids, that targets all of their audiological and life needs. This approach to solution selling will therefore differ according to the needs and time perspectives of each patient to allow for positive intervention outcomes and quality of life for all. The latter correlates with research done on solution selling in audiology, which states that this approach is about the total hearing solution (von Borstel, 2021). Seemingly, participants feel as though solution selling is an important aspect of audiological intervention outcomes, and in order for it to be a total hearing solution that considers all needs and requirements of patients within the audiological journey, time perspectives need to be considered.

Conclusion

Summary of the Dissertation

To address the topic of this study, a qualitative, exploratory, cross-sectional study was used. Through the specific use of open-ended, semi-structured individual interviews and two focus groups, insight was gained into time perspective as being a possible indicator of audiological help-seeking behaviours and intervention outcomes. This was important due to the large paucity of research on time perspective within the audiological field, despite it being studied and identified as vital within numerous other general and health-related behaviours.

By using the Framework Method of analysis, predominant themes and sub-themes were derived, to target each objective of the study. According to literature and interpretation of findings from the current study, it was evident that there are multiple components that influence audiological help-seeking behaviours and intervention outcomes, such as social stigma, finances, and perceived severity of hearing loss, to name a few. However, up until this study, participants had not thought of the impact that time and time perspective could have on all audiological behaviours. When delving deeper into the topic, participants all felt that the component of time in general was vital to consider, as it is the essence in anything that is done in life and is strongly related to the hearing loss journey. Moreover, through providing individuals with a time perspective mind-map, they all resonated with one or more of the time perspectives provided and explained the reasoning behind their selection. In doing so, many of them described the important influential aspect of time perspective, and how it could be an indicator or predictor of all audiological behaviours.

In terms of the different time perspectives, several participants had similar opinions and thoughts about how individuals with each time perspective would behave and approach the audiological journey. Future-orientated individuals were perceived as planning ahead and

viewing consequences of current actions as important, and it was therefore felt that they would likely seek audiological assistance. Present-fatalistic individuals were said to use fate as their guiding role in life, and therefore may be pessimistic toward audiological intervention and seeking assistance. Present-hedonistic individuals were believed to live in the moment and take each day as it comes. Therefore, they were mainly perceived to not prioritise their hearing challenges. Past-negative individuals were thought to mostly see the cup half empty. Therefore, they are likely to avoid audiological assistance. Finally, past-positive individuals were thought to see the cup half full and therefore optimistically approach the audiological journey. Whilst majority of the participants perceived the above, some participants provided interesting and contrasting opinions regarding the different time perspectives. Additionally, data analysis revealed the common belief that time perspective fluctuates as people age and pass-through different phases of life. Therefore, a balanced time perspective was interpreted as fostering optimal human functioning, well-being, and positive outcomes.

Due to the strong perception that both time and time perspectives indicate audiological help-seeking behaviours and intervention outcomes, participants provided advice to audiologists in relation to the consideration of time within the audiological journey. Hence, they recommended increasing awareness of early hearing detection and intervention, psychological training in audiology degrees, patience and time-giving, solution selling based on time perspectives and the development and implementation of a time perspective tool. Moreover, based on data interpretation, it was gathered that the time perspective theory could fit well into other theories such as the COM-B model, the ICF framework, and the problem-solving model of rehabilitation, as time appears to influence many aspects of life. In conclusion, time perspective was viewed as a vital psychological construct impacting on daily life-decisions and behaviours, that should be studied further and highly contemplated within the audiological journey of patients.

Implications of the Study

Implications for Theory

Upon interpreting the data obtained within this exploratory study, important implications for theory were noted.

Firstly, when looking at the problem-solving model discussed by Maltby (2019), regarding the rehabilitation procedure for individuals with a hearing loss, it was found that it may be useful to add time perspective into this model. Within this model, there are different sections, with the first being the commencement of the hearing loss journey, and then working its way through the hearing loss and intervention journey (Maltby, 2019). Based on findings from the current exploratory study, it may be beneficial to include an exploration into the time perspective of patients, within the initial phase of the hearing loss journey, which in the case of this model would form part of the definition of the problem. In doing so, it is believed that audiologists may have a better understanding and idea from the beginning, on how to approach the audiological journey and provide recommendations and rehabilitation services that are best for individuals in terms of their audiological challenges as well as their time perspective.

In close similarity, the findings from the current study have indicated the possible importance of considering time perspective within the ICF framework. This model has explained in depth, how the negative impact of hearing loss on the general functioning of an individual goes beyond the body structure and function, and states that activity limitations, participation restrictions, and personal factors have a greater effect on the outcomes of audiological intervention and rehabilitation, as opposed to the diagnosis of a hearing loss alone (Meyer et al., 2016). Therefore, within the case history stage of the journey, audiologists should ask numerous open-ended questions relating to the lifestyle of an individual, in addition to the general hearing related questions. Asking specific questions may lead the audiologist to obtain an idea of the primary time perspective of an individual. Time perspective could therefore

possibly be added and considered within the personal factors of the ICF framework. In considering time perspective as part of the ICF model, patients may be understood in a holistic manner, which may facilitate an effective hearing rehabilitation journey.

The COM-B model, which is currently an influential theory of behaviour, may benefit from the inclusion of the time perspective theory. As previously mentioned, there is a motivation aspect included within this model, which explains that in order to engage in a specific behaviour, one needs to be more motivated to execute that particular behaviour in comparison to any other behaviours (West & Michie, 2020). In understanding this aspect of the model, findings from the current exploratory study may suggest the benefit of considering and interpreting time perspective as a potential motivational factor. This is because one's time perspective may play a significant role in one's motivation to execute a specific action or behaviour. Therefore, based on this specific study as well as literature, a theoretical implication may be the incorporation of the time perspective theory into the motivational aspect of the COM-B model of behaviour.

Implications for Practice

Not only were theoretical implications obtained, but findings from this study provided important implications for practice, too.

Creating awareness was an important practical implication drawn from this study. It has been made evident that there is a need for audiologists to create awareness around hearing loss in general, and specifically relating to the fact that individuals of all ages may present with a hearing loss. This may help reduce the social stigma around hearing loss as well as the widespread idea that hearing loss only occurs in older individuals. In doing so, audiologists may also directly introduce and increase awareness of the importance of early hearing detection and intervention for all individuals, and especially adults. This is because early hearing detection and intervention normally relates to younger individuals and children, as opposed to

adults. Whilst creating this awareness for the general public is important, it is also vital for audiologists to increase the awareness of other health professionals, specifically general practitioners, as they are normally the first to hear of one's audiological issues. Up until now, there has been a lack of referrals from general practitioners to audiologists, which is why audiologists should seek to increase the awareness of these doctors on this matter. It was also revealed that even if individuals suspect hearing issues, they do not know what to do or where to go. As a result, audiologists should increase awareness on audiological help-seeking behaviours and when, how, and where to access assistance with regard to hearing challenges. In order to create awareness, audiologists should reach out to the public and general practitioners in the form of talks, presentations, or even useful audiological pamphlets. It may also be useful to provide hearing screening services that are easily accessible to adults and older individuals who suspect that they may have a hearing loss, as this may indicate the need for monitoring or the need for further investigation and management of a hearing issue.

Implementing a hearing aid trial for a week or two, should be a mandatory within the hearing aid journey of all individuals. Evidently, this is a practical implication that was drawn from the data of this study as well as prior literature, as all individuals mentioned the importance of the hearing aid trial period, in their hearing aid journey's, in terms of allowing them time to adapt to the device, manage expectations, as well as to see and experience the benefits of this form of intervention. In implementing this trial period with patients, audiologists may be effectively guided to utilise ethical solution selling, as opposed to product selling, that has been mentioned previously. Whilst hearing aid trials are done in many practices, they are not done in all, and this study has shown the effectiveness of incorporating it into the hearing loss journey of all individuals for which a hearing aid is recommended. Moreover, in relation to this study, if time perspective is to be considered within audiology practice going forward, implementing a hearing aid trial may be especially useful for those

with specific time perspectives, such as present-fatalistic, present-hedonistic, and past-negative, in having good intervention outcomes and a good quality of life, which is essentially the overall goal.

Finally, and the most significant practical implication of this study was the need to possibly incorporate and consider time perspective within audiological practice. Many participants proposed the development of a time perspective tool. Specifically, they mentioned that this tool should consist of deliberately created questions to ask individuals during case history, which may uncover the time perspective of the specific patient. This may be useful as findings from this study have revealed that time perspective may indeed be one of the indicators or predictors of an individual's audiological help-seeking behaviours and intervention outcomes. As seen in this study, there are five specific time perspectives, and participants have explained that these individual time perspectives need to be approached in a unique way, in order to get the best results and intervention outcomes. Although this study was purely exploratory and more research is needed, it may be useful for audiologists to become more aware of time perspective by becoming familiar with current literature on it, within other fields of health and medicine. They could also partake in the ZTPI to understand their own time perspective and to familiarise themselves with the tool that assesses time perspective. Thereafter, they may begin to look into the development of certain questions by using the ZTPI as a guideline, to use during initial consultations with patients, which may lead to an idea of the time perspective of patients. They could then begin to use strategies and approaches that may best suit patients based on their time perspective and other contributing factors. The table within the *Time Perspective Tool* theme of this study may be used as a guideline on how to begin approaching such patients. Whilst this is early phases of this topic, this study has provided meaningful input and information on how time perspective may be considered and approached. Future research on larger scales and with a quantitative research method may

provide more explicit guidelines. Nevertheless, whilst audiologists may not be familiar with time perspective and how to approach it within audiology, psychologists are health professionals who work with time perspective and are knowledgeable regarding this psychological construct. Therefore, if audiologists are able to gain an idea of a patient's time perspective based on the above-mentioned guidelines, they may be able to identify the need to refer for time perspective therapy so as to assist patients in developing a more balanced time perspective, which may assist in all aspects of their lives, including the audiological one.

Limitations of the Study

Whilst this study provided valuable insight into the topic at hand, there were some limitations that occurred. As a result, it is imperative to discuss such limitations, so that future research can be guided in an effective manner.

The first limitation is that this study mainly consisted of males as opposed to females. Out of the fifteen participants who participated in the individual interviews, only four were females, and the rest were males. Moreover, the two focus groups that were optional in terms of participation, consisted only of males and no females. Literature has shown that gender and sex are significant in research, and that men and women or males and females are different in the sense of their communication, uptake of interventions, and decision-making journey's (Tannenbaum et al., 2016). Therefore, having less females in this study is a limitation as the results obtained may be more applicable and relevant to the male population as opposed to the female one. Nevertheless, it must be stated that most of the females responded similarly to the males in their belief regarding time perspective as an indicator of audiological help-seeking behaviours and intervention outcomes. Whilst gender and sex are important, there are many other factors and aspects of human personality that could have impacted on feelings and opinions on this topic.

As explained in the study title, the research sought out to explore time perspective as being a possible indicator of audiological help-seeking behaviours, as well as intervention outcomes. Whilst this was achieved, it must be noticed that all of the participants had conventional hearing aids as their primary means of intervention, and therefore mainly provided discussions around this form of intervention as opposed to any other interventions. Therefore, a lack of information was obtained on other audiological interventions, such as FM systems, intensive aural rehabilitation, surgical intervention to correct certain types of hearing loss, as well as implantable or non-conventional hearing devices, such as cochlear implants or bone anchored hearing systems.

Taking an emic perspective to this study could also be seen as a limitation, as this perspective consists of investigating actions and behaviours from inside the system (Olive, 2014). Whilst this can be helpful in qualitative studies, literature has expressed some limitations and disadvantages associated with this perspective. For example, the researcher may be naively or intrinsically biased when conducting the study and analysing the results (Holmes, 2020). Moreover, the researcher may be too familiar or close with the participants, which may affect the types of questions asked and the way in which data is interpreted (Holmes, 2020). In being too familiar with participants, the researcher may not bring an external perspective to the research process, which again may impact on how the findings are analysed (Holmes, 2020). Finally, the participants may be less willing to expose and discuss sensitive details with the researcher, as they know that they will have future contact with this researcher. Whereas, if they undergo participation in a study that includes an outsider, they may be more likely to share sensitive information (Holmes, 2020). Whilst such limitations may be associated with this perspective, the researcher was aware of this and tried to limit the disadvantages of the emic position. Therefore, the researcher made sure to critically evaluate and reflect on her means of data collection and analysis regarding expectations and assumptions. To do the latter, the

researcher used a journal throughout the research process, in which the details associated with the researcher's thoughts, actions, and feelings during data collection and analysis, were noted. This was done to minimise the disadvantages related to this perspective, as using a self-reflective journal whilst analysing data, is actually a strategy that assists with reflexivity, as the journal allows for the examination and awareness of personal goals and assumptions as well as personal belief systems and biases (Dodgson, 2019). In having such awareness, data analysis and interpretation may be conducted with less bias, more accuracy, and credibility (Dodgson, 2019).

Recommendations for Future Research

Based on the above implications and limitations of the study, recommendations for future research have been identified.

As previously mentioned, the interventions that were mainly explored within this topic, included conventional hearing aids. This is possibly because hearing aids are the most popular form of intervention for hearing loss, and therefore, individuals with hearing aids formed part of the inclusion criteria of the study. Nevertheless, conventional hearing aids may not be an appropriate intervention for all individuals with hearing challenges. In many cases, bone anchored hearing aids, assistive listening devices, cochlear implants and intensive aural rehabilitation may be relevant. Therefore, in future research, it is recommended that this topic be studied in terms of time perspective being a possible indicator of intervention and rehabilitation outcomes, related to a variety of audiological interventions, and not merely conventional hearing aids.

Another recommendation for future research is to replicate this study with individuals of different age groups, as well as with a more balanced inclusion of different genders. This is because the study at hand had limitations regarding the age group of individuals as well as the gender of the participants. Therefore, by including a wider variety and representation of age

groups and gender, additional and potentially important information regarding the topic at hand may be obtained and implemented within the audiological journey of individuals. Moreover, as explained previously, time perspective is influenced by different variables, including gender and age and whilst there have been studies on these aspects, more information is required about the extent of influence of these variables on time perspective. Evidently, this is a recommendation that would be important to follow through with in future research studies.

Based on this study and the widespread opinion that time perspective may indeed indicate audiological help-seeking behaviours and intervention outcomes, it has been recommended by participants and the researcher, that this study be conducted on a larger scale and possibly using a quantitative research method. As seen within this study, the exploratory nature of it was conducted due to the paucity of research within the area of time perspective and audiology, and therefore the need to explore its possible benefit and usefulness within the field of audiology. The current study at hand did the latter and provided a foundation and groundwork for future research. Moreover, as seen in prior literature on time perspective in other fields, quantitative studies have been done to study time perspective as a predictor of certain behaviours. Therefore, by conducting this study on a larger scale and in a quantitative manner, more objective data may be obtained, and potential biases may be removed from the study, which contributes to the accuracy of the findings on this topic (E. Daniel, 2016). Therefore, conducting a larger quantitative study will assist with the generalisability of the results obtained. Conclusions drawn from the quantitative study may assist with theoretically and practically implementing time perspective within the audiological journey of all individuals.

In adding to the above, it may also be beneficial to conduct this as a longitudinal study. This is because longitudinal studies use constant procedures to follow certain people over a prolonged time period, frequently years or even decades (Caruana et al., 2015). Therefore, this

type of study may provide information regarding the influence of time on the phenomenon being studied (Caruana et al., 2015). As seen within this study and literature, there is an idea that time perspective changes with age and different periods of life. Therefore, a longitudinal study may provide more detailed information and guidance on this, with specific regard to the audiological field.

The final future research recommendation relates to Bronfenbrenner's Ecological Model of Human Development, as it involves conducting this study within public healthcare settings in South Africa. Whilst it was useful to explore this study within the private sector, findings have yielded that this time perspective may indeed indicate audiological help-seeking behaviours and intervention outcomes, and therefore needs to be considered within every person's audiological journey. Therefore, it is crucial to look at the different levels of environmental and social structure influences, in the lives of all South African individuals, including those who seek public healthcare, as the public sector serves the majority of the population in the country (Rensburg, 2021). Based on the latter and the apparent usefulness of this psychological construct within audiology, it would therefore be essential to study it again in the public sector to determine if the same results are found and if time perspective would be beneficial to consider within the public setting.

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Appendices

Appendix A: Permission Letter from the University of the Witwatersrand's Human Research Ethics Committee (Medical) to Conduct the Study

UNIVERSITY OF THE WITWATERSRAND JOHANNESBURG

R49 Ms M Araujo

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)
CLEARANCE CERTIFICATE NO. M211125

NAME: (Principal Investigator)	Ms M Araujo
DEPARTMENT:	School of Human and Community Development Department of Speech Pathology and Audiology University
PROJECT TITLE:	*An exploratory study on time perspective as a possible indicator of audiological help-seeking behaviours and intervention outcomes, in Gauteng, South Africa.*
DATE CONSIDERED:	2021/11/26
DECISION:	Approved unconditionally
CONDITIONS:	
NOTE:	If contact information regarding student study participants is required, please contact the Registrar's office - <Nicoleen.Potgieter@wits.ac.za>
SUPERVISOR:	Dr V De Andrade and Ms L Petrocchi-Bartal
APPROVED BY:	Dr CB Penny, Chairperson, HREC (Medical)
DATE OF APPROVAL:	2022/02/17

This Clearance Certificate is valid for 5 years from the date of approval. An extension may be applied for.

DECLARATION OF INVESTIGATORS

To be completed in duplicate and **ONE COPY** returned to the Research Office secretariat on the 3rd floor, Philip Tobias Building, Parktown, University of the Witwatersrand, Johannesburg.

(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 submit details to the Committee. I agree to submit a yearly progress report. When a funder requires annual re-certification, the application date will be one year after the date when the study was initially reviewed. In this case, the study was initially reviewed in **November** and therefore reports and re-certification will be due in the month of **November** each year. Unreported changes to the study may invalidate the clearance given by the HREC (Medical).

Signature of Principal Investigator — Date: 18/02/2022

Appendix B: Study Information and Permission Letter – Private Practice

STUDY INFORMATION AND PERMISSION LETTER: PRIVATE PRACTICE

Study title: An exploratory study on time perspective as a possible indicator of audiological help-seeking behaviours and intervention outcomes, in Gauteng South Africa.

Dear Lisa Calligaro and Leesa King (Owners of Calligaro and King, Inc – private practice)

I, Monica Araujo, am a postgraduate student at the Department of Speech and Hearing Therapy at the University of the Witwatersrand and am currently employed as a permanent speech therapist and audiologist at Calligaro and King, Inc. In order to complete the requirements for a master's degree in audiology, I am required to conduct a research study.

I, Monica Araujo, am doing research on time perspective as a possible indicator of audiological help-seeking behaviours and intervention outcomes, in Gauteng South Africa. Research is a process used in seeking new knowledge. In this study I want to learn if time perspective is a possible indicator of such behaviours and outcomes, so as to facilitate audiologists in understanding the concept of time perspective and its potential influence within audiology, which may allow for beneficial contributions and adaptations to clinical practice and current theoretical knowledge within the field.

Time perspective is an unconscious human trait, which means that our own perceptions of time influence our opinions, emotions, beliefs, and behaviours. Our time perspectives come from our daily experiences, and these experiences determine our behaviours. Hence, some of our behaviours and decisions are influenced by our immediate situation (what we are currently feeling and what others are doing or saying). Other behaviours and decisions of ours ignore the present and rather focus on the past (specifically on memories of similar events). Other behaviours and decisions are made with future consequences in mind (thinking about how beneficial an action is for the future and what can we gain or lose). These are the three main time perspectives that psychologically guide our decision making down different paths. The five specific time perspective dimensions are:

- Past negative: This involves a negative and loathing view of the past.
- Past-hedonistic: This involves a self-indulgent, risk-taking view and take towards life and time, with minimal fear for any future consequences. These individuals

enjoy present pleasure, love taking risks, crave excitement and have fun with intense activities.

- Future orientated: These individuals place importance on future goals and incentives. They view consequences, various possibilities and outcomes of current decisions and behaviors, as crucial.
- Past-Positive: These individuals present with a pleasurable, gentle, emotional, and nostalgic attitude towards their past. They are motivated to maintain relationships with friends and family.
- Present-fatalistic: These individuals possess an attitude towards life and the future, that is fatalistic, miserable, and defenseless.

Time perspective has been studied in numerous areas to determine if it predicts different behaviours or not. It has been found to predict several behaviours such as procrastination, obesity, and academic achievement. It has never been researched in audiology which is why this study is being undertaken.

Before conducting this research study, ethical clearance will first be obtained from the University of the Witwatersrand Human Research Ethics Committee (HREC) Medical. I would like to request permission to conduct this study at Calligaro and King, Inc and use 15-20 patients from the practice who meet the inclusion criteria. There will be no preferential treatment or incentives for participants to take part in this study.

Involvement in the study and data collection:

If patients agree to participate in the study, they will be invited to participate in:

- An individual semi-structured interview of approximately 30-45 minutes in duration, which will take place at one of the two practices of Calligaro and King, Inc. The interview will be audio recorded.
- A focus group of approximately 45 – 60 minutes in duration, with a maximum of six participants, which will take place at one of the two practices of Calligaro and King, Inc. The focus group will be audio and video recorded.

Within the interviews and focus groups, COVID-19 regulations will be strictly adhered to, in the sense of social distancing, allowing for the movement of fresh air in the rooms, hand sanitising and wearing a conventional mask or a mask with a clear window to assist with

communication. If the participants are unable to attend the interview or focus group physically, or if COVID-19 poses limitations, an online platform, such as Microsoft Teams, Skype, or Zoom, which are all safe and secure, can be used to participate virtually and safely. Due to face-to-face interviews or online interviews incurring financial costs to the patients, the researcher will offer a reimbursement amount of R100,00 for those participating online, in order to cover data costs and for those attending face-to-face interviews or focus groups, to cover transport costs.

Risks of being involved in the study:

Hearing loss and the daily adverse effects that are associated with it, are known to cause negative emotions or distress for many individuals. Hence, discussing the topic may possibly cause some of these negative emotions to arise. Moreover, in conducting member checks after the research to confirm the accuracy of the findings, some distress may arise. Should any of this distress or discomfort occur during the interviews or focus groups, the steps of the distress protocol will be implemented. Moreover, due to the possibility of negative emotions arising during the interviews, focus groups, or member checks, the participants will be informed about a pro-bono referral that can be made to a counselling psychologist. Hence, if any participants experience emotional distress according to the distress protocol, the necessary steps will be taken to assist the participants and the details and arrangements of the pro-bono referral to Fellyn Collins will be discussed with them. This pro-bono referral will be for containment and arrangements for any future sessions for participants, if necessary, will be made. Within the focus group, there is risk related to confidentiality of information, as it is difficult for the researcher to control whether participants share the discussions that took place, outside of the group. However, in order to mitigate this, participants are required to sign a consent form which has a non-disclosure statement explaining the need for the participants to respect the privacy and confidentiality of every person and their shared information, in the group.

Benefits of being in the study:

Participating in this study will allow for the researcher to obtain essential information on the topic, and the findings obtained will likely be shared with professionals in the field of audiology. In doing so, audiologists will gain more information on considerations of time perspective within the audiological journey, potentially useful referrals to make, and approaches to take when managing different patients with hearing loss. In addition, this study

can inform the need for future research to possibly investigate time perspective as a predictor of audiological behaviours. Moreover, by participating in the focus group, participants may be able to reflect on their journey, share similar experiences with the other individuals, and gain support. Another benefit is that at the end of the study, the researcher will share the results with the participants by providing them with the abstract of the study and inviting them to contact the researcher, should they want to discuss the study further.

Participation is voluntary:

Participation within this study is voluntary and consent to participate will be requested first. Hence, all individuals will be invited to participate in both the individual interview as well as the focus group, however, they may choose to participate only in the individual interview if they wish. All individuals have the right to withdraw from this study at any stage without any penalty and repercussion in general and with regard to the services they receive from the private practice. They are also not required to provide an explanation or reason regarding their choice to withdraw. In the case that they do withdraw, any data collected from them will in default be destroyed unless they specifically consent to its retention. Finally, the adults will not receive any payment for participating in this study and additionally, participation will not cost them anything other than their time.

Confidentiality and Anonymity:

Any personal information will be treated in the strictest confidence and will only be available to myself, who is the Principal Investigator (PI) and my two research supervisors. The only exceptions - and all of them are rare - would normally be:

1. personal information may be disclosed if required by law
2. the Human Research Ethics Committees of the University may exceptionally require personal data to respond to a formal complaint, or for a compliance audit.

Where a study involves focus group discussions, such as in this study, participants may very well recognise each other, and while I, the PI may request confidentiality, I am not in a position to enforce it. For the same reason, anonymity cannot be guaranteed in focus group discussions. Nevertheless, in order to mitigate these potential issues as best as possible, I will hold a briefing at the start of the focus groups which will involve discussions around the rules and the expectations of the group. Additionally, and as previously stated, prior to participating in this

study, all participants are required to sign a consent form which has a non-disclosure statement explaining the need for the participants to respect the privacy and confidentiality of every person and their shared information, in the group.

Additionally, the confidentiality and anonymity of the participants will be ensured throughout the report writing process. Hence, pseudonyms or assigned numbers will be used where necessary and coding will be used throughout data analysis, to recognise different participants. Within the semi-structured interviews, their confidentiality will also be ensured.

If results are published, this may, exceptionally, lead to cohort, or more rarely, individual identification. All data collected in the course of the study will be securely retained for two (2) years, if a scientific publication arises from the study and six (6) years, if there is no publication. Thereafter it will be destroyed accordingly.

Contact details of researcher and supervisors:

- Monica Araujo, Principal Investigator. Telephone number: 061 842 3398. E-mail: monaraujo96@gmail.com.
- Dr Victor de Andrade, Supervisor. Email: victor.deandrade@wits.ac.za
- Mrs Luisa Petrocchi-Bartal, Supervisor. Email: luisa.petrocchi-bartal@wits.ac.za

Outputs

All of the data obtained from the research study will be securely stored with myself, the researcher. Once analysed and interpreted, this data will be used to write a research dissertation for my Master's degree in Audiology. This dissertation will be available upon request to you and may be used for other research studies.

Contact details of HREC administrator and chair – for reporting of complaints / problems. This study has been approved by the Human Research Ethics Committee (Medical) of the University of the Witwatersrand, Johannesburg ("Committee"). A principal function of this Committee is to safeguard the rights and dignity of all human subjects who agree to participate in a research project and the integrity of the research.

If you have any concern over the way the study is being conducted, please contact the Chairperson of this Committee who is Professor Clement Penny, who may be contacted on telephone number 011 717 2301, or by e-mail on Clement.Penny@wits.ac.za. The telephone

numbers for the Committee secretariat are 011 717 2700/1234 and the e-mail addresses are Zanele.Ndlovu@wits.ac.za and Rhulani.Mukansi@wits.ac.za

Thank you for reading this Study Information and Permission Letter and considering this request.

Date: January 2022

Monica Araujo (MA Audiology Student)



Dr Victor de Andrade (MA Supervisor)



Mrs Luisa Petrocchi-Bartal (MA Supervisor)

Luisa Petrocchi-Bartal

RE: Request for permission to conduct my research at Calligaro and King, Inc

We, Leesa King and Lisa Calligaro (name of both practice owners) herewith permit Monica Araujo, with student number 1122743, from the University of the Witwatersrand to conduct this research study at Calligaro and King, Inc. It is understood that the masters proposal will be submitted to the Human Research Ethics Committee (Medical) and data collection will only begin once ethical clearance has been obtained by the Human Research Ethics Committee (Medical).

Name of practice owner: Lisa Calligaro Name of practice owner: Leesa King

Date: 31/01/2022 Date: 31/02/2022

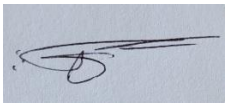
Place: Alberton Place: Johannesburg

Signature: Signature: 

Witnessed by:

Name of witness: Nina Johnson

Date: 03/02/2022

Signature: 

Appendix C: Study Information Sheet – Interviews and Focus Groups

STUDY INFORMATION SHEET: PARTICIPATION IN THE STUDY

Study title: An exploratory study on time perspective as a possible indicator of audiological help-seeking behaviours and intervention outcomes, in Gauteng South Africa.

Dear Sir/Madam

My name is Monica Araujo, and I am a postgraduate student at the Department of Speech and Hearing Therapy at the University of the Witwatersrand. To complete the requirements for a master's degree in audiology, I am required to conduct a research study.

I am doing research on time perspective as a possible indicator of audiological help-seeking behaviours and intervention outcomes, in Gauteng South Africa. Research is a process used in seeking new knowledge. In this study I want to learn if time perspective is a possible indicator of such behaviours and outcomes. This may facilitate audiologists in understanding the concept of time perspective and its potential influence within audiology, which may allow for beneficial contributions and adaptations to clinical practice and current theoretical knowledge within the field.

Time perspective is an unconscious human trait, which means that our own perceptions of time influence our opinions, emotions, beliefs, and behaviours. Our time perspectives come from our daily experiences, and these experiences determine our behaviours. Hence, some of our behaviours and decisions are influenced by our immediate situation (what we are currently feeling and what others are doing or saying). Other behaviours and decisions of ours ignore the present and rather focus on the past (specifically on memories of similar events). Other behaviours and decisions are made with future consequences in mind (thinking about how beneficial an action is for the future and what can we gain or lose). These are the three main time perspectives that psychologically guide our decision making down different paths. The five specific time perspective dimensions are:

- Past negative: This involves a negative view of the past.
- Past-hedonistic: This involves a self-indulgent, risk-taking view and take towards life and time, with little fear for any future consequences. These individuals enjoy present pleasure, crave excitement, and have fun with intense activities.

- Future orientated: These individuals place importance on future goals. They see consequences, various possibilities and outcomes of current decisions and behaviors, as vital.
- Past-Positive: These individuals present with a pleasurable, gentle, emotional, and nostalgic attitude towards their past. They are motivated to keep relationships with friends and family.
- Present-fatalistic: These individuals have an attitude towards life and the future, that is fatalistic, miserable, and helpless.

Time perspective has been studied in several areas to determine if it predicts different behaviours or not. It has been found to predict numerous behaviours such as procrastination, obesity, and academic achievement. It has never been researched in audiology which is why this study is being undertaken.

The study has two phases. Phase one includes individual interviews with adults who present with a hearing loss and are currently using hearing aids. Phase two includes focus groups with these same individuals, so as to further explore the topic of interest. I am inviting you to consider participating in both phases, although you may choose only to participate in the first phase. There is no cost involved with participating in any phases of the study.

Involvement in the study and data collection:

If you agree to participate in the study, you will be invited to participate in:

- An individual semi-structured interview of about 30-45 minutes in duration, which will take place at one of the two practices of Calligaro and King, Inc. The interview will be audio recorded.
- A focus group of about 45 – 60 minutes in duration, which will take place at one of the two practices of Calligaro and King, Inc. The focus group will be audio and video recorded. If you do wish to participate in the focus group, the researcher will add your name to the list of individuals who have agreed to participate in the focus group sessions. Thereafter, a randomisation process will select six individuals per group who will then constitute the focus groups. Due to this randomisation process, you may or may not form part of a focus group.

In the interview and focus group, COVID-19 regulations will be strictly followed, in the sense of social distancing, allowing for the movement of fresh air in the rooms, hand sanitising, and wearing a conventional mask or a mask with a clear window to assist with communication. If you are unable to attend the interview or focus group physically, or if COVID-19 poses limitations, an online platform, such as Microsoft Teams, Skype or Zoom, which are all safe and secure, can be used as a means of participating virtually and safely. Due to face-to-face interviews or online interviews incurring financial costs to you, the researcher will offer a reimbursement amount of R100,00 for those participating online, in order to cover data costs and for those attending face-to-face interviews or focus groups, to cover transport costs.

Risks of being involved in the study:

Hearing loss and the daily unpleasant effects associated with it, are known to cause negative emotions or distress for many individuals. Hence, discussing the topic may possibly cause some of these negative emotions to arise. Moreover, in conducting member checks after the research to confirm the accuracy of the findings, some distress may arise. Should any distress or discomfort occur during the interviews or focus groups, the steps of the distress protocol will be implemented. Moreover, due to the possibility of negative emotions arising during the interviews, focus groups, or member checks, the researcher has organised a pro-bono referral that can be made to a counselling psychologist. Hence, if you experience emotional distress according to the distress protocol, the necessary steps will be taken to assist you and the details and arrangements of the pro-bono referral to Fellyn Collins will be discussed with you. This pro-bono referral will be for containment and arrangements for any future sessions for yourself, if necessary, will be made. If you already have existing counselling services, then they will be employed. In the focus group, there is risk related to confidentiality of information, as it is difficult for the researcher to control whether participants share the discussions that took place, outside of the group. To mitigate this, participants are required to sign a consent form which has a non-disclosure statement explaining the need for the participants to respect the privacy of every person and their shared information, in the group.

Benefits of being in the study:

Participating in this study will allow the researcher to obtain important information on the topic, and the findings obtained will likely be shared with professionals in the field of audiology. In doing so, audiologists will gain more information on considerations of time perspective within

the audiological journey, useful referrals to make, and approaches to take when managing different patients with hearing loss. This study can also advise the need for future research to possibly investigate time perspective as a predictor of audiological behaviours. Moreover, by participating in the focus group, participants may be able to reflect on their journey, share similar experiences with the other individuals, and gain support. Another benefit is that at the end of the study, the researcher will share the results with the participants by giving them the abstract of the study and inviting them to contact the researcher, should they want to discuss the study further.

Participation is voluntary:

Participation in this study is voluntary and consent to participate will be requested first. Please note that you are invited to participate in both the individual interview as well as the focus group, however, you may choose to participate only in the individual interview if you wish. You have the right to withdraw from this study at any stage without any penalty and repercussion in general and with regard to the services that you receive from the private practice. You also do not need to provide an explanation or reason regarding your choice to withdraw. In the case that you do withdraw, any data collected from you will in default be destroyed unless you specifically consent for it to be kept. Finally, you will not receive any payment for participating in this study and additionally, participation will not cost you anything other than your time.

Confidentiality and Anonymity:

Any personal information will be treated in confidence and will only be available to myself, who is the Principal Investigator (PI) and my two research supervisors. The only exceptions - and all of them are rare - would normally be:

1. personal information may be disclosed if required by law
2. the Human Research Ethics Committees of the University may exceptionally require personal data to respond to a formal complaint, or for a compliance audit

Where a study involves focus group discussions, such as in this study, participants may recognise each other, and while I, the PI may request confidentiality, I am not in a position to enforce it. For the same reason, anonymity cannot be guaranteed in focus group discussions. Nevertheless, to lessen these potential issues as best as possible, I will hold a briefing at the

start of the focus groups which will include discussions around the rules of the group, the nature of the focus group, the need to respect privacy, anonymity and confidentiality, and the expectations of the group to participate in discussions around the topic. Moreover, before participating in this study, all participants need to sign a consent form which has a non-disclosure statement explaining the need for the participants to respect the privacy and confidentiality of every person and their shared information, in the group. Your confidentiality and anonymity will be ensured throughout the report writing process. Hence, pseudonyms or assigned numbers will be used where needed and coding will be used throughout data analysis, to recognise different participants. Within the semi-structured interviews, your confidentiality will also be ensured.

If results are published, this may, unusually, lead to group, or more rarely, individual identification. All data collected throughout the study will be safely kept for two (2) years, if a scientific publication occurs from the study and six (6) years, if there is no publication. Thereafter it will be destroyed appropriately.

Contact details of researcher and supervisors:

- Monica Araujo, Principal Investigator. Telephone number: 061 842 3398. E-mail: monaraujo96@gmail.com.

- Dr Victor de Andrade, Supervisor. Email: victor.deandrade@wits.ac.za



- Mrs Luisa Petrocchi-Bartal, Supervisor. Email: luisa.petrocchi-bartal@wits.ac.za

Luisa Petrocchi-Bartal

Outputs

All of the data obtained from the research study will be securely stored with myself, the researcher. Once analysed and interpreted, this data will be used to write a research dissertation for my Masters degree in Audiology. This dissertation will be available upon request to you and may be used for other research studies.

Contact details of HREC administrator and chair – for reporting of complaints / problems. This study has been approved by the Human Research Ethics Committee (Medical) of the University of the Witwatersrand, Johannesburg ("Committee"). A main function of this Committee is to protect the rights and dignity of all human subjects who agree to participate in a research project and the integrity of the research.

If you have any concern over the way the study is being conducted, please contact the Chairperson of this Committee who is Professor Clement Penny, who may be contacted on telephone number 011 717 2301, or by e-mail on Clement.Penny@wits.ac.za. The telephone numbers for the Committee secretariat are 011 717 2700/1234 and the e-mail addresses are Zanele.Ndlovu@wits.ac.za and Rhulani.Mukansi@wits.ac.za

Thank you for reading this Study Information Sheet.

Date: January 2022

Monica Araujo (MA Audiology Student)



Dr Victor de Andrade (MA Supervisor)



Mrs Luisa Petrocchi-Bartal (MA Supervisor)

Luisa Petrocchi-Bartal

Appendix D: Participant Consent Sheet – Individual Interviews

PARTICIPANT CONSENT SHEET: INDIVIDUAL INTERVIEW

Research Title: *An exploratory study on time perspective as a possible indicator of audiological help-seeking behaviours and intervention outcomes, in Gauteng South Africa.*

1. I have been given a Participant Information Sheet which explains the nature and processes involved in this study, which is attached hereto;
2. I was given time to read it, or had it read to me, in the language I best understand;
3. I was given time to ask any questions I wanted to and found any answers given to me to be reasonable and satisfactory;
4. I believe I fully understand why the study is being conducted and what the intended outcomes will be;
5. Should I choose or require to participate in an online interview, I understand that it will be conducted using a safe and secure online platform such as Microsoft Teams, Skype, or Zoom, and that if I require assistance to use this online platform, I will ask a relative or friend to assist me at the beginning or throughout the interview.
6. I understand that there will be no immediate benefit to me, should I agree to participate Participation will not cost me anything but my time and I will be offered R100,00 to cover any data or transport costs.
7. I understand that, even if I initially consent to take part in the study, I may subsequently withdraw at any time and would not be required to give any reasons; if that happened, any data collected about me for the purposes of the study would immediately be destroyed, unless I give consent for it to be retained
8. I have been given a range of contact details, listed below. If I require further information or become concerned about any aspect of this study I am free to speak to any of these contacts.

Contact details:

- Monica Araujo, Principal Investigator. Telephone number: 061 842 3398. E-mail: monaraujo96@gmail.com.

- Dr Victor de Andrade, Supervisor. Email: victor.deandrade@wits.ac.za

- Mrs Luisa Petrocchi-Bartal, Supervisor. Email: luisa.petrocchi-bartal@wits.ac.za

Professor CB Penny, Chairperson of the Human Research Ethics Committee (Medical) at the University of Witwatersrand, on telephone no. 011 717 2301, or by e-mail at Clement.Penny@wits.ac.za. Ms. Z Ndlovu or Mr Rhulani Mkansi, Committee Secretariat, telephone nos.: 011 717 2700 or 1234, or by e-mail at: Zanele.Ndlovu@wits.ac.za or Rhulani.Mkansi@wits.ac.za

Name of Participant:_____

Date: _____

Place: _____

Signature or mark: _____

Witnessed by:

Name of Witness: _____

Signature: _____

Date: _____

Appendix E: Consent for Audio Recording – Individual Interviews

CONSENT FORM FOR AUDIO RECORDING OF STUDY PARTICIPATION: INDIVIDUAL INTERVIEW

Research Title: *An exploratory study on time perspective as a possible indicator of audiological help-seeking behaviours and intervention outcomes, in Gauteng South Africa.*

I consent to audio recording of the individual interview in face-to-face interactions or online interviews.

I understand that:

- The recording will be kept in a safe location (a locked cupboard or password protected computer) with access to the researcher and the supervisors only.
- The recording will be transcribed and any information that could identify me will be removed,
- The recordings will be removed within either (a) two (2) years of the publication of the research findings, or (b) six (6) years, if no publications occur from this research
- Anyone wanting 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 used in the research report or other write-ups of research.

Name of Participant: _____

Date: _____

Place: _____

Signature or mark: _____

Witnessed by:

Name of Witness: _____

Signature: _____

Date: _____

Appendix F: Participant Consent Sheet – Focus Group

PARTICIPANT CONSENT SHEET: FOCUS GROUP

Research Title: *An exploratory study on time perspective as a possible indicator of audiological help-seeking behaviours and intervention outcomes, in Gauteng South Africa.*

1. I have been given a Participant Information Sheet which explains the nature and processes involved in this study, which is attached hereto;
2. I was given time to read it, or had it read to me, in the language I best understand;
3. I was given time to ask any questions I wanted to and found any answers given to me to be reasonable and satisfactory;
4. I believe I fully understand why the study is being conducted and what the intended outcomes will be; I understand that there will be no immediate benefit to me, should I agree to participate. Participation will not cost me anything, but my time and I will be offered R100,00 to cover any data or transport costs.
5. Should I choose or require to participate in an online focus group, I understand that it will be conducted using a safe and secure online platform such as Microsoft Teams, Skype or Zoom, and that if I require assistance to use this online platform, I will ask a relative or friend to assist me at the beginning or throughout the interview.
6. I will maintain the confidentiality of all information discussed within the focus group, between all of the participants and the interviewer, thereby respecting the privacy of all involved.
7. I understand that, even if I initially consent to take part in the study, I may subsequently withdraw at any time and would not be required to give any reasons; if that happened, any data collected about me for the purposes of the study would immediately be destroyed, unless I give consent for it to be retained.
8. I have been given a range of contact details, listed below. If I require further information or become concerned about any aspect of this study I am free to speak to any of these contacts.

Contact details:

- Monica Araujo, Principal Investigator. Telephone number: 061 842 3398. E-mail: monaraujo96@gmail.com.

- Dr Victor de Andrade, Supervisor. Email: victor.deandrade@wits.ac.za
- Mrs Luisa Petrocchi-Bartal, Supervisor. Email: luisa.petrocchi-bartal@wits.ac.za

Professor CB Penny, Chairperson of the Human Research Ethics Committee (Medical) at the University of Witwatersrand, on telephone no. 011 717 2301, or by e-mail at Clement.Penny@wits.ac.za. Ms. Z Ndlovu or Mr Rhulani Mkansi, Committee Secretariat, telephone nos.: 011 717 2700 or 1234, or by e-mail at: Zanele.Ndlovu@wits.ac.za or Rhulani.Mkansi@wits.ac.za

Name of Participant: _____

Date: _____

Place: _____

Signature or mark: _____

Witnessed by:

Name of Witness: _____

Signature: _____

Date: _____

Appendix G: Consent for Audio Recording – Focus Groups

CONSENT FORM FOR AUDIO RECORDING OF STUDY PARTICIPATION: FOCUS GROUPS

Project Title: *An exploratory study on time perspective as a possible indicator of audiological help-seeking behaviours and intervention outcomes, in Gauteng South Africa.*

I consent to audio recording of the focus group discussion in face-to-face or online interactions. I understand that:

- The recording will be kept in a safe location (a locked cupboard or password protected computer) with access to the researcher and supervisors only.
- The recording will be transcribed and any information that could identify me will be removed.
- The recordings will be removed within either (a) two (2) years of the publication of the research findings, or (b) six (6) years, if no publications occur from this research.
- Anyone wanting 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:

Name of Witness: _____

Signature: _____

Date: _____

Appendix H: Consent for Visual Recording – Focus Groups

CONSENT FORM FOR VISUAL RECORDING OF STUDY PARTICIPATION: FOCUS GROUPS

Project Title: *An exploratory study on time perspective as a possible indicator of audiological help-seeking behaviours and intervention outcomes, in Gauteng South Africa.*

I consent to visual recording of the focus group discussion in face-to-face or online interactions. I understand that:

- The recording will be kept in a safe 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 removed.
- My face and voice will not be recognisable in any visual recording.
- The recordings will normally be removed within either (a) two (2) years of the publication of the research findings, or (b) six (6) years, if no publications occur from this research, or:
- The film, with all identifying information directly linked to me removed, will be stored permanently and may be used for future research.
- Anyone wanting 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:

Name of Witness: _____

Signature: _____

Date: _____

Appendix I: Guide Form – Individual Interviews

GUIDE FORM: INDIVIDUAL INTERVIEW

Demographic information of participant:

Gender: Age:

Age/Year of hearing loss diagnosis: Age/Year of hearing aid fitting:

Degree/Type of hearing loss:

Initial Information:

Before beginning, the concept of time perspective as well as the five dimensions will be discussed, as per the time perspective mind map developed by the researcher, to ensure the participants understanding of the phenomenon of interest.

Interview Questions:

1. Please explain how you may resonate with any of the time perspective dimensions that I mentioned?
2. What is your perspective or belief on time in general?
3. What is your belief regarding the past and present and how it can influence the future as well as decision making in life?
4. In terms of audiology, how do you think time impacted on your journey?
5. Please explain your time frame of seeking audiological help in terms of going for a hearing test, the hearing aid decision-making process, and purchasing hearing aids?
6. How do you think these time perspectives (ask about each aspect: Past negative, past positive, present hedonistic, present fatalistic, future oriented) could have an impact on these audiological help seeking behaviours and intervention outcomes in general and for yourself? In what way and why?
7. How important do you think it is for audiologists to consider aspects of time?
8. How beneficial would it be for audiologists to explore time perspective within the audiological journey? Please explain and elaborate.

9. These are the variables involved in audiological help seeking behaviours and intervention outcomes (age, gender, finances, etc). Knowing about time perspective now, would it be useful/beneficial to study it as a variable or predictor of these behaviours and outcome? If so, why?

10. Please provide any advice for audiologists on how we could possibly consider time and time perspective within the audiological patient journey?

Appendix J: Guide Form – Focus Groups

GUIDE FORM – FOCUS GROUP

Group information:

Number of participants: Genders: Age:

Initial information:

Before eliciting interaction between the participants, the researcher will discuss the purpose of the focus group, the topic being investigated and most importantly, the importance of maintaining privacy and confidentiality of all involved. Even though all of the participants would have received an explanation during individual interviews, the concept of time perspective as well as the five dimensions will again be discussed as per the time perspective mind map developed by the researcher.

Guiding questions:

1. What is everyone's opinion about time in general?
2. How does everyone feel about the impact of time on behaviour?
3. How could time perspective specifically, impact on general behaviour?
4. How could time perspective impact on one's audiological help seeking behaviours as well as intervention outcomes for hearing loss? (Own experiences to please be shared if possible – focus on initial consultation, hearing aid decision-making process, hearing aid uptake and the overall amplification journey)
5. Should time perspective be considered as an influential indicator and contributor to the audiological process (seeking help and going through intervention)? If so, why
6. How should we as audiologist consider it and what advice can be given to us?

Appendix K: Distress Protocol

DISTRESS PROTOCOL – INTERVIEWS AND FOCUS GROUPS

The following distress protocol was to be implemented within the study if necessary(Haigh & Witham, 2015):

1. Distress

- This is when a participate specifies that he/she is undergoing large amounts of emotional distress or stress.
- Distress can also be identified by certain behaviours exhibited by the participants during the focus group discussions or interviews, such as those associated with stress, like shaking or crying uncontrollably.



2. Stage 1 Response

- If distress is identified, the interview or focus group discussion should be stopped.
- Support will then be offered immediately by the researcher, who is a health professional.
- The participants mental status will then be assessed by asking the following questions (if this occurs during the focus group, the participant will be assessed in another room, away from the other participants):
  - What thoughts are you currently having?
  - How and what are you feeling at the moment?
  - Do you currently feel safe?
  - Do you think that you can carry on with your day today?



3. Review:

- If the participant feels that he/she can continue, then the focus group discussion or interview will resume.
- If the participant feels or demonstrates then he/she cannot continue, then stage 2 will be implemented (see below).

4. Stage 2 Response:

a. The interview or discussion will be stopped at that point, and the participant will be accompanied to a separate room, or the interview or discussion will be discontinued immediately.

b. If the participant is currently seeing or being treated by any mental health professional, the participant or researcher, with consent, can contact the professional to obtain the advice or support needed for that particular participant.

c. If the above is not applicable, then with the consent of the participant, a pro-bono referral will be made to Fellyn Collins on 0722415119, who is a counselling psychologist. She is aware of the current study and has made the necessary arrangements with the researcher. Her details and the details of the arrangement will then be discussed with the participant at this point.

d. If required, the participant can contact Fellyn Collins themselves to organise an appointment for the pro-bono referral.

e. The pro-bono referral will be for containment and arrangements for future sessions, if necessary, will be made.

5. Follow-up:

- The researcher will follow up with the participant with a call, if consent is given to do so.
- Alternatively, the participant can call if he/she is experiencing increased levels of distress in the hours or days after the interview or focus group.

Appendix L: Letter To Counselling Psychologist

STUDY INFORMATION LETTER: COUNSELLING PSYCHOLOGIST

Study title: An exploratory study on time perspective as a possible indicator of audiological help-seeking behaviours and intervention outcomes, in Gauteng South Africa.

Dear Fellyn Collins (Counselling Psychologist)

I, Monica Araujo, am a postgraduate student at the Department of Speech and Hearing Therapy at the University of the Witwatersrand and am currently employed as a permanent speech therapist and audiologist at Calligaro and King, Inc. In order to complete the requirements for a master's degree in audiology, I am required to conduct a research study.

I, Monica Araujo, am doing research on time perspective as a possible indicator of audiological help-seeking behaviours and intervention outcomes, in Gauteng South Africa. Research is a process used in seeking new knowledge. In this study I want to learn if time perspective is a possible indicator of such behaviours and outcomes, so as to facilitate audiologists in understanding the concept of time perspective and its potential influence within audiology, which may allow for beneficial contributions and adaptations to clinical practice and current theoretical knowledge within the field.

Time perspective is an unconscious human trait, which means that our own perceptions of time influence our opinions, emotions, beliefs, and behaviours. Our time perspectives come from our daily experiences, and these experiences determine our behaviours. Hence, some of our behaviours and decisions are influenced by our immediate situation (what we are currently feeling and what others are doing or saying). Other behaviours and decisions of ours ignore the present and rather focus on the past (specifically on memories of similar events). Other behaviours and decisions are made with future consequences in mind (thinking about how beneficial an action is for the future and what can we gain or lose). These are the three main time perspectives that psychologically guide our decision making down different paths. The five specific time perspective dimensions are:

- Past negative: This involves a negative and loathing view of the past.
- Past-hedonistic: This involves a self-indulgent, risk-taking view and take towards life and time, with minimal fear for any future consequences. These individuals

enjoy present pleasure, love taking risks, crave excitement, have fun with intense activities.

- Future orientated: These individuals place importance on future goals and incentives. They view consequences, various possibilities and outcomes of current decisions and behaviors, as crucial.
- Past-Positive: These individuals present with a pleasurable, gentle, emotional, and nostalgic attitude towards their past. They are motivated to maintain relationships with friends and family.
- Present-fatalistic: These individuals possess an attitude towards life and the future, that is fatalistic, miserable, and defenseless.

Time perspective has been studied in numerous areas to determine if it predicts different behaviours or not. It has been found to predict several behaviours such as procrastination, obesity, and academic achievement. It has never been researched in audiology which is why this study is being undertaken.

Before conducting this research study, ethical clearance will first be obtained from the University of the Witwatersrand Human Research Ethics Committee (HREC) Medical. Moreover, permission will also be obtained by the owners of the private practice, to conduct the study at this practice with patients.

Involvement in the study and data collection:

If patients agree to participate in the study, they will be invited to participate in:

- An individual semi-structured interview of approximately 30-45 minutes in duration, which will take place at one of the two practices of Calligaro and King, Inc. The interview will be audio recorded.
- A focus group of approximately 45 – 60 minutes in duration, with a maximum of six participants, which will take place at one of the two practices of Calligaro and King, Inc. The focus group will be audio and video recorded.

Within the interviews and focus groups, COVID-19 regulations will be strictly adhered to, in the sense of social distancing, allowing for the movement of fresh air in the rooms, hand sanitising and wearing a conventional mask or a mask with a clear window to assist with communication. If the participants are unable to attend the interview or focus group physically,

or if COVID-19 poses limitations, an online platform, such as Microsoft Teams, Skype or Zoom, which are all safe and secure, can be used to participate virtually and safely.

Risks of being involved in the study:

Hearing loss and the daily adverse effects that are associated with it, are known to cause negative emotions or distress for many individuals. Hence, discussing the topic may possibly cause some of these negative emotions to arise. Moreover, in conducting member checks after the research to confirm the accuracy of the findings, some distress may arise. Within the focus group, there is risk related to confidentiality of information, as it is difficult for the researcher to control whether participants share the discussions that took place, outside of the group. However, in order to mitigate this, participants are required to sign a consent form which has a non-disclosure statement explaining the need for the participants to respect the privacy and confidentiality of every person and their shared information, in the group.

Benefits of being in the study:

Participating in this study will allow for the researcher to obtain essential information on the topic, and the findings obtained will likely be shared with professionals in the field of audiology. In doing so, audiologists will gain more information on considerations of time perspective within the audiological journey, potentially useful referrals to make, and approaches to take when managing different patients with hearing loss. In addition, this study can inform the need for future research to possibly investigate time perspective as a predictor of audiological behaviours. Moreover, by participating in the focus group, participants may be able to reflect on their journey, share similar experiences with the other individuals and gain support. Another benefit is that at the end of the study, the researcher will share the results with the participants by providing them with the abstract of the study and inviting them to contact the researcher, should they want to discuss the study further.

Participation is voluntary:

Participation within this study is voluntary and consent to participate will be requested first. Hence, all individuals will be invited to participate in both the individual interview as well as the focus group, however, they may choose to participate only in the individual interview if they wish. All individuals have the right to withdraw from this study at any stage without any penalty and repercussion in general and with regard to the services they receive from the private

practice. They are also not required to provide an explanation or reason regarding their choice to withdraw. In the case that they do withdraw, any data collected from them will in default be destroyed unless they specifically consent to its retention. Finally, participants will be offered R100,00 to cover any data or transport costs incurred from participating in the study.

Contact details of researcher and supervisors:

- Monica Araujo, Principal Investigator. Telephone number: 061 842 3398. E-mail: monaraujo96@gmail.com.
- Dr Victor de Andrade, Supervisor. Email: victor.deandrade@wits.ac.za
- Mrs Luisa Petrocchi-Bartal, Supervisor. Email: luisa.petrocchi-bartal@wits.ac.za

Outputs

All of the data obtained from the research study will be securely stored with myself, the researcher. Once analysed and interpreted, this data will be used to write a research dissertation for my Master's degree in Audiology. This dissertation will be available upon request to you and may be used for other research studies.

Contact details of HREC administrator and chair – for reporting of complaints / problems. This study has been approved by the Human Research Ethics Committee (Medical) of the University of the Witwatersrand, Johannesburg ("Committee"). A principal function of this Committee is to safeguard the rights and dignity of all human subjects who agree to participate in a research project and the integrity of the research.

If you have any concern over the way the study is being conducted, please contact the Chairperson of this Committee who is Professor Clement Penny, who may be contacted on telephone number 011 717 2301, or by e-mail on Clement.Penny@wits.ac.za. The telephone numbers for the Committee secretariat are 011 717 2700/1234 and the e-mail addresses are Zanele.Ndlovu@wits.ac.za and Rhulani.Mukansi@wits.ac.za

Request for assistance from counselling psychologist

As seen above, there are potential risks with being involved in this study, related to possible emotional distress or discomfort arising. Due to this, a referral to a psychologist may be required and in the best interests of the participant. I therefore request if you would be able to

assist by being a pro-bono referral for the participants and consulting with them if distress is identified and observed according to the distress protocol. If you have agreed to assist and with your consent, the participants will be provided with your contact details as well as details of the arrangements made, at the point that the distress is identified. If this occurs, either I would contact you to assist with a consult for the participant, with their consent, or they would have your details to contact you themselves.

Thank you for reading this Study Information Letter and considering this request.

Date: January 2022

Monica Araujo (MA Audiology Student)



Dr Victor de Andrade (MA Supervisor)



Mrs Luisa Petrocchi-Bartal (MA Supervisor)

Luisa Petrocchi-Bartal

Appendix M: Letter of Agreement from Counselling Psychologist

LETTER OF AGREEMENT TO BE PRO-BONO REFERRAL:

COUNSELLING PSYCHOLOGIST

Fellyn Collins
Counselling Psychologist
MA Counselling Psych (Wits)
PS: 0134600 PR: 0666 599
Cell: 072 241 5119
Email: fellyn.collins.psychology@gmail.com

To whom it may concern:

This letter is to confirm that I have agreed to assist Monica Araujo with her distress protocol for the following study: 'An exploratory study on time perspective as a possible indicator of audiological help-seeking behaviours and intervention outcomes, in Gauteng South Africa'.

Monica and I have an agreement in place and I have offered to be the pro-bono referral for participants that require containment. Should Monica notice a participant needs containment, I have consented to her sharing my information. The participant may then contact me and I will set up an appointment with them.

Fellyn Collins

17.01.2022