

Exploring the Professional Quality of Life of South African Audiologists

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Declaration

I, Senamile Ntuli, declare that this research report is my work except as indicated in the references and acknowledgements. I am responsible for the content of this study and the conclusions presented. No part of this research report has been previously submitted for a degree at any other University/Institution.

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Abstract

Background: South African audiologists are faced with challenges in their clinical practices which are unique to the South African context, exacerbated by the significant increases in patient caseloads whilst practising in resource-deprived healthcare facilities. There appears to be sparse research regarding South African audiologists' professional quality of life and its association with various demographic variables, and unexplored research regarding the influence of resilience on South African audiologists' professional quality of life (ProQOL), especially in South Africa.

Purpose: To explore the professional quality of life of South African audiologists working in various clinical settings. Objectives included: 1.) To measure and describe the level of compassion satisfaction, compassion fatigue, burnout and secondary traumatic stress among South African audiologists, 2.) To determine the association of the professional quality of life variables among South African audiologists (compassion satisfaction vs compassion fatigue, compassion satisfaction vs burnout, compassion satisfaction vs secondary traumatic stress, compassion fatigue vs burnout, compassion fatigue vs secondary traumatic stress, burnout vs secondary traumatic stress), 3.) To determine the association between the professional quality of life of South African audiologists and other variables such as demographic variables, 4.) To explore the influence of resilience on South African audiologists' professional quality of life, 5.) To explore the perceptions of available resources to improve their professional quality of life, and 6.) To explore strategies that South African audiologists may use to improve their professional quality of life.

Participants: A non-probability purposive sampling strategy was used to select participants. The participants included South African audiologists who are registered with the Health Professions Council of South Africa (HPCSA) and practising in any setting.

Methods: A two-phase explanatory sequential mixed methods research design was utilised. In the first phase, the quantitative cross-sectional survey design was employed using the ProQOL scale to collect data. The ProQOL was distributed online using REDCap, while the qualitative explanatory aspect was conducted in the second phase using online semi-structured interviews. In the first phase, Data was analysed using SPSS version 29, with descriptive statistics used to summarise the sample and professional quality of life subscales, while inferential tests, including Pearson's correlations and independent t-tests, explored associations between variables. Normality

was assessed using skewness, kurtosis, and histograms, and missing data were imputed based on the most frequent responses for similar items. Braun and Clarke's reflexive thematic analysis was used to analyse the qualitative aspect of the research. The process of mixing the data occurred at the interpretation stage where the results from both approaches were compared to identify patterns, correlations or contradictions.

Results: A total of 73 South African audiologists participated in the quantitative phase (Phase 1) of the study, while 15 audiologists took part in the qualitative phase (Phase 2). The findings revealed that audiologists experience moderate levels of compassion satisfaction ($M = 40.18$, $SD = 7.25$) and relatively low burnout rates ($M = 24.01$, $SD = 6.75$), though the long-term effects of work-related stress remain unclear. Resilience emerged as a protective factor, with audiologists who demonstrated higher resilience ($M = 3.81$, $SD = 0.91$) reporting better emotional regulation, adaptability, and access to support systems. However, workplace challenges such as limited access to mental health resources, high caseloads, and insufficient institutional support negatively impacted professional well-being.

Burnout and compassion satisfaction showed a strong negative correlation ($r = -0.733$, $p < 0.001$), highlighting the inverse relationship between job fulfilment and emotional exhaustion. Compassion fatigue was strongly correlated with burnout ($r = 0.863$, $p < 0.001$) and secondary traumatic stress ($r = 0.846$, $p < 0.001$), reinforcing the interconnected nature of these stressors. Unexpectedly, a weak correlation was found between secondary traumatic stress and compassion satisfaction ($r = -0.223$, $p = 0.057$), suggesting that exposure to patient trauma does not necessarily diminish job fulfilment. These findings underscore the role of both organisational and personal resources in shaping audiologists' professional quality of life.

Conclusion: Current findings highlight the importance of professional quality of life among South African audiologists, emphasising the balance between compassion satisfaction and the challenges of burnout and compassion fatigue. Resilience emerges as a key protective factor, underscoring the need for institutional interventions to enhance workplace support and well-being. Findings suggest that targeted strategies, such as mentorship programmes and stress management initiatives, could mitigate professional stressors and improve career sustainability. The study also calls for

future research to explore long-term resilience-building interventions and systemic workplace improvements, ensuring a more supportive environment for audiologists in South Africa.

Keywords: audiologists; professional quality of life; South Africa; workplace; work-life balance

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List of Abbreviations

HPCSA	Health Professions Council of South Africa
ProQOL	Professional quality of life
STS	Secondary traumatic stress
CS	Compassion satisfaction
CF	Compassion fatigue
SANDTA	South African Neurodevelopmental Therapy Association
SAAA	South African Association of Audiologists
NABSLHA	National Black Speech Language Hearing Association
RuReSA	Rural Rehab South Africa
REDCap	Research Electronic Data Capture Software
SD	Standard deviation
HREC	Human Research Ethics Satisfaction Committee
BO	Burnout
RES	Resilience
CPE	Coping
BO	Burnout

Chapter 1: Introduction

This chapter sets the foundation for the study by outlining key themes related to the professional quality of life of audiologists in South Africa. It delves into aspects such as compassion satisfaction, burnout, secondary traumatic stress, and workplace challenges. The significance of these elements will be explored, along with the study's rationale, particularly in examining resilience, coping mechanisms, and support systems within the audiology profession.

Healthcare practitioners in South Africa have legal, ethical, and moral obligations towards their patients. Legally, they are bound by the National Health Act (61 of 2003), which outlines their rights and responsibilities for efficient healthcare delivery. Ethically, practitioners must adhere to professional codes of conduct set by regulatory bodies like the Health Professions Council of South Africa (HPCSA), covering patient rights, confidentiality, record-keeping, and ethical research (HPCSA, 2016). Morally, they must prioritise patient well-being, showing empathy, compassion, and respect for dignity and autonomy (Moudatsou et al., 2020). It is therefore no surprise that always fulfilling all these obligations in all their professional interactions may be overwhelming. Constant demands are placed on healthcare providers to provide the best care they can in the context of these rules, regulations, and codes of conduct (Moudatsou et al., 2020).

Audiologists are considered healthcare providers in South Africa and are consequently expected to maintain the highest standards of ethical conduct in their practice (HPCSA, 2016). Given that they work with individuals experiencing communication impairments (Kramer & Brown, 2019), their profession is influenced by various socio-economic and cultural factors (Pillay et al., 2020). Audiologists may experience stress when working with people who have hearing and balance-related difficulties, deliver life-changing diagnoses, and must determine an associated prognosis, management options and relevant counselling (Brito-Marcelino et al., 2020). In addition to their clinical responsibilities, audiologists often engage in patient education, case management, and intervention planning (Brito-Marcelino et al., 2020). These duties, coupled with the demands of therapeutic work, may contribute to additional pressure and psychological strain (Pillay et al., 2020).

Audiologists are faced with challenges that are unique and situated within the South African context and these may result in significantly increased patient caseloads (Feng et al., 2019). One such challenge is high crime rates as social violence crime and homicide are the highest increasing crimes in South Africa (Obagbuwa & Abidoye, 2021; Statistics South Africa, 2023). The relationship between high crime rates and the professional quality of life (ProQoL) of South African audiologists is multifaceted, involving both direct and indirect effects. Many audiologists work in communities with high levels of violence, placing them at risk when commuting or working in healthcare facilities situated in unsafe areas. This ongoing exposure to danger can result in heightened anxiety, emotional fatigue, and decreased psychological safety, especially among female audiologists, who may face an elevated risk of gender-based violence. Given that the profession in South Africa is predominantly female (Khoza-Shangase, 2022), the implications of societal violence are particularly significant for their sense of wellbeing and job satisfaction. Furthermore, audiologists may frequently encounter patients who have experienced violence-related trauma or hearing loss, which could contribute to secondary traumatic stress — a key component of compassion fatigue. These challenges are further compounded by South Africa's broader socio-economic context. In addition to high unemployment, the rising cost of living, stagnant public sector wages, and increasing financial responsibilities can place audiologists under financial stress, limiting their capacity to find fulfilment in their work. These cumulative pressures — from societal instability, economic hardship, and gender-based risks — may negatively influence all three components of ProQoL: compassion satisfaction, burnout, and secondary traumatic stress

South African audiologists are exposed to death frequently because of the high violent crime and mortality rate which has been increasing consistently in South Africa over the past decade, reaching a high of 45 deaths per 100,000 people in 2023 (Institute for Security Studies, 2023). This sustained exposure may negatively affect their professional quality of life. Furthermore, Statistics South Africa (2023) indicates the unemployment rate in the third quarter of 2023 was 31.9%. This means that South African audiologists may also experience the harsh reality of unemployment which may impact their professional quality of life (Hlayisi, 2022; Moroe et al., 2025). Other challenges that South African audiologists may face include the lack of resources in public healthcare establishments that limit their ability to provide effective healthcare (Khoza-Shangase,

2022; Maphumulo & Bhengu, 2019; Phanguphangu et al., 2024; Pillay et al., 2020; Sebothoma & Khoza-Shangase, 2021).

This study aims to explore the components of the professional quality of life of South African audiologists, and the impact they have on patient care (Williams et al., 2007).

Rationale

The professional quality of life of healthcare workers has been extensively studied (Bhutani et al., 2012; Blood et al., 2007; Chung, 2020; de Andrade et al., 2024; Kelly et al., 2015; Sacco et al., 2015; Severn et al., 2012; Zakeri et al., 2021; Zimmer et al., 2022). However, research focusing specifically on audiologists in South Africa remains scarce (Brännström et al., 2016; Severn et al., 2012). In a country where unique factors that are related to South Africa's socio-political and economic landscape have an impact on healthcare providers (Maphumulo & Bhengu, 2019), it is important to understand the impact that these factors have on the well-being of these healthcare providers. Many healthcare providers may not be aware of how these factors impact their professional quality of life and by extension, their ability to do their work well and their ability to take care of themselves. It is thus likely that audiologists in general are unaware of ways to improve their professional quality of life.

As such, this research is crucial for several reasons. Most importantly, understanding the general and unique challenges that audiologists face may lead to the development of effective interventions that address these challenges and allow audiologists to provide improved patient care. Understanding the factors that contribute to compassion fatigue and burnout among South African audiologists is fundamental in promoting the mental and physical health of audiologists and the establishment of an improved work-life balance. This research may also assist in the identification of those protective factors that may enhance audiologists' resilience in the face of stress or trauma. The overall effect may be an increase in compassion satisfaction and as a result, enhanced job satisfaction.

There are also limited studies on professional quality of life using a mixed-methods research design. Professional quality of life is a complex phenomenon that cannot be fully understood using

quantitative research only. It involves a complex interplay of various factors including job stressors, traumatic experiences, coping mechanisms and personal experiences with patients that all need to be considered (Shdaifet et al., 2023). To gain proper insight into this topic, the experiences and perspectives of audiologists must be ascertained and understood. Qualitative research allows us to understand the broader context within which these audiologists work (Creswell, 2013). We can delve deeper into the social, cultural, organisational, political, and economic factors that influence the professional well-being of audiologists in South Africa. Understanding the context also enhances our ability to interpret quantitative data more accurately. Finally, in addition to filling the current research gaps that exist, it also guides the development of appropriate interventions that can promote and improve the well-being of audiologists.

The study has chosen to focus on audiologists who are currently practising. This includes audiologists practising in the private and public sectors, as well as those currently completing their community service requirements. Practising audiologists have been included because they engage directly with the daily realities of patient care (HPCSA, 2017). Their responsibilities typically include diagnosing and managing hearing and balance disorders, handling emergencies, performing administrative tasks, and collaborating with other healthcare professionals (HPCSA, 2017). These continuous, high-contact duties position them well to provide an accurate reflection of the professional quality of life in the South African context. The inclusion of community service audiologists is particularly important, as they not only face the demands of clinical work but also experience additional stressors related to the transition into permanent employment. The persistent shortage of audiology posts in the public sector means that many community service audiologists face the threat of unemployment at the end of their service year, which may contribute to increased anxiety, financial strain, and uncertainty about their future career trajectory. These factors can have a substantial impact on their overall professional quality of life. Through their interactions with patients, practising audiologists are more likely to give a more accurate representation of the professional quality of life of South African audiologists.

This topic originated from discussions with various colleagues within the audiology profession. At the time of writing the research proposal for the current study, I had difficulties in dealing with and coping with low work satisfaction and feelings of fatigue and burnout. I often wondered if I was still satisfied with my line of work and whether experiencing the fatigue and burnout would

impact my ability to provide good patient care. As an audiologist, I often wonder whether the high unemployment rate in South Africa results in my colleagues staying in the profession despite the low compassion satisfaction and high levels of compassion fatigue and burnout. While the study is grounded in the experiences of practising audiologists, it is important to note that the target population included audiologists working in both clinical and non-clinical settings. These include roles in academia, research, healthcare management, and policy, where professional responsibilities and sources of work-related stress may differ from those in direct patient care. Including this broader range of work environments provides a more comprehensive understanding of the factors influencing professional quality of life in the South African audiology context.

Chapter 2: Literature Review

This chapter provides a literature review that describes the factors affecting the professional quality of life of South African audiologists. It outlines the dimensions and concepts associated with professional quality of life for audiologists both in South Africa and internationally. The chapter also briefly reviews existing literature to highlight research gaps, particularly regarding audiologists and emphasises the importance of examining resilience, coping strategies, and workplace support.

Professional quality of life is a multidimensional construct that encompasses the positive and negative aspects of one's work-related experiences, particularly in professions with high emotional and empathetic demands (Ravi et al., 2016). In the context of South Africa, understanding the professional quality of life of audiologists is crucial as it directly impacts their well-being and effectiveness in their work, and this understanding can be used for optimising patient care, job satisfaction, and overall well-being. Stamm (2010) divides professional quality of life into positive aspects such as compassion satisfaction, and negative aspects such as compassion fatigue. Compassion fatigue (CF) is composed of two parts: burnout (BO) and secondary traumatic stress (STS). Burnout, compassion fatigue, resilience (RES), occupational stress, and compassion satisfaction (CS) have been shown to have a significant impact on professional quality of life.

Compassion is fundamental to helping professions like audiology and can be defined as “feeling and acting with deep empathy and sorrow for those who suffer” (Stamm, 2002; Skovholt & Trotter-Mathison, 2016). Practising as an audiologist has positive and negative aspects and the negative secondary aspects of one's job or effects of helping others have been explored in various forms and can manifest in various ways (Stamm, 2010). This can include compassion fatigue, which Ravi et al. (2016, p.163) defines as “the diminished capacity and dampened concern of the health professional to engage empathically or be able to bear the suffering of significant others in their lives, patients, clients, or sometimes colleagues”. Compassion fatigue can occur as a result of the emotionally demanding aspects of patient care (Nimmo & Huggard, 2013; Stamm, 2010). Stamm (2010) divides compassion fatigue into exhaustion, frustration, anger, and depression characteristic of burnout, and a negative feeling driven by fear, and work-related trauma, characteristic of traumatic stress.

Professional quality of life

Measuring the professional quality of life involves the determination of “the quality one feels in relation to their work as a helper” (Stamm, 2010, p.8). Healthcare professionals can be considered “helpers” in this context as their work primarily involves providing care and support to individuals who may be experiencing trauma, illness, or distress (Sorenson et al, 2016). The idea of measuring professional quality of life (ProQOL) was first introduced by Figley (1995) and developed further by Stamm (2010). In 2010, Stamm published *The Concise ProQOL Manual* which has been revised over the years to provide a more accurate method of measuring the professional quality of life of, amongst others, healthcare providers (Stamm, 2010). Professional quality of life refers to the emotional and psychological effects of one’s work, encompassing two primary dimensions: compassion satisfaction—the fulfilment derived from helping others—and compassion fatigue—the emotional exhaustion and reduced empathy resulting from prolonged exposure to others’ suffering (Coetzee & Kloppe, 2010).

Compassion fatigue can be further subdivided into two parts: burnout and secondary traumatic stress. According to Stamm (2010, p.13), burnout is “associated with feelings of hopelessness and difficulties in dealing with work or in doing your job effectively”. It develops gradually due to various factors such as excessive workload, high emotional demands, and a stressful or unsupportive work environment (Ruiz-Fernández et al., 2020). Secondary traumatic stress (STS), on the other hand, is described as “a negative feeling driven by fear and work-related trauma” (Stamm, 2010, p. 13). It occurs because of continuous exposure to patients’ traumatic experiences, leading to symptoms such as sleep disturbances, intrusive thoughts, and avoidance behaviours (Bride, 2007). Healthcare professionals, particularly those working in high-intensity settings such as emergency departments, mental health services, and critical care, are at an increased risk of developing STS (Ray et al., 2013).

Understanding professional quality of life is essential for developing strategies to support healthcare workers and mitigate the effects of compassion fatigue and burnout. Addressing these challenges through workplace interventions, resilience training, and mental health support can enhance both the well-being of professionals and the quality of care they provide (Neville & Cole, 2013). Compassion satisfaction (CS), on the one hand, and burnout, compassion fatigue (CF),

resilience, and occupational stress, on the other, have all been illustrated as significantly influencing one's professional quality of life. Although these concepts have been extensively researched in other healthcare professions, there is limited study specifically focusing on audiologists. (Brännström et al., 2016; Severn et al. 2012). Few studies have investigated the levels of compassion fatigue in audiologists globally and, more specifically, in South Africa.

Multiple studies concur that burnout is a complex psychological condition, characterized as the ultimate stage of stress in which practitioners develop negative emotions toward their patients and become cynical about their work. (Maslach & Leiter, 2008; Skovholt & Trotter-Mathison, 2016). The consequences of burnout can be severe, impacting the audiologist, their family, and their patients negatively (Skovholt & Trotter-Mathison, 2016). Maslach & Leiter (2008) divided burnout into three categories: emotional exhaustion, depersonalisation, and reduced personal accomplishment. Emotional exhaustion encompasses feeling drained, tired, fatigued, and needing to distance oneself cognitively and emotionally from one's work (Blood et al., 2008; Maslach & Leiter, 2008). Depersonalisation involves indifference, callousness, and cynicism that may be directed toward patients (Blood et al., 2008; Maslach & Leiter, 2008). Reduced personal accomplishment includes feeling that one's work does not make a significant impact or difference in the lives of patients (Blood et al., 2008; Maslach & Leiter, 2008).

Professional quality of life in other healthcare professions

A study by Bhutani et al. (2012) investigated compassion fatigue and burnout among clinicians. Clinicians tend to have greater involvement and spend more time with patients, making them more susceptible to burnout and compassion fatigue. Another important factor linked to burnout is the clinician's level of experience. Research by Bhutani et al. (2012) found that clinicians with more years of practice reported lower levels of burnout. Additionally, a notable difference was observed in compassion satisfaction among clinicians working in private institutions versus government institutions in which clinicians in private institutions had a higher compassion satisfaction than clinicians working in government institutions (Bhutani et al., 2012). Additionally, poor working conditions significantly increased burnout and compassion satisfaction (Bhutani et al., 2012). These two results may correlate as government institutions have poorer working conditions which may lead to a lack of compassion satisfaction in the clinicians (Bhutani et al., 2012). On the other

hand, in private institutions, modern equipment, trained staff, and good working conditions reduce the likelihood of burnout in clinicians and may result in better compassion satisfaction (Bhutani et al., 2012). The current study hypothesized that better working conditions can help reduce burnout and improve compassion satisfaction in medical practitioners.

Chung's (2020) research on the professional quality of life of occupational therapists aligns with Bhutani et al.'s (2012) findings, indicating lower burnout rates among individuals with greater clinical experience. The study by Chung (2020) explores the factors affecting occupational therapists' work-related well-being, focusing on dimensions such as burnout, compassion fatigue, and compassion satisfaction in regions of South Korea. Only 27% of occupational therapists reported high levels of compassion satisfaction (Chung, 2020). A significant portion of the respondents, 80.5%, experienced high or average levels of burnout (Chung, 2020). About 74.5% of participants reported high or average levels of STS, which results from exposure to the traumatic experiences of others (Chung, 2020). This correlation reinforces previous research suggesting that clinical experience positively influences occupational therapy work performance. An additional study by Zakeri et al. (2021) found a positive relationship between compassion satisfaction and clinical competence among nurses in public hospitals in South Iran. The study showed that nurses with higher compassion satisfaction had a high level of clinical competence in their work and were less prone to compassion fatigue and burnout (Zakeri et al., 2021).

In terms of employment type, occupational therapists hired as temporary employees were reported to have higher compassion satisfaction and less burnout than occupational therapists hired permanently (Chung, 2020). The study highlighted that the workplace environment plays a critical role in the professional quality of life (Chung, 2020). Factors such as workload, administrative support, and workplace culture significantly impact stress levels and job satisfaction and, therefore, having a supportive work environment, including peer support and access to professional development opportunities, was associated with higher levels of compassion satisfaction and lower levels of burnout and STS (Chung, 2020). Maintaining a clear professional identity and feeling valued within the multidisciplinary team were important for occupational therapists' job satisfaction and professional quality of life (Chung, 2020). Similarly, Zakeri et al. (2021) suggested that healthcare organisations should implement plans to increase compassion satisfaction and reduce compassion fatigue. The studies by Chung (2020) and Zakeri et al. (2021) were cross-

sectional in nature, which limits the ability to establish causal relationships between variables and they relied on self-reported measures, which may introduce response bias and affect the accuracy of the results (Creswell, 2013). Additionally, the studies were conducted in specific regions of South Korea and South Iran, which may limit the generalisability of the findings to occupational therapists and possibly audiologists in other countries or regions (Chung, 2020). For instance, Chung (2020) examined the work environment and the quality of the professional lives of occupational therapists and did not consider other potential factors that could influence their professional quality of life.

Sacco et al. (2015) found that the age of a nurse has a significant impact on their professional quality of life. Nurses who were 50 years and older scored higher on the compassion satisfaction scale and scored lower on the burnout and secondary traumatic stress scales than their younger counterparts (Sacco et al., 2015). A possible conclusion is that older nurses have more professional and life experience and are therefore better prepared to cope with the challenges of critical care nursing (Sacco et al., 2015). In the same study, staff nurses with six to 10 years of experience had higher burnout and lower compassion satisfaction scores than nurses with less than six years of experience. Nurses with 11 to 20 years of experience had the highest degree of compassion fatigue (Sacco et al., 2015). A study by Kelly et al. (2015) similarly found that age and experience influence compassion satisfaction and compassion fatigue. Younger nurses with less experience were more likely to experience higher levels of burnout, secondary traumatic stress, and lower levels of compassion satisfaction than their older, more experienced counterparts. However, the study also noted that as nurses gained experience, they were at an increased risk of compassion fatigue, potentially due to prolonged exposure to occupational stressors. Despite this, nurses who reported higher job satisfaction consistently experienced lower compassion fatigue and greater compassion satisfaction, suggesting that workplace fulfilment plays a crucial role in mitigating the negative effects of prolonged service in high-stress healthcare environments (Kelly et al., 2015).

Professional quality of life of audiologists

A study on job burnout among educational audiologists in the United States found that new professionals in the field reported higher levels of emotional exhaustion (Blood et al., 2007). The study revealed that emotional exhaustion differed significantly based on years of experience.

Specifically, 53% of participants with less than 10 years of experience (classified as new professionals) scored in the high burnout range on the Emotional Exhaustion subscale. In contrast, only 9% of young professionals (aged under 35 but with slightly more than 10 years of experience), 10% of experienced professionals (those with 11–20 years of experience), and 17% of long-time professionals (with over 20 years of experience) showed signs of high emotional exhaustion (Blood et al., 2007). These findings highlight that early-career audiologists are at greater risk of burnout, which may be attributed to factors such as professional adjustment, workload demands, and lack of established coping strategies.

However, overall, the study found that educational audiologists showed low susceptibility to burnout (Blood et al., 2007). An argument can be made against these findings as the study primarily focused on educational audiologists and burnout in the United States, potentially limiting the generalisability of the findings to other countries or regions as it did not explore potential confounding variables that could influence the levels of emotional exhaustion, such as work environment, caseload, or specific job responsibilities (Blood et al., 2007). A more recent study by Zimmer et al. (2022) supports the findings of Blood et al. (2007). Zimmer et al. (2022) broadened the sample by also investigating burnout among audiologists in the United States of America (USA) and identified common stressors in the audiology profession, including work duties, time constraints, and patient interactions. The study also found that overall, USA audiologists had low burnout rates. It also found that less experienced audiologists had greater burnout, emotional exhaustion, and depersonalisation compared to more experienced audiologists (Zimmer et al., 2022). The relationship between audiologist demographics and stress/burnout is complex and requires further exploration.

In contrast, a study by Severn et al. (2012) explored occupational stress amongst audiologists in New Zealand and found that increasing age was associated with a higher risk of burnout, and time demand was the strongest predictor of low compassion satisfaction and burnout. Additionally, paediatric audiologists and public-sector audiologists reported higher levels of stress in certain areas compared to adult-serving and private-sector audiologists (Severn et al., 2012). The main stress factors identified in the study were staffing, patient contact, feeling undervalued, paperwork and administration, level of service offered to patients, patient contact time, unrealistic patient expectations, time demand, audiological management, clinical protocol, and accountability

(Severn et al., 2012). The study also highlighted the importance of social support for audiologists in managing occupational stress (Severn et al., 2012).

Both studies discussed above have similar limitations in that the sample sizes were relatively small, which may limit the generalisability of these findings to the broader population of audiologists (Severn et al., 2012). However, these studies did not explore the participants' employment role, which could impact stress and burnout. Other factors that could impact occupational stress that were not considered in the studies include gender, years of experience, or specific work settings. These factors have the potential to provide valuable insights into the unique stressors faced by different subgroups of audiologists with intersecting characteristics (Severn et al., 2012).

The available research indicates that overall, audiologists experience low burnout risk as illustrated in the Brito-Marcelino et al. (2020) and Ravi et al. (2016) studies. However, the inclusion of speech-language pathologists in these studies could make the findings less directly relevant for audiologists. Burnout is a prevalent concern in professions requiring frequent emotional engagement, and audiologists are no exception. Exploring the prevalence and contributing factors of burnout among South African audiologists can shed light on the challenges they face, such as workload, organisational support, and coping mechanisms. This study can explore the prevalence of burnout and identify the predictors in South African audiologists.

The second aspect of compassion fatigue is secondary traumatic stress, which results from indirect exposure to traumatising material, especially if it is grotesque and graphic (Marriage & Marriage, 2005; Stamm, 2010). The behaviours manifest in the form of avoidance, numbing, and persistent alert arousal/fear/difficulty sleeping (Marriage & Marriage, 2005; Stamm, 2010). Severn et al. (2012) found high levels of secondary traumatic stress were identified among 22% of audiologists surveyed and this indicates that a significant portion of audiologists experience secondary traumatic stress in their profession.

Giddens et al. (2022) found that secondary traumatic stress and compassion satisfaction mediate the association between stress and burnout. This suggests that the experience of secondary traumatic stress can impact burnout levels, and that compassion satisfaction may play a role in mitigating the effects of stress on burnout (Giddens et al., 2022). There are limited studies that

have delved into levels of secondary traumatic stress among audiologists and Giddens et al. (2022) highlighted the lack of audiology-specific research on burnout syndrome.

Secondary traumatic stress can manifest in different ways, and this is evidenced in the study by Nagdee and de Andrade (2013) which explored the moral injury experienced by South African speech-language therapists and audiologists due to patient death and dying. The study found that these professionals experience moral injury concerning patient death and dying through feelings of helplessness, guilt, and anger. They may feel helpless when confronted with patient death and dying, as they may struggle to provide the care, they believe their patients deserve. Additionally, they may experience guilt, feeling as though they may have taken something away from the patient (Nagdee & de Andrade, 2013). Furthermore, they may feel anger, particularly when they perceive that other healthcare professionals are using a different ethical approach in treating terminally ill patients, which they believe may be harmful to the patients (Nagdee & de Andrade, 2013). The experiences of moral injury in patient death and dying are complex and multifaceted, influenced by their personal beliefs, professional responsibilities, and interactions with other healthcare professionals. Therefore, it is essential to provide them with the necessary support, education, and coping strategies to mitigate moral injury and promote their well-being in their practice.

Audiologists with higher caseloads are more vulnerable to vicarious trauma, which is a distinct concept from secondary traumatic stress, as it refers to changes in cognitive schemas because of vicarious trauma exposure, e.g. changes in how one sees the world, perhaps as a place that is unjust and unsafe (Masson, 2016). There is also positive potential related to trauma, such as posttraumatic growth and the cultivation of resilience or even ‘vicarious resilience’ following traumatic incidents, e.g. by reflecting on challenges to spiritual frameworks and finding deeper meaning (Masson, 2016). This highlights how ‘negative’ aspects of quality of life carry the connotation that something is bad, whereas certain aspects of professional quality of life may seem unpleasant or bad but potentially have some positive effects. Given the nature of their work, audiologists may be exposed to the traumatic experiences of their clients. Examining the occurrence of secondary traumatic stress among South African audiologists and identifying potential sources of trauma exposure can inform interventions and support systems.

Stressors and satisfaction in audiologists in SA

A study by de Andrade et al. (2024) sought to investigate the professional quality of life of South African speech and hearing professionals. High compassion satisfaction scores were found in 34% of the sample, while 65% obtained average scores, and 1% obtained a low score. In this study, 68% of professionals obtained average scores of burnout, and 32% obtained low scores of burnout. Additionally, 1% obtained high secondary traumatic stress scores, 59% of professionals obtained average scores of secondary traumatic stress, and 40% obtained low scores. The one-way ANOVA showed no statistically significant difference between registered occupations on ProQOL subscales. There was a strong negative correlation between compassion satisfaction and burnout, and a moderate positive correlation between burnout and secondary traumatic stress (de Andrade et al., 2024).

An independent sample test found a statistically significant impact of years of work experience on burnout scores. The higher the years of experience, the lower the burnout experienced. Personal accounts suggested that participants felt satisfied when successful, that participants felt dissatisfied and frustrated when barriers affected success (and they made suggestions for change regarding barriers), that burnout was related to unmet needs and work-life balance/boundaries, and those emotionally impactful elements of work were related to needing support, e.g. through counselling, supervision, and self-care (de Andrade et al., 2024).

Importantly, the qualitative data was obtained from a few open-ended questions in a survey meaning that no in-depth interviews or focus groups were conducted, and there was little acknowledgment of context and detail. In this study, quantitative and qualitative data were not integrated due to feasibility, and this can be explored in future research (de Andrade et al., 2024). Overall, further profession-specific analysis is required to clarify compassion satisfaction levels and understand the influence of compassion satisfaction on burnout in audiologists (Chung, 2020; Carmona-Barrientos, 2020). Investigating the factors influencing job satisfaction among South African audiologists is crucial for understanding the profession's overall appeal and identifying areas for improvement. Additionally, exploring work-life balance challenges and solutions can contribute to a more holistic understanding of professional well-being and exploring the existing support systems and coping mechanisms utilised by South African audiologists can provide

insights into the effectiveness of current strategies and highlight areas for enhancement. This may include examining the role of mentorship, peer support, and mental health resources.

Theoretical framework

The theoretical framework guiding this study is the Resilience Theory. This framework focuses on understanding the processes and resources that enable individuals to adapt and thrive in the face of adversity or significant stressors (Van Breda & Theron, 2018). It emphasises the dynamic nature of resilience and the interaction between personal, relational, and environmental factors in promoting positive outcomes (Van Breda & Theron, 2018). Resilience theory seeks to identify the specific factors that contribute to resilience and to inform interventions and support systems that can enhance individuals' ability to overcome challenges and achieve well-being (Van Breda & Theron, 2018).

Resilience theory and professional quality of life

One individual characteristic that has recently garnered attention from researchers and clinicians is resilience. Currently, the scientific literature conceptualises resilience as a multidimensional and dynamic construct consisting of biological and psychological features (Campbell-Sills & Stein, 2007). Resilience, along with specific skills (e.g. active problem-solving), enables an individual to cope with the challenges of daily life (Campbell-Sills & Stein, 2007). Goncalves et al. (2022) defined resilience as the personal characteristic of an individual that enables them to thrive amid challenging circumstances and is further described as a key characteristic of success for an employee in the work environment. As a state, resilience resembles a protective process, activated during stressful or traumatic events to reduce the negative and adverse effects on an individual (Johnson et al., 2011). According to Pietrzak et al. (2014), resilience is the main predictor of compassion satisfaction. Its components are, on the one hand, the acceptance that the suffering will last for only a limited period and the suffering itself, and on the other hand, acceptance and kindness toward one's suffering. Resilience therefore appears to be related to compassion and several studies propose the theory that having experienced adversity in the past may predispose individuals toward compassion (Lim & DeSteno, 2016).

Resilience as a process versus as an outcome

According to van Breda and Theron (2018), resilience theory is a framework that focuses on understanding the processes and resources that enable individuals to adapt and thrive in the face of adversity or significant stressors. It emphasises the dynamic nature of resilience and the interaction between personal, relational, and environmental factors in promoting positive outcomes (van Breda & Theron, 2018). Earlier research on resilience focused on understanding resilience through the individual approach which tended to emphasise resilience as an internal phenomenon (van Breda, 2001). Many of these individual resilience processes remain prominent in resilience studies despite coming under much criticism that is centred on decentralising the responsibility for personal growth and development to the individual (van Breda, 2018).

The resilience theory is rooted in the study of adversity and how harmful negative life experiences can impact different people (van Breda, 2018). This study highlighted variations in outcomes in response to adversity and emphasised definitions of resilience that draw attention to the 'state of being resilient' amidst challenges, thereby focusing on an outcome-oriented approach to resilience (van Breda, 2018). The problem with definitions of resilience as an outcome is that they offer observations of positive outcomes without explaining them and this, according to van Breda (2018), has limited use. Distinguishing those with better outcomes from those with poorer outcomes recognises that other processes mediate adversity and negative outcomes (van Breda, 2018). This presents a different definition of resilience which views resilience as a process which focuses on the mediating factors or processes that enable positive outcomes in adversity (van Breda, 2018). Therefore, as a concept, resilience is then a process that leads to an outcome with mediating processes central to it (van Breda, 2018). van Breda (2018) recommends that the word “resilience” be best used in the process definition and that the word “resilient” be reserved for an outcome definition.

The extensive field of resilience thus centres around three components that are interlinked: adversity, mediating factors and outcomes. van Breda defined resilience as “The multilevel processes that systems engage in to obtain better-than-expected outcomes in the face or wake of adversity” (van Breda, 2018). The term “multilevel” proposes that the resilience process does not

only happen in the individual but also happens across multiple levels of the person-in-environment (van Breda, 2018)

Adversity and outcomes

Recognising the patterns of adversity presents different pathways to resilience. Adversity can be split into two categories, and these are chronic and acute. Chronic adversity occurs over a long period with an impact that may be felt in different aspects of the person's life (van Breda, 2019). Chronic adversity can be further subdivided into distal-onset chronic adversity, which does not have a clear starting point, and proximal-onset chronic adversity, which has a clear starting point (van Breda, 2018). By contrast, acute adversity has a defined starting point, a short duration and a limited impact on a person (van Breda, 2018).

According to van Breda (2018), thinking of resilience as bouncing back or returning to a previous level of functioning allows one to overcome acute and proximal-onset chronic adversities. However, this may not work on distal-onset chronic adversities as they have no starting point. van Breda (2018) further states that resilience which involves coping in the face of adversity is related to chronic adversity, whereas resilience which involves recovering in the wake of adversity is related to acute adversity. van Breda (2018) argues that researchers will achieve more nuanced and powerful results if they measure outcomes on a continuous scale from negative to positive outcomes and offer differentiation between good and bad or better and worse. It is also argued that it would be more accurate and respectful of people's dignity to define the resilient outcomes concerning the specific variables used (van Breda, 2018). For research, van Breda (2018) states that what is considered a good outcome must be selected based on qualitative research with a sample of the participants by considering what is most important to them and how they define their outcomes.

Resilience theory in South Africa

van Breda (2018) argues that although the relevance of resilience theory has been critiqued for its neoliberal tendencies, it can contribute to our thinking and understanding of the negative impact that adversity or vulnerability has on people, their coping resources and strengths (van Breda, 2018). Understanding how a person deals with their challenges is an important part of

understanding the whole person within their social environment. As such, the resilience theory offers the researcher an opportunity to give attention to the full spectrum of the human experience, both negative and positive, both vulnerability and strength (van Breda, 2018). Additionally, understanding the resilience processes helps one to better inform policy and practice than understanding the adversity only (van Breda, 2018).

The resilience theory celebrates local and indigenous knowledge as much of its research is qualitative and may reveal the voices and experiences of participants as well as the local knowledge and practices that help people navigate hard times (van Breda, 2018). This leaves a gap in the knowledge of cultural resilience practices in South Africa which still needs further development and research (van Breda, 2018). Utilising this framework in this research will be beneficial in identifying the specific factors that contribute to resilience and will inform interventions and support systems that can enhance South African audiologists' ability to overcome challenges and achieve well-being (van Breda & Theron, 2018). Findings indicate that personal and relational resources were the most frequently reported factors that enable resilience and the importance of understanding and leveraging personal and relational resources to promote resilience has been highlighted (van Breda & Theron, 2018).

A study by Goncalves et al. (2022) explored the role of personal resources, such as self-efficacy and resilience, as mediating factors in the resilience process. The study found that higher levels of self-efficacy and resilience were associated with greater compassion satisfaction and a reduced risk of adversity or burnout. The study recommended that healthcare organisations provide resources to enhance personal resilience and self-efficacy in their employees to improve their professional quality of life (Goncalves et al., 2022).

In principle, if compassion satisfaction is understood as a sense of achievement or gratification felt by healthcare professionals, resilience becomes a personal resource necessary for achieving compassion satisfaction as it enables healthcare professionals to adjust to constantly stressful and demanding healthcare environments (Coetzee & Laschinger, 2018; Sacco & Copel, 2018). Resilience involves enduring stress, tolerating pressure in challenging situations, and implementing strategies to overcome negative or traumatic experiences (Ruiz-Fernández et al.,

2021). Meanwhile, acceptance and kindness toward one's suffering can be understood as self-compassion training and fall under the mediating factors that lead to a positive outcome that may increase resilience and which, in turn, decreases compassion fatigue among healthcare professionals (Ruiz-Fernández et al., 2021). However, studies exploring the relationship of these emotional variables with professional quality of life in audiologists are scarce.

Chapter 3: Methodology

This chapter outlines the aims, objectives, and research questions that guide the study. It describes the research design, context, and pilot study, as well as the participants, sampling methods, and data collection measures. The research process, including data analysis, rigour, and ethical considerations, is also detailed.

Aim

The main aim of this study was to explore the professional quality of life of South African audiologists.

Specific objectives

1. To measure and describe the level of compassion satisfaction, compassion fatigue, burnout and secondary traumatic stress among South African audiologists.
2. To determine the association of the professional quality of life variables among South African audiologists (compassion satisfaction vs compassion fatigue, compassion satisfaction vs burnout, compassion satisfaction vs secondary traumatic stress, compassion fatigue vs burnout, compassion fatigue vs secondary traumatic stress, burnout vs secondary traumatic stress).
3. To determine the association between the professional quality of life of South African audiologists and other variables such as demographic variables.
4. To explore the influence of resilience on South African audiologists' professional quality of life.
5. To explore the perceptions of available resources to improve their professional quality of life.
6. To explore strategies that South African audiologists may use to improve their professional quality of life.

Research Question

1. What is the level of compassion satisfaction, compassion fatigue, burnout and secondary traumatic stress among South African audiologists?

2. What is the association of the professional quality of life variables among South African audiologists (compassion satisfaction vs compassion fatigue, compassion satisfaction vs burnout, compassion satisfaction vs secondary traumatic stress, compassion fatigue vs burnout, compassion fatigue vs secondary traumatic stress, burnout vs secondary traumatic stress)?
3. What is the association between the professional quality of life of South African audiologists and other variables such as demographic variables?
4. What is the influence of resilience on South African audiologists' professional quality of life?
5. What are the perceptions of South African audiologists on the availability of resources to improve quality of life?
6. What strategies may South African audiologists possibly use to improve their professional quality of life?

Hypotheses

Null hypothesis (H_0)

The professional quality of life of South African audiologists is not significantly influenced by demographic factors such as workplace, age, geographic location, etc.

Alternative hypothesis (H_1)

The professional quality of life of South African audiologists is significantly influenced by demographic factors such as workplace, age, geographic location, etc.

Research Design

This study employed a two-phase explanatory sequential mixed methods research design (Cresswell & Cresswell, 2018). Mixed methods research is an approach to inquiry that combines both qualitative and quantitative forms in a study (Cresswell, 2009). A mixed methods design was selected as it can give more comprehensive insight and compensate for the limitations associated with using one research design (Creswell & Plano Clark, 2007). Due to the recent history of mixed methods research, the quality, validity and reliability of the meta-inferences generated can be

difficult to judge (Teddle & Tashakkori, 2009). The good reporting of a mixed methods study criteria has been proposed as a mixed methods reporting guideline (O’Cathain et al., 2008).

A major limitation of the mixed methods design is associated with the increased time that it takes to collect data, analyse, interpret and complete the overall study, particularly with sequential designs (Whitley et al., 2020). To overcome this, careful planning and organisation was crucial in the development phase. A detailed timeline was developed, and resources were allocated efficiently and accordingly. It is important to recognise that the qualitative phase took much longer and thus required greater allocated time. Another key limitation is the fact that participants in a sequential explanatory design may experience an increased burden due to being subjected to multiple data collection phases and methods (Toyon, 2021). To alleviate this burden, potential participants received comprehensive information on both data collection phases and what they would entail before being asked to sign the consent form.

Researcher bias may be another limitation of the study. When selecting participants or determining which qualitative results must be further explored in the second phase, the researcher ensured that their biases do not influence the research implementation and interpretation of results. To guard against researcher bias, it was crucial to engage in reflexivity by continuously reflecting on personal beliefs and potential biases, and documenting these reflections (Dodgson, 2019). Employing triangulation through multiple data sources and methods also helped validate findings (Noble & Heale, 2019). Participants were involved in member checking to ensure interpretations aligned with their perspectives (Brit et al., 2016). Peer review and debriefing with colleagues were utilised to gain diverse viewpoints and identify biases. These strategies collectively helped mitigate bias and enhanced the credibility of qualitative research (Parajuli & Horey, 2022). A final limitation may involve data integration issues. If the quantitative and qualitative data do not align, this may result in a discrepancy in the findings. The researcher ensured that there was still coherence in the overall results of the study (Whitley et al., 2020).

Phase 1

A quantitative cross-sectional survey design was used (Creswell, 2013). Quantitative approaches use numerical data to answer their specific questions and objectives (Irwin et al., 2020). The quantitative data is suitable because it allowed the researcher to establish a baseline understanding

of the professional quality of life of audiologists using the ProQOL scale and to use this as a foundation for further exploration and interpretation during phase 2 (Creswell & Creswell, 2018). It may also reveal patterns and trends from which the researcher can identify key areas of interest that can be explored during phase 2 (Creswell, 2009). Finally, by using quantitative data collection, the researcher could efficiently gather data from a much larger sample and this may provide insights that can be generalised to a broader population. The design is considered cross-sectional because data was collected at one point in time (Creswell, 2013).

Phase 2

In the second phase, the researcher sought to elaborate or expand on the insights provided by the quantitative data with qualitative research (Creswell & Plano Clark, 2007; Leedy & Ormrod, 2015). Once the researcher had analysed the responses to the ProQOL scale from phase 1, the researcher used the insights gained to determine which patterns or trends warrant further qualitative exploration. If there were unexpected or contradictory findings, the qualitative phase would provide an opportunity to conduct a deeper investigation into these findings (Creswell, 2009). The qualitative phase provided context on the social, economic, political, organisational, and cultural factors that shape the participants' experiences (Knudsen et al., 2012). Semi-structured interviews were conducted in phase 2 to obtain in-depth information about audiologists' professional quality of life. The South African audiologists had the opportunity to also comment on their professional quality of life scores.

Research context

This is a national study that was conducted within the South African context. Audiologists working in various clinical sectors such as community clinics, hospitals, schools, and institutions of higher learning were recruited and included in the study. The context of the study was chosen since audiologists working in various clinical settings presented different insights about their quality of life depending on their situations and circumstances. There is a general extreme shortage of audiologists in South Africa (Pillay et al., 2020), exacerbating demand versus capacity challenges (Khoza-Shangase, 2022). Recent reports indicate that there are approximately 1548 audiologists registered with the Health Professions Council of South Africa (Pillay et al., 2020), with an audiology-patient ratio of 0.87 per 100 000 (Mulwafi et al., 2017). Most audiologists are reported

to be working in urban or affluent areas, with limited number of audiologists working in rural and townships (Pillay et al., 2020). In addition, there is a lack of training of health professionals on complex issues (Dambisya, 2007), and the exposure to high levels of crimes (Shisana et al., 2016). Therefore, this national study was crucial to provide important information about the quality of life from a diverse group of audiologists.

Participants

A non-probability purposive sampling strategy was used to recruit and select participants who meet the inclusion criteria (Campbell et al., 2020). This sampling strategy was used in both phases of the study. Purposive sampling is a type of non-probability sampling that involves selecting participants with specific characteristics that are important for the study (Campbell et al., 2020). Participant selection was guided by the principles of purposive sampling, seeking individuals who can provide rich, detailed, and relevant information about the phenomena under study (Creswell, 2007). This method of sampling emphasises the quality of data obtained as it is the depth of information that contributes to the understanding of complex phenomena in qualitative research (Irwin et al., 2008). While non-probability sampling methods generally do not allow the researcher to generalise the population (Stratton, 2023), the purpose of this study was to understand the professional quality of life of South African audiologists and the extent to which the results reflect or hold for the population, in this case, South African audiologists (Kirchherr & Charles, 2018).

Sampling size

Phase 1

A large sample size is required for quantitative research (Burton et al., 2009). It was anticipated that a sample size of approximately 283 South African audiologists would be included in this study, with a proportion of 50%, a 95% confidence interval, and a 5% margin of error, using the Raosoft sample size calculator (Olowofela & Isah, 2017; HPCSA, 2024). This sample size would provide sufficient data for meaningful analysis, while still being manageable within the constraints of the study (Creswell, 2009). A low response rate, which is common in the South African context, particularly when conducting survey design, was anticipated (Makhoba & Joseph, 2016;

Sebothoma & Khoza-Shangase, 2021). A total of 73 audiologists participated in the first phase of the study.

Phase 2

The sample size for this phase was based on the adequate quality of the data to address the research question and aims of the study (Braun & Clarke, 2019). Deciding in this manner aligns with the premise of ensuring a thorough and nuanced understanding of the research question, aligning with the goals of achieving data saturation, depth, and richness in the findings. Additionally, during simultaneous data collection and analysis, pragmatic considerations namely, time, volume of data, resources, or norms or expectations of the context, were used to decide a sample size (Braun & Clarke, 2019). These elements were also considered when suggesting a priori sample size. Information power, a concept for determining sample size sufficiency, was also recommended to gauge sample size for this study because its premises align with the research design by emphasising that sample size should be determined by the quality and relevance of the data rather than by a predetermined number of participants (Malterud, 2019).

In qualitative research, the goal is to achieve depth and richness of understanding, and information power suggests that if the data collected is highly informative and specific to the research questions, fewer participants may be needed (Malterud, 2019). This approach is closely linked to the idea of data saturation, where additional data does not contribute new insights. By focusing on the richness and relevance of the data, information power allows researchers to make flexible, context-dependent decisions about sample size, ensuring that the study's findings are both meaningful and thorough while also considering practical constraints like time and resources. Malterud et al. (2016) suggest that the aim of the study, sample specificity, use of established theory, quality of dialogue, and the analysis strategy should be considered when suggesting a sufficient sample size with enough information power. This concept was also used to suggest a priori sample size for this study.

Malterud et al. (2016) developed the Information Power—Items and Dimensions Model as a tool to be considered with sample size in qualitative interviews. This model provided a framework for determining an appropriate sample size based on the relevance and richness of the data collected. In this model, "items" refer to specific pieces of information or data points relevant to the research

questions, while "dimensions" reflect the depth and breadth of the topics covered (Malterud et al., 2016). If each audiologist provides highly relevant and detailed insights into the professional quality of life, fewer participants may be needed because the information power of each response is high. The model also suggests that when the study is focused on specific, well-defined aspects of professional quality of life and uses established theories to guide the analysis, a smaller, targeted sample can still provide comprehensive and meaningful data (Malterud et al., 2016). This approach ensured that the study findings were both robust and contextually relevant.

The study needs a sample that can provide detailed and relevant insights, and a focused aim allows for a smaller, more targeted sample that can still yield meaningful findings due to the high information power of each participant's data (Malterud et al., 2016). A highly specific sample such as experienced audiologists from diverse regions within South Africa ensures that the data collected is directly relevant to the study's aims. A more specific sample often requires fewer participants because each one is selected based on their potential to contribute rich, relevant information, thereby increasing information power (Malterud et al., 2016). If the study is grounded in established theories related to professional quality of life, such as resilience theory, these theories can guide the data collection and analysis. Theories provide a structured lens through which data is interpreted, allowing for a more focused inquiry (Malterud et al., 2016). With a clear theoretical framework, a smaller sample may be sufficient, as the data can be analysed more systematically and aligned with existing theoretical constructs, enhancing information power. High-quality dialogue, where participants engage in in-depth, reflective discussions about their professional experiences, increases the richness of the data (Malterud et al., 2016). If the interviews elicit comprehensive, nuanced responses, fewer participants may be needed as the information power from each participant is maximised. A rigorous and detailed analysis strategy, such as reflexive thematic analysis, ensures that all relevant data is thoroughly examined. When the analysis is systematic and detailed, even a smaller sample can provide sufficient data to meet the study's objectives, as the focus is on extracting maximum insight from each participant's contribution (Malterud et al., 2016).

Thus, from the above, Sim et al. (2018) recommend giving a rough estimate of sample size at the beginning of a study. Determining an adequate sample size to meet the study's objectives is an

iterative process guided by the researcher, considering factors such as data saturation, feasibility, and representativeness (Sim et al., 2018). The sample size estimated for this study was 12 to 15 participants.

Inclusion criteria for both phases:

1. South African audiologists working in various settings in South Africa (e.g. schools, public hospitals, private practice, academia etc.)
2. South African audiologists registered with the HPCSA
3. Duly qualified audiologists were included. However, these participants needed to be practising as audiologists as well.
4. South African audiologists with internet access

Exclusion criteria for both phases:

1. South African audiologists not practising in South Africa
2. Retired South African audiologists

Data collection and instrumentation

Instrumentation

Phase 1

The Professional Quality of Life (ProQOL) questionnaire was used to collect data in the first phase of the study. The ProQOL is a self-report questionnaire that measures compassion fatigue, compassion satisfaction and burnout in helping professions (Stamm, 2010). The ProQOL scale indicates the frequency of behaviours/emotions/thoughts associated with compassion satisfaction, burnout, and secondary traumatic stress experienced over the last 30 days. This is quantified using a five-point self-report Likert scale with ranges of 1 (never) to 5 (very often) (Appendix A). The ProQOL manual indicates that subscale scores can be converted to low (scores that are 22 or less), average (scores between 23 and 41), and high (scores that are 42 or more). It is not a diagnostic tool but can indicate probable burnout or secondary traumatic stress (Stamm, 2010). The manual indicates that participants would be required to base their answers on their current work situation and their experience based on the last 30 days. The work factors questions enquire about

occupation (options: dually qualified audiologist and speech-language pathologist, audiologist, years of experience in audiology, work variables (options: private practice, public hospital, school setting, university part-time, university full-time, professional board (e.g., HPCSA), combination, other), and rural/urban/combo (Stamm, 2010). The ProQOL consists of 30 questions with 10 under each category of compassion satisfaction, burnout, and secondary traumatic stress (Stamm, 2010). The scale was adapted to suit the purpose and context of the study by changing the word “helper” to audiologist and listing the people audiologists help such as patients and students depending on work setting. **Phase 2**

Semi-structured interviews were used to collect data (Adeoye-Olatunde & Olenik, 2021). Participants were recruited from the phase 1 respondents. The interviews were conducted online using the MS Teams platform and were scheduled to take place a minimum of three times over seven days. The interview guide (Appendix B) was used to conduct the interviews. More interviews were scheduled based on the data obtained from the interviews. Participants chose to participate in the second phase of the study and were given timeslots to choose from.

Procedure

The ProQOL scale can be used without permission from the authors. However, the use of ProQOL requires that the Centre for Victims of Torture be credited (www.ProQOL.org), the scale is not sold, and no changes are made other than creating or using a translation, and/or replacing "helper" with a more specific term such as "nurse" (Stamm, 2009). Permission to distribute the scale online was sought from professional associations that include the South African Neurodevelopmental Therapy Association (SANDTA), South African Association of Audiologists (SAAA), National Black Speech Language Hearing Association (NABSLHA) and Rural Rehab South Africa (RuReSA) (Appendix C). As soon as permissions were obtained (Appendix D), ethics clearance was obtained (Appendix E) from the Human Research Ethics Committee (non-medical) of the University of the Witwatersrand (clearance number: H24/09/38). These organisations were also given a poster invite (Appendix F) to distribute.

In the first phase, the ProQOL was distributed online using the Research Electronic Data Capture Software (REDCap). REDCap provides a user-friendly dashboard where researchers can monitor and manage their projects, a user agreement was signed to use the software (Appendix G). The

ProQOL was loaded on the REDCap software and an online link was created. In the link, a research invite (Appendix H), the participant information sheet for phase 1 (Appendix I) that detailed the purpose and nature of the study, and the consent form for the study and audio recordings (Appendix J) were attached. There was also a button prompting the participants to click if they consent to the study and wish to proceed to the questionnaire. Participants were given three months to complete the survey. Participants were reminded to participate every month until the end of the data collection period. At the end of the questionnaire, there was an option that participants who were willing to take part in the second phase clicked to indicate their availability. These participants were asked to provide their contact details such as email addresses and telephone numbers so that the researcher could contact them for the interview. The researcher then contacted them on a separate day to make an appointment for the interview. These participants were provided with a participant information sheet for phase 2 (Appendix K).

The interviews were conducted online using MS Teams. The online platform offers convenience and flexibility in scheduling, making it much easier to arrange interviews at minimal cost to both the researcher and participants (de Villiers et al., 2021). The interview questions were developed based on the research objectives. These interviews offered an in-depth exploration of participants' perspectives on their professional quality of life, allowing the researcher to gather detailed responses (Knudsen et al., 2012). The semi-structured nature of these interviews allowed for open-ended questions that were tailored to the responses of the participants, thereby facilitating the extraction of rich and nuanced data (Cook, 2001). Each interview took approximately 30 to 45 minutes (Jamshed, 2014).

All interviews were audio recorded (Carpenter & Suto, 2008) and saved on a secured feature provided by these online platforms (Frey & Beth, 2023). For participants who chose an online platform such as Microsoft Teams, data compensation of approximately 50 MB was paid to the participants following the interview. A distress protocol (Appendix L) would have been used should a participant indicate during the interview that she/he is experiencing a high level of stress or emotional distress or exhibit behaviour such as a trembling voice, crying or shaking. The distress protocol was modified based on Draucker et al.'s (2009) guide on developing distress protocols for research on sensitive topics. No participants experienced a high level of emotional distress during this phase of the study.

Pilot Study

A pilot study was essential in assessing the feasibility and appropriateness of the research instruments and procedures (Irwin et al., 2008). The pilot study participants were not included in the main study to avoid bias (Creswell, 2009). For both phases, the adapted professional quality of life scale and interview guide were tested with two audiologists who work in different settings such as a hospital and academia. Participants from different settings can highlight potential barriers to participation and they can also highlight and address potential misunderstandings or varied interpretations of the questions. These participants were approached directly by the researcher to participate in the pilot study and met the inclusion criteria through email and verbal invitation. All participants were provided with a leaflet detailing the purpose of the study and a consent form for both phases (Appendix M). They completed the questionnaire and interview and provided feedback regarding the clarity, relevance, and ambiguity of the scale items and interview questions. Their feedback was collected through a feedback form (Appendix N), which helped gauge their understanding of the scale and identify any difficulties faced in responding to the items and aided in the addition of questions in the interview. The pilot participants were happy with the scale and interviews and therefore no changes were made on the scale and interview questions before data collection commenced.

Data Analysis

Phase 1

Incomplete responses from Phase 1 were reviewed during the data cleaning process. Responses missing substantial portions of key variables were excluded from the final dataset. 18 responses were excluded from the analysis. Raw data from the REDCap software was imported into statistical software SPSS version 29 (IBM Corporation, 2022) for analysis. Descriptive statistics, including the mean, median, and standard deviation (SD), were used to explore the data (Guetterman, 2019). Inferential statistical methods were applied to determine associations between the outcome variable and explanatory variables (Guetterman, 2019). In terms of scoring, ProQOL items 1, 4, 15, 17, and 29 were reverse-scored to ensure that negatively worded items contributed correctly to the overall measurement of the constructs, thereby improving validity following the ProQOL manual (Stamm, 2010). Descriptive statistics were calculated for each component, and

the score distributions were examined. Cronbach's Alpha coefficients were computed to assess the internal consistency reliability of the subscales and overall scale (Cho & Kim, 2015). Frequencies and percentages were used to describe the sample and the categorisation of the professional quality of life subscales.

Measures such as means, medians, standard deviations, ranges, skewness coefficients (between -1 and 1), kurtosis estimates (between -3 and 3) and a central limit theorem were used to assess normality (Mishra et al., 2019). Additionally, histograms were examined to evaluate the distribution of professional quality of life subscales (Mishra et al., 2019). Pearson's correlation coefficients were used to determine the strength, direction, and significance of relationships between professional quality of life subscales, resilience, and coping (CPE) (Puth et al., 2014). Independent sample t-tests were conducted to compare the professional quality of life scores and coping and resilience ratings between different participant groups based on age (18–35 years vs. 36 and above), qualification level (bachelor's vs. postgraduate), and years of experience (0–5 years vs. more than 5 years) (Kim, 2019). Missing data for one item was imputed in two cases based on the most frequent responses given by the participant for similar questions on the same scale, rather than using multiple imputation techniques. No formal normality tests such as the Shapiro-Wilk test were conducted. Furthermore, non-parametric tests were not used, as all variables were sufficiently normally distributed. No multinomial logistic regression, logistic regression, or chi-square tests were performed in this analysis.

Since the demographics of the participants were categorical, a sound analysis could not be done on all of the categories as some had small numbers. To perform a sound analysis, variables were dichotomised into two groups. An independent sample t-test was conducted to determine if there was a significant difference in the levels of BO, STS, CF, RES and CPE coping based on the participants' different categories. In terms of age, the categories of the participants were split into two groups namely 18 to 35 years (younger participants) and 36 or older (older participants). Analysis shows that the average levels of CS were higher for the older group (Table 3). For the compassion satisfaction subscale, equal variances were assumed as the sig-value was greater than 0.05, and the two-sided p-value was less than 0.05, indicating that the older participants in the

sample had statistically significant and higher levels of compassion satisfaction than the younger participants.

The two-sided p-values of the other subscales (BO, STS, CF, RES and CPE) were much greater than 0.05 indicating that there was no difference between the groups of older and younger participants (Table 6). The two-sided p-values of all subscales (CS, BO, STS, CF, RES and CPE) were much greater than 0.05 indicating that there was no difference between those who were less qualified and those who were more qualified. The levels of education did not significantly relate to any of the ProQol subscales (Table 7). In terms of years of experience, the categories of the participants were split into two groups namely, those with zero to five years' experience and those with more than five years' experience. The t-test analysis of this category shows that the average levels of CS were higher for those with more experience (Table 4). The independent sample test for this category showed that the two-sided p-value was less than 0.05, which indicates that the difference in levels of CS was significant and high for those with more than five years of work experience. The two-sided p-values of the other subscales (BO, STS, CF, RES and CPE) were much greater than 0.05 indicating that there was no difference between the groups of older and younger participants (Table 8).

Phase 2

The six steps to reflexive thematic analysis as proposed by Braun and Clarke (2006) were used to analyse the findings of the study. As per the recommendation of Braun and Clarke (2006), the researcher familiarised herself with the transcript data by reading through them. The transcriptions were submitted to the supervisors, who read through them, the researcher familiarised herself with the data and journaled her impressions. Once the researcher was familiar with the data, she discussed her impressions with her fellow researchers. Thereafter, the researcher moved to the second step of thematic analysis, which involves generating codes (Braun & Clarke, 2006). This allowed the researcher to discuss how her perceptions and ideas evolved as she further immersed herself in the data (Nowell, 2017). She tracked in a journal the discussions of her emerging impressions of what the data represent and how they relate. (Nowell, 2017). These codes were deductively generated and based on the data. Codes were developed during the data analysis process, allowing sub-themes to emerge naturally (Braun & Clarke, 2006). The researcher then

proceeded to the third step of thematic analysis, which involved searching for themes (Braun & Clarke, 2006).

Themes were identified at a semantic level inductively, using the generated codes. This approach allowed for a comprehensive understanding of the data by addressing its explicit content. (Braun & Clarke, 2006). The themes were presented to fellow researchers for review to check if any themes needed to be combined, refined, separated, or discarded (Braun & Clarke, 2006). Reviewing the themes is the fourth step of thematic analysis (Braun & Clarke, 2006). Once the researchers agreed on the themes, the themes were defined and their interaction with each other was noted, which is the fifth step of thematic analysis (Braun & Clarke, 2006). They then moved onto the last step of thematic analysis, which involves producing the report (Braun & Clarke, 2006). Nvivo 14 software was used to import the data and was a helpful tool for sorting, organising, and analysing the data (Dhakal, 2022). The researcher presented the themes and sub-themes, which were supported by interview extracts, in the results section of the dissertation. In the discussion section of the dissertation, the themes and sub-themes were discussed together with literature that pertains to the professional quality of life of South African audiologists.

Reliability and Validity

The ProQOL has a good construct validity as various studies have explored the reliability and validity of the ProQOL (Cilar et al., 2021; McClure & Anderson, 2022). Studies by McClure and Anderson (2022) and Cilar et al. (2021) explored the construct validity of the ProQOL scale by examining its factor structure. The results supported the three-factor model (compassion satisfaction, burnout, and secondary traumatic stress), which aligns with the theoretical framework of the ProQOL scale (Cilar et al., 2021; McClure & Anderson, 2022). This indicates that the scale validly measures the constructs it is intended to measure (Cilar et al., 2021; McClure & Anderson, 2022).

Multiple studies have assessed internal consistency using Cronbach's alpha, which evaluates how well the items measure the same underlying construct and found that acceptable reliability was achieved by the burnout subscale while compassion satisfaction and secondary traumatic stress reached a standard of high reliability (Geoffrion et al., 2019; Cilar et al., 2021; McClure & Anderson, 2022). Notably, compassion satisfaction and secondary traumatic stress are both above

the ideal threshold and allow for the subscales to be considered reliable and in both samples the burnout subscale is still in the acceptable range, but lower than its counterparts. (Geoffrion et al., 2019; McClure & Anderson, 2022). The ProQOL scale showed good internal consistency, meaning that the items within each subscale (compassion satisfaction, burnout, and secondary traumatic stress) were consistent with each other (Geoffrion et al., 2019; Cilar et al., 2021; McClure & Anderson, 2022). The Cronbach's alpha coefficients for these subscales were reported to be within acceptable ranges, indicating that the scale is a reliable tool for assessing professional quality of life (Geoffrion et al., 2019; Cilar et al., 2021; McClure & Anderson, 2022). Another aspect to consider is skewness and whether this has an impact on validity and reliability. The distribution and variability occurring in the data can be achieved by conducting a skewness investigation and this is often expressed as a symmetry level of data (Larasati et al., 2019).

Datasets obtained from survey studies are mostly skewed and have been found to not be normally distributed (Larasati et al., 2019; Cilar et al., 2021). If the data are skewed, it will be essential to consider whether this is expected or if it indicates a potential issue with the items (Larasati et al., 2019; Cilar et al., 2021). The inclusion of a pilot study further supports the reliability and validity of the ProQOL scale. Conducting a pilot study allows researchers to assess the feasibility of the scale, refine item wording, and detect potential issues before full-scale implementation (Irwin et al., 2008). In preliminary testing, the ProQOL demonstrated stable factor structure and internal consistency across a smaller sample, reinforcing its construct validity and reliability (Cilar et al., 2021). The pilot study also provided insights into potential item modifications and response patterns, ensuring that the scale accurately measures compassion satisfaction, burnout, and secondary traumatic stress. These findings align with previous research that supports the robustness of the ProQOL scale as a psychometric tool (Cilar et al., 2021; McClure & Anderson, 2022).

Trustworthiness

Trustworthiness ensures rigour in the study's second phase, given its qualitative nature. Credibility and confirmability, key aspects of trustworthiness, ensure the findings accurately represent audiologists and are free from bias (Gill et al., 2018). To enhance these, methodological triangulation will involve developing additional interview questions based on ProQOL responses. Participants also reviewed their analysed transcriptions for accuracy through member checking

(Birt et al., 2016). Additionally, piloting the interviews helped minimise interview bias, further supporting the study's credibility.

Reflexivity was used to ensure transparency throughout the research process. This was supported by using REDCap's automated audit trail to track data collection and analysis, and by maintaining a researcher-developed audit trail (Creswell & Miller, 2000). This includes raw data (consent forms, questionnaires, interview recordings), data analysis processes, and feedback from member checking and pilot studies. The audit trail helped uphold trustworthiness, particularly dependability and confirmability, by ensuring consistency and allowing for replication of the study (Pitney & Parker, 2009). Additionally, reflexive notes were kept throughout the study to document the researcher's thoughts, decisions, and potential biases. These notes provided insights into how the researcher's perspectives may have influenced data interpretation and ensured a more rigorous and reflective analytical process.

Transferability refers to the extent to which the findings can be generalised to other contexts (Stalmeijer et al., 2024). Therefore, since the experiences of participants who participated in the second part of the study were used to obtain a comprehensive understanding of their burnout, secondary traumatic stress and compassion satisfaction that was yielded from the first part of the study, the findings were transferred to or used to generalise South African audiologists' perceptions and experiences regarding professional impairment.

Ethical Considerations

Ethics clearance was obtained from the Human Research Ethics Satisfaction Committee (HREC) (non-medical) of the University of the Witwatersrand, Johannesburg, South Africa (clearance number: H24/09/38) (Appendix E). This research study upheld the ethical principles as articulated in the Declaration of Helsinki, a set of ethical principles regarding human experimentation developed by the World Medical Association (World Medical Association, 2013). This asserts the researcher's duty to ensure the welfare, rights, and health of the research participants (Emanuel et al., 2004). Before the commencement of the study, the research protocol was submitted to the Human Research Ethics Committee (HREC) of the University of Witwatersrand. This process was

intended to ensure that the research design and execution align with the necessary ethical guidelines and standards (Jelsma & Clow, 2005).

Autonomy

Emanuel et al. (2004) emphasise the importance of respect for the participants as this allows them to choose what will or will not happen to them depending on their ability to be autonomous. Autonomy refers to the right of individuals to make their own decisions freely and independently, without undue influence or coercion (Cook, 2001). In the study examining the professional quality of life of South African audiologists, efforts were made to uphold autonomy by ensuring that participants are fully informed about the study's objectives, procedures, and any potential risks or benefits, allowing them to make an informed decision about their participation (Cook, 2001). Participation was entirely voluntary, with no negative consequences for choosing to decline or withdraw from the study at any time. Additionally, participants' confidentiality was protected to safeguard their privacy and personal information. By implementing these measures, the study respected and supported the autonomy of the participants throughout the research process.

Informed Consent

Informed consent is a fundamental ethical principle in research that requires researchers to provide participants with all necessary information about a study, including its purpose, procedures, potential risks, and benefits (Emanuel et al, 2004). This process ensures that participants fully understand what their involvement entails and can make a voluntary and informed decision about whether to participate.

The relevant information relating to the study was provided to the participants and this includes the purposes, the research procedure and risks. The researcher intended to seek consent in appropriate formats to enable participants to make voluntary decisions regarding their participation in the study or withdrawal at any time, without prejudice or penalty (Emanuel et al, 2004). The consent form included a section that ensured that the participant understood the purpose of the study and requested permission to record the interviews for phase 2, along with a clause aimed at guaranteeing the participants' confidentiality and providing an option to withdraw from the study

at any time for both phases (World Medical Association Declaration of Helsinki, 2013; Creswell, 2013). Participants' consent was required for them to continue with the questionnaire for phase 1.

Confidentiality

The confidentiality of participants is expected to be protected by allowing them to choose a pseudonym and by clearly communicating what information may be shared and with whom, should they disclose any personal details. (Cook, 2001). A file storage service known as Google Drive was used to keep any data that could be used to identify participants, such as consent forms, coding sheets and audiotapes, to which only the researchers have access through their personal computers which are password-protected. Participants' identities were protected by removing identifying information from the data collected during the research process, including names, addresses, phone numbers, and any other potentially identifying details (Kaiser, 2009).

Secure and encrypted storage systems were used for storing electronic data to prevent unauthorised access. Secure channels such as encrypted emails or file-sharing platforms were used when transmitting data electronically (Kaiser, 2009). Participant data will have restricted access to authorised personnel only, such as researchers directly involved in the study. Electronic databases containing participant information will be password-protected and access-controlled (Kaiser, 2009). All individuals involved in the research, including researchers, assistants, and data analysts, signed confidentiality agreements outlining their responsibility to protect participant identities (Kaiser, 2009). By implementing these strategies, researchers can effectively protect the identity of participants and maintain confidentiality throughout the research process, ensuring that ethical standards are upheld and participants' trust is respected (Kaiser, 2009).

Justice

Justice is an ethical principle in research that emphasises fairness in the distribution of benefits and burdens (Jelsma & Clow, 2005). It ensures that all participants are treated equitably, with no group being unfairly burdened or excluded from the potential benefits of the research. Justice requires that the selection of participants is based on fair criteria and that no individual or group is exploited or disadvantaged in the research process (Jelsma & Clow, 2005).

In this study, justice was upheld by striving to ensure that the selection of participants was fair and inclusive. Audiologists from diverse backgrounds, practice settings, and geographic locations were given equal opportunity to participate. The study did not disproportionately target or exclude any group, and care was taken to ensure that the findings benefit all participants equitably. Additionally, the results of the study were shared in a way that contributes to the broader understanding and improvement of the professional quality of life for all South African audiologists, ensuring that the benefits of the research are widely distributed.

Beneficence

Following the principles of the Declaration of Helsinki, the researcher is committed to safeguarding the health and wellbeing of participants, an ethical principle known as beneficence (World Medical Association, 2013; Emanuel et al., 2004). Beneficence, as outlined by Beauchamp (2008), encompasses two major elements. First, it necessitates that researchers ensure the welfare of the participants by not harming them and by maximising potential benefits. Second, it demands the minimisation of any possible harm to both participants and society.

In addition to these measures, a distress protocol was implemented during the interview process. This protocol was adapted from Draucker et al.'s (2009) guidelines on developing distress protocols for research on sensitive topics. This protocol involved immediate cessation of the interview should the participant become visibly distressed. Additionally, they were provided with contact details for the Emthonjeni Centre of the University of Witwatersrand should they feel the need for professional emotional support following the interview. Confirmation from the centre was sought (Appendix O). This distress protocol and contact information for psychological support were clearly outlined in the participant information sheet. By implementing these safeguards, the research adheres to the principle of beneficence, respecting the emotional wellbeing of participants while striving to maintain the integrity and quality of the research (Emanuel et al., 2004).

Non-maleficence

Non-maleficence is a norm of avoiding the causation of harm (Beauchamp & Childress, 2001). Since the data was collected through interviews, the research, therefore, posed minimal risks of harm, however, the researchers took due care in ensuring that any risk and harm to the participants

were minimised and the benefits were maximised (Jelsma & Clow, 2005). There is a possibility that sensitive issues could have been uncovered, recognised or confronted for the first time during the research process; as such the researcher promoted the emotional integrity of the participants by establishing trust and openness by providing an outline of the roles of the participants and researcher before data collection commences (Jelsma & Clow, 2005). Building trusting relationships involves cultural sensitivity, community engagement, transparent communication, and a commitment to ethical principles (Parajuli & Horey, 2022). By fostering trust and collaboration, researchers can ensure that their work is respectful, inclusive, and beneficial to the communities they study. Vulnerable populations can include, but are not limited to, groups such as children and minors, elderly individuals, people with disabilities, ethnic and racial minorities, economically disadvantaged individuals, immigrants and refugees and individuals with mental health issues (Parajuli & Horey, 2022).

These groups may be vulnerable due to limited access to resources, social stigmatisation, health disparities, or legal and political marginalisation. Building trusting relationships can involve understanding and respecting the cultural backgrounds and norms of the population (Parajuli & Horey, 2022). This includes language, customs, and social structures and involving community leaders and organisations in the research process. Their endorsement can enhance credibility and trust, being open about the research goals, processes, and outcomes and regularly updating the community and participants on the progress and findings (Parajuli & Horey, 2022). Participants should be approached with empathy and one should actively listen to their concerns and show genuine respect for their experiences and perspectives (Parajuli & Horey, 2022). One should empower the community by including capacity-building components in the research, such as training, resources, or educational sessions. Practical strategies can include developing communication materials that are culturally and linguistically appropriate and using visuals and plain language to ensure comprehension (Parajuli & Horey, 2022). The research activities should be conducted in locations that are convenient and comfortable for the population. Fair compensation for participants' time and contributions should be provided, showing a commitment to the community beyond the duration of the research. This can include continued engagement or follow-up projects that benefit the population (Parajuli & Horey, 2022).

Researching vulnerable populations ethically and effectively requires a deep commitment to understanding and addressing their unique needs and challenges. Building trust involves ongoing engagement, respect, and a willingness to adapt research practices to be more inclusive and responsive to the community's concerns and priorities. By adopting these principles and strategies, researchers can foster meaningful and ethical collaborations that ultimately benefit both the populations studied and the broader field of research.

Chapter 4: Results

This chapter presents the findings of the study, based on the data collected during the research process. It will provide a clear and detailed presentation of the results, including both qualitative and quantitative data, where applicable. The chapter will use tables, charts, and descriptive statistics to organize and illustrate the findings. Key patterns, trends, and significant relationships will be highlighted, and the data will be analysed concerning the research questions and objectives.

The results are presented according to the specific objectives outlined in the methodology. The first phase of the study, which was quantitative, described the measurement and associations of professional quality of life variables (compassion satisfaction, compassion fatigue, burnout, and secondary traumatic stress) among South African audiologists as well as their relationships with demographic factors. The second, qualitative phase explored the influence of resilience on professional quality of life, perceptions of available resources, and strategies audiologists may use to enhance their professional quality of life. Given the nature of the data, findings related to the associations among professional quality of life variables and demographic factors have been combined for clarity. Similarly, qualitative findings on available resources and strategies for improvement have been presented separately.

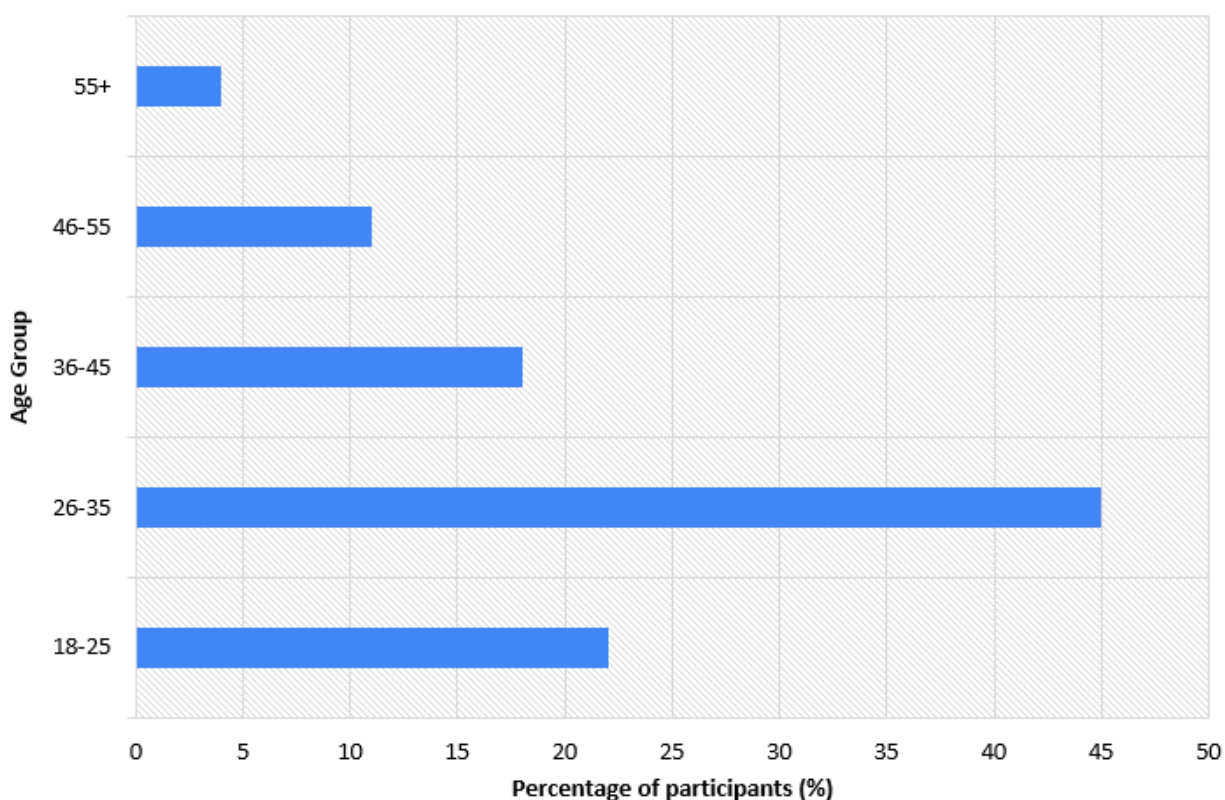
Participant Demographics

Phase 1

A total of 73 South African audiologists participated in the study. Of the total, the majority of the participants (49%; n=36) were Black African people, with Coloured people (5%; n=4) representing the smallest group. Only 3% (n=2) of the participants did not indicate their racial group. Participants were disproportionately distributed, with a majority of participants (92%; n= 67) being females and only 8% (n=6) being males. The majority of the participants (45%; n=33) were >25 years of age, ranging between 26 to 35 years, with only 4% (n=3) being over 55 years of age (see Figure 1). Table 1 below shows a distribution of participants' demographic categories.

Table 1*Demographic characteristics distribution of the participants (n=73)*

Demographic variable	Participants (N=73)
Gender	
Male	6 (8%)
Female	67 (92%)
Race	
African	36 (49%)
White	18 (25%)
Indian	13 (18%)
Coloured	4 (5%)
Missing	2 (3%)
Years of experience	
0-5	28 (38%)
6 to 10	19 (26%)
11 to 15	10 (14%)
16 to 20	5 (7%)
20+	11 (15%)

Figure 1*Participants' distribution by age group*

Most participants (38%; n=28) had zero to five years of working experience, with only 7% (n=5) having the least amount of working experience. The majority of the participants (63%; n=46) completed their undergraduate bachelor's degree (e.g. BSc Audiology), with few participants having postgraduate degrees (see Figure 2). Participants were disproportionately distributed in different work settings, with most participants working either in government hospitals (36%; n=26) or private sectors (41%; n=30). Very few participants were working in school settings – either in government schools (4%, n=3) or private schools (3%, n=2) (see Figure 3).

Figure 2

Participants' distribution by qualification

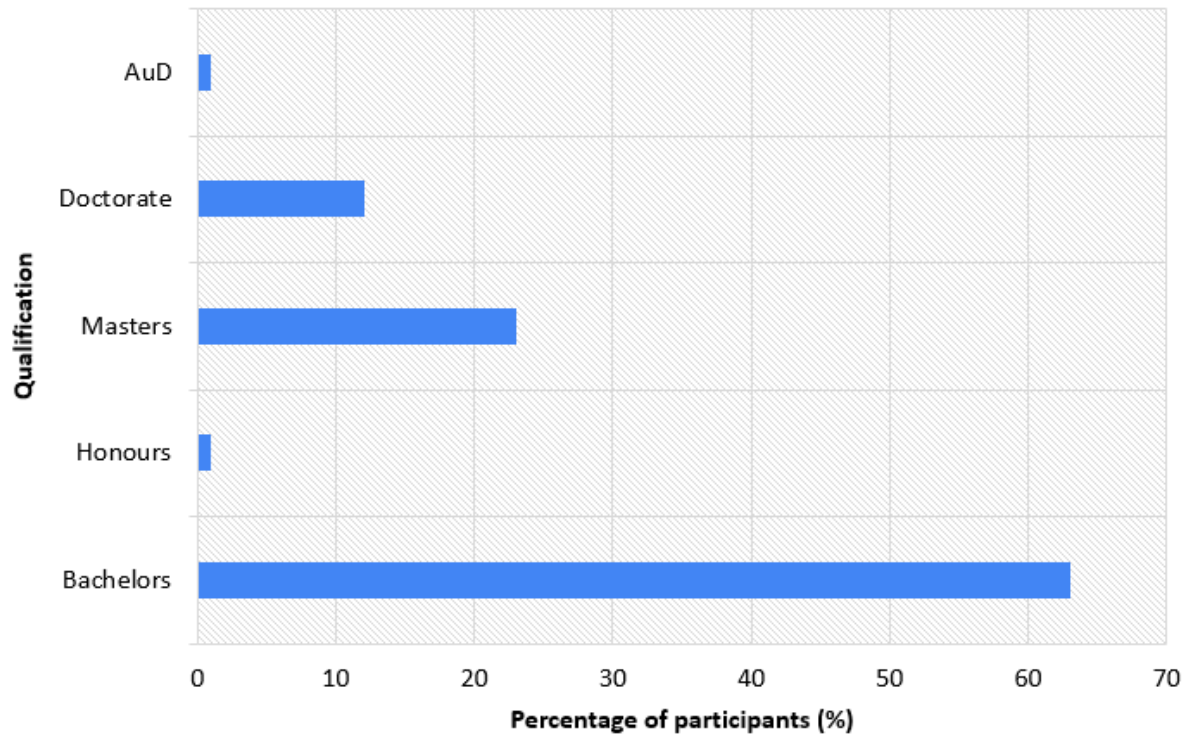
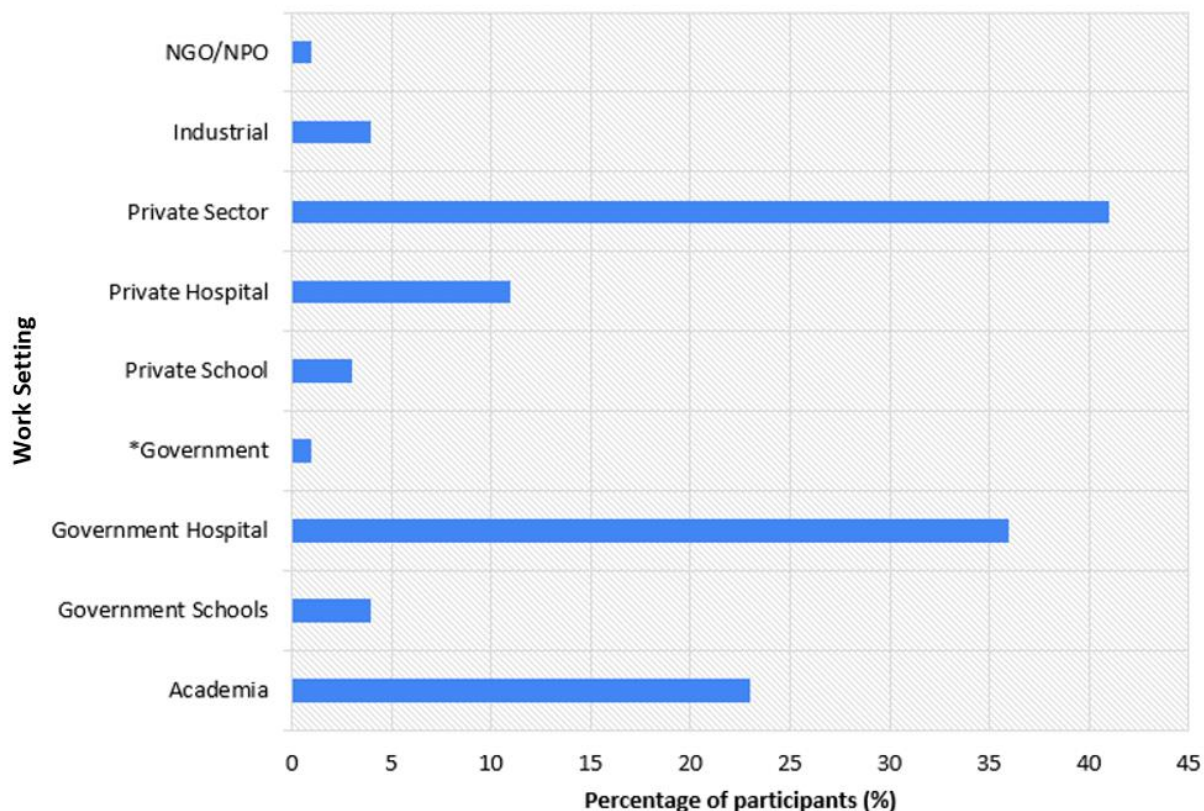


Figure 3*Participants' distribution by work setting***Phase 2**

Fifteen participants volunteered to take part in the interviews. The sample comprised fourteen females and only one male. Nine of the participants were African Black people, two were White people, while there was one Indian and one Coloured participant. There was only one participant who preferred not to disclose their ethnicity (Table 2). Of the participants interviewed, several of them (n=8) were working in government sectors or private sectors. Few participants (n=4) were working in academics.

Table 2*Participants' demographic characteristics*

Participant's ID	Highest Qualification	Ethnicity	Age	Gender	Years of experience	Work setting
P6	Master's	African	36-45	Female	11 to 15	Government Private
P8	Doctorate	African	46-55	Female	20+	Academic
P12	Bachelors	African	18-25	Female	0 to 5	Private
P21	Bachelors	Coloured	26-35	Female	0 to 5	Private
P25	Bachelors	White	18-25	Female	0 to 5	Private
P30	Bachelors	Indian	18-25	Female	0 to 5	Government
P33	Masters	Indian	26-35	Female	6 to 10	Academic Private
P34	Bachelors	African	36-45	Female	6 to 10	Private
P44	Bachelors	African	26-35	Female	6 to 10	Government
P49	Bachelors	African	18-25	Female	0 to 5	Government
P53	Bachelors	African	26-35	Female	0 to 5	Government
P76	Bachelors	White	36-45	Female	16 to 20	Government
P78	Doctorate	Prefer not to say	55+	Female	20+	Academic Private Government
P82	Bachelors	African	26-35	Female	0 to 5	Academic
P89	Doctorate	African	26-35	Male	11 to 15	Government

Reliability of ProQol

The alpha scale reliability reported is 0.88 for the compassion satisfaction (CS) subscale, 0.75 for the burnout (BO) subscale, and 0.81 for the secondary traumatic stress (STS) subscale (Stamm, 2010). Table 3 shows the internal consistency reliability of the scale which was checked using Cronbach's alpha and it was 0.904 for CS, 0.823 for BO, 0.791 for STS and 0.856 for CF.

Table 3

Table showing reliability statistics for ProQOL subscales

Reliability statistics		
	Cronbach's Alpha	N of Items
CS	.904	10
BO	.823	10
STS	.791	10
CF	.856	20

Levels of professional quality of life and their association with demographic variables

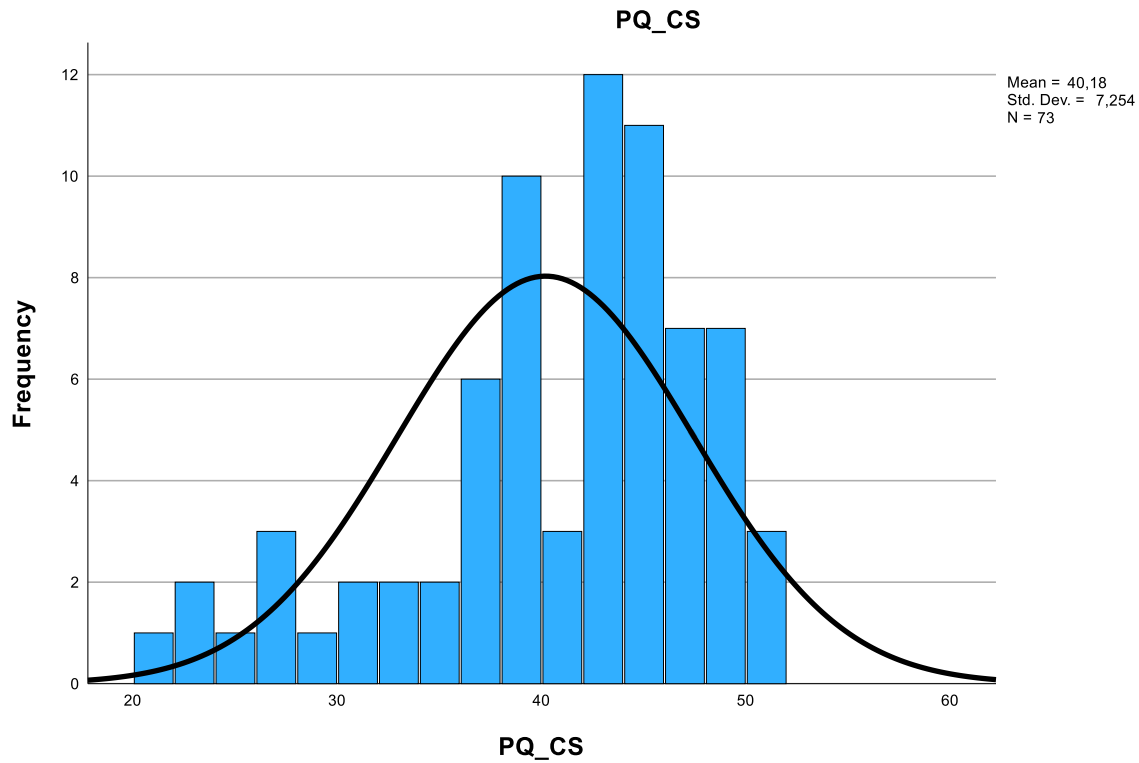
The first objective of the current study was to measure and describe the levels of compassion satisfaction, compassion fatigue, burnout, and secondary traumatic stress among South African audiologists using the ProQOL scale. Objective 3 aimed to determine the association between the professional quality of life of South African audiologists and other variables such as demographic variables. Tables 4 to 6 indicate the mean scores of compassion satisfaction (CS), burnout (BO) secondary traumatic stress (STS), and compassion fatigue (CF) amongst the South African audiologists. Tables 7 to 9 indicate the independent samples t-tests for the equality of means between CS, BO, STS and CF.

Compassion satisfaction

The overall mean score for compassion satisfaction was calculated to be 40.18, with a standard deviation of 7.25 (Figure 4). This indicates a moderate level of compassion satisfaction among the participants. The mean score for CS was higher ($M=42.92$; $SD= 5.64$) amongst the older participants aged 36 years and older. The difference between the mean score in the age groups was statistically significant ($P=0.023$) (Table 7). However, there was no statistically significant difference in the mean scores of CS across the different levels of qualifications (e.g. Undergraduate vs Postgraduate) ($P=0.5$) (Table 8). In terms of years of experience, participants who have been working for over five years have a higher mean score ($M=41.89$; $SD= 6.5$) for CS than those who have been working for less than five years ($M=37.43$; $SD=7.63$), and this difference is statistically significant ($P=0.01$) (Table 9), resulting in the rejection of null hypothesis (H_0) in favour of the alternative hypothesis (H_1).

Figure 4

The overall mean Compassion Satisfaction scores for participants

**Table 4**

The t-test results for age category between compassion satisfaction (CS), burnout (BO) and secondary traumatic stress (STS), compassion fatigue (CF), resilience (RES) and coping (CPE).

	Age	N	Mean	Std. Deviation	Std. Error Mean
CS	18 to 35	49	38,84	7,622	1,089
	36 or more	24	42,92	5,641	1,151
BO	18 to 35	49	24,06	6,430	,919
	36 or more	24	23,92	7,419	1,514
STS	18 to 35	49	22,12	6,499	,928
	36 or more	24	22,58	6,234	1,273
CF	18 to 35	49	46,18	10,727	1,532
	36 or more	24	46,50	12,318	2,514
RES	18 to 35	49	3,80	,763	,109
	36 or more	24	3,83	1,090	,223
CPE	18 to 35	49	3,35	1,032	,147
	36 or more	24	3,29	1,160	,237

Table 5

The t-test results for years of experience between compassion satisfaction (CS), burnout (BO) and secondary traumatic stress (STS), compassion fatigue (CF), resilience (RES) and coping (CPE)

	Years of experience	N	Mean	Std. Deviation	Std. Error Mean
CS	0-5	28	37,43	7,632	1,442
	More than 5	45	41,89	6,523	,972
BO	0-5	28	24,96	6,915	1,307
	More than 5	45	23,42	6,604	,984
STS	0-5	28	22,71	7,282	1,376
	More than 5	45	22,00	5,808	,866
CF	0-5	28	47,68	11,225	2,121
	More than 5	45	45,42	11,206	1,670
RES	0-5	28	3,64	,780	,147
	More than 5	45	3,91	,925	,138
CPE	0-5	28	3,29	1,150	,217
	More than 5	45	3,36	1,026	,153

Table 6

The t-test results for qualifications between compassion satisfaction (CS), burnout (BO) and secondary traumatic stress (STS), compassion fatigue (CF), resilience (RES) and coping (CPE)

	Qualification	N	Mean	Std. Deviation	Std. Error Mean
CS	Bachelors	46	39,72	7,020	1,035
	Postgraduate	26	40,92	7,858	1,541
BO	Bachelors	46	23,78	6,425	,947
	Postgraduate	26	24,19	7,359	1,443
STS	Bachelors	46	21,72	6,632	,978
	Postgraduate	26	22,96	5,862	1,150
CF	Bachelors	46	45,50	10,926	1,611
	Postgraduate	26	47,15	11,675	2,290
RES	Bachelors	46	3,85	,788	,116
	Postgraduate	26	3,73	1,041	,204
CPE	Bachelors	46	3,50	1,006	,148
	Postgraduate	26	3,04	1,148	,225

Table 7

The t-test results for the equality of means in the age category between compassion satisfaction (CS), burnout (BO) and secondary traumatic stress (STS), compassion fatigue (CF), resilience (RES) and coping (CPE).

		Levene's Test for Equality of Variances		t-test for Equality of Means							
		F	Sig.	t	df	Significance		Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
						One-Sided p	Two-Sided p			Lower	Upper
CS	Equal variances assumed	2,724	,103	-2,326	71	,011	,023	-4,080	1,754	-7,578	-,582
	Equal variances not assumed			-2,574	59,667	,006	,013	-4,080	1,585	-7,250	-,910
BO	Equal variances assumed	,458	,501	,086	71	,466	,932	,145	1,686	-3,217	3,506
	Equal variances not assumed			,082	40,420	,468	,935	,145	1,771	-3,434	3,723
STS	Equal variances assumed	,012	,914	-,288	71	,387	,774	-,461	1,598	-3,647	2,726
	Equal variances not assumed			-,293	47,547	,386	,771	-,461	1,575	-3,629	2,707
CF	Equal variances assumed	,430	,514	-,113	71	,455	,911	-,316	2,807	-5,914	5,281
	Equal variances not assumed			-,107	40,577	,457	,915	-,316	2,945	-6,265	5,632
RES	Equal variances assumed	4,925	,030	-,170	71	,433	,865	-,037	,220	-,476	,401
	Equal variances not assumed			-,151	34,418	,440	,881	-,037	,248	-,541	,466
CPE	Equal variances assumed	,193	,662	,206	71	,419	,837	,055	,268	-,479	,589
	Equal variances not assumed			,198	41,302	,422	,844	,055	,279	-,508	,618

Table 8

The t-test results for the equality of means in the qualifications category between compassion satisfaction (CS), burnout (BO) and secondary traumatic stress (STS), compassion fatigue (CF), resilience (RES) and coping (CPE)

		Levene's Test for Equality of Variances		t-test for Equality of Means							
		F	Sig.	t	df	Significance		Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
						One-Sided p	Two-Sided p			Lower	Upper
CS	Equal variances assumed	,595	,443	-,670	70	,252	,505	-1,206	1,799	-4,793	2,381
	Equal variances not assumed			-,649	47,291	,260	,519	-1,206	1,856	-4,940	2,528
BO	Equal variances assumed	,287	,594	-,247	70	,403	,806	-,410	1,662	-3,724	2,905
	Equal variances not assumed			-,237	46,398	,407	,813	-,410	1,726	-3,884	3,065
STS	Equal variances assumed	,040	,843	-,796	70	,214	,429	-1,244	1,562	-4,360	1,872
	Equal variances not assumed			-,824	57,533	,207	,413	-1,244	1,509	-4,266	1,777
CF	Equal variances assumed	,625	,432	-,602	70	,275	,549	-1,654	2,748	-7,134	3,826
	Equal variances not assumed			-,591	49,181	,279	,557	-1,654	2,799	-7,279	3,971
RES	Equal variances assumed	2,442	,123	,538	70	,296	,592	,117	,218	-,317	,551
	Equal variances not assumed			,498	41,385	,310	,621	,117	,235	-,357	,591
CPE	Equal variances assumed	,220	,641	1,777	70	,040	,080	,462	,260	-,057	,980
	Equal variances not assumed			1,712	46,515	,047	,094	,462	,270	-,081	1,004

Table 9

The t-test results for the equality of means in years of experience between compassion satisfaction (CS), burnout (BO) and secondary traumatic stress (STS), compassion fatigue (CF), resilience (RES) and coping (CPE)

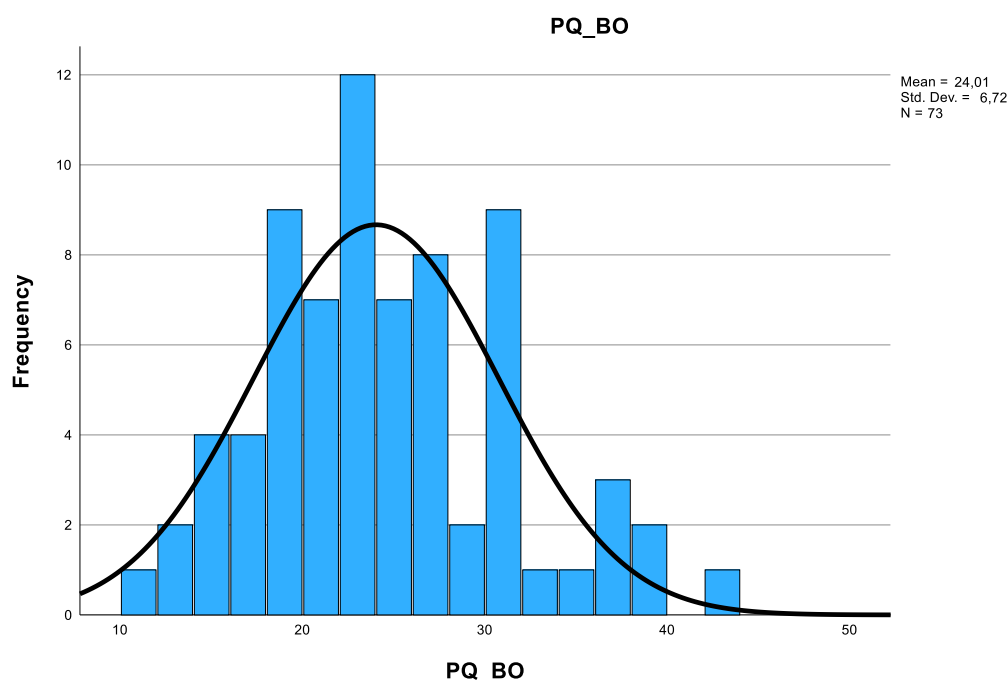
		Levene's Test for Equality of Variances		t-test for Equality of Means							
		F	Sig.	t	df	Significance		Mean Differenc e	Std. Error Differenc e	95% Confidence Interval of the Difference	
						One- Sided p	Two- Side d p			Lower	Upper
CS	Equal variances assumed	1,057	,307	- 2,660	71	,005	,010	-4,460	1,677	- 7,804	- 1,117
	Equal variances not assumed			- 2,564	50,69 6	,007	,013	-4,460	1,740	- 7,953	-,967
BO	Equal variances assumed	,009	,923	,953	71	,172	,344	1,542	1,618	- 1,685	4,769
	Equal variances not assumed			,943	55,39 6	,175	,350	1,542	1,636	- 1,736	4,820
STS	Equal variances assumed	1,286	,261	,463	71	,322	,645	,714	1,542	- 2,361	3,790
	Equal variances not assumed			,439	47,98 8	,331	,662	,714	1,626	- 2,555	3,983
CF	Equal variances assumed	,439	,510	,836	71	,203	,406	2,256	2,699	- 3,125	7,638
	Equal variances not assumed			,836	57,33 7	,203	,407	2,256	2,700	- 3,150	7,663
RES	Equal variances assumed	,014	,908	- 1,277	71	,103	,206	-,268	,210	-,687	,151
	Equal variances not assumed			- 1,329	64,57 9	,094	,189	-,268	,202	-,671	,135
CPE	Equal variances assumed	,585	,447	-,270	71	,394	,788	-,070	,259	-,586	,446
	Equal variances not assumed			-,263	52,46 3	,397	,794	-,070	,266	-,603	,463

Participants demonstrated compassion when they expressed P30 *“That would be when I successfully complete a treatment”* (line 175). It seems that their work is fulfilling because participants, such as P21 *“which is like it just brings so much fulfilment because you can see this patient is benefiting from it.”* (lines 136-137). Relatedly, it seems that they found their work rewarding because they are making a difference in their patients’ lives, as can be seen in the report by P25 *“what makes it rewarding is the fact that you can see the difference that you're making in someone's life”* (lines 134-135). Additionally, training future audiologists also seemed to provide them with fulfilment/satisfaction because P33 reported *“And I also feel like I'm training future audiologists who might do great things for the future in our profession”* (line 213-214) and *“I love academia when students understand what I teach, and they use it practically and it makes them better audiologists. So I feel like if I'm training someone to be a good audiologist, it's going to change many of our patients lives that need the help effectively”* (line 204-207) and so did P82 *“I can be there for students when they need me to because some students are dealing with so much that they feel like as lecturers we don't give them room to be vulnerable”* (lines 112-114).

Burnout

The overall mean score for burnout was calculated to be 24.01, with a standard deviation of 6.72 (Figure 5). This indicates a low level of burnout among the participants. The mean score for BO was higher (M=24.06; SD=6.43) amongst the younger group aged 18 to 35 years old.

However, the difference between the mean scores in the age groups was not statistically significant ($p=0.9$) (Table 7). There was also no statistically significant difference in the mean scores of BO across the different levels of qualifications (e.g. Undergraduate vs Postgraduate) ($P=0.3$) (Table 8). In terms of years of experience, the results revealed that participants who have been working for less than five years have higher mean scores (M=24.96; SD=6.92) for BO than those who have been working for more than five years (M=23.42; SD= 6.6), but this difference was not statistically significant ($P=0.3$) (Table 9). As such, we fail to reject the null hypothesis (H_0).

Figure 5*The overall mean Burnout scores for participants*

Burnout emerged as a major theme, characterised by depersonalisation, professional inefficiencies and emotional exhaustion due to high workloads and stressful conditions. Audiologists described feeling overwhelmed, with some even contemplating leaving the profession. Professional inefficiencies are evident as a result of resource constraints, limited growth opportunities, and inadequate compensation, leading to frustration and feelings of underachievement. Emotional exhaustion stems from overwhelming workloads, understaffing, and a lack of support, resulting in physical and mental fatigue. Depersonalisation is also a prominent characteristic, with professionals distancing themselves from patients due to repetitive, emotionally draining interactions and the pressures of high patient expectations. These combined factors paint a picture of a profession struggling with burnout, affecting both personal well-being and professional effectiveness.

As reflected in the quotes, in Table 10, these factors reflect a pervasive and debilitating experience that impacts both the personal well-being of professionals and the quality of care they provide.

Table 10*Participant quotes related to burnout sub-themes*

Sub-themes	Interview excerpts
Emotional exhaustion	P25 <i>"last year I was very burnt out and I was very, you know, frustrated didn't want to go to work anymore. (line 68) The stress is high."</i> (lines 81-82) P30 <i>"I feel when I just started off you know how it is when you've just like started off comm serve. You want to do everything you excited for everything but like now towards the end it's become a bit more like I just feel like I'm really tired all the time."</i> (lines 211-213) <i>"You can't get angry with the patient or you can't let them see that it's affecting you. You know. So doing that, I think it emotionally drains you also because like it does use up a lot of energy to also do that."</i> (lines 349-351)
Depersonalisation	P30 <i>"we have quite a high patient, quite a high outpatient load. (lines 248-249) "I have to put them on the waiting list again or you know like I tend to yeah and then detachment I guess I do also feel that also."</i> (lines 215-216) P76 <i>"Oh where you actually get empathy fatigue where you actually start not empathising with people because you empathise so much"</i> (lines 718-719)
Professional inefficiencies	P33 <i>"So with government, why I say it's extremely stressful is because of the lack of resources. (lines 152-153)</i>

	<i>“The shortage of hearing aids was challenging.” (line 247)</i> <i>“It was prohibiting me from performing my best because of the difficulty in accessing the resources.” (lines 513-514)</i> P89 <i>“the lack of resources prevents me from being the best at my job professionally” (lines 324-325)</i>
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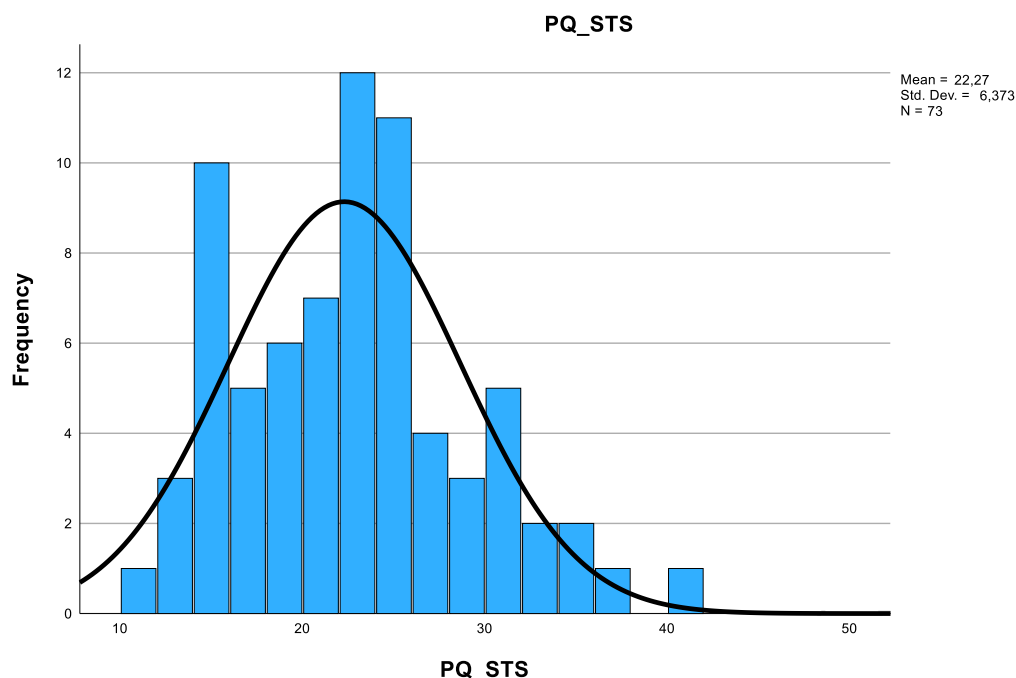
Secondary Traumatic stress

The overall mean score for STS was calculated to be 22.27, with a standard deviation of 6.37 (Figure 6). This indicates a low level of STS among the participants. The mean score for STS was higher (M=22.58; SD= 6.23) amongst the older group aged 36 years and above.

However, the difference in the mean score between age groups was not statistically significant ($p=0.7$) (Table 7). There was also no statistically significant difference in the mean scores of STS across the different levels of qualifications (e.g. Undergraduate vs Postgraduate) ($P=0.4$) (Table 8). In terms of years of experience, participants who have been working for less than five years have a higher mean score (M=22.71; SD=7.3) for STS than those who have been working for more than five years (M=22; SD= 5.81), and this difference is statistically not significant ($P=0.6$) (Table 9). There is no strong evidence against null hypothesis (H_0).

Figure 6

The overall mean Secondary Traumatic Stress scores for the participants



STS is evident in the emotional toll that patient suffering takes on professionals. Many audiologists experience deep emotional distress when faced with the hardships their patients endure. P30 expressed how difficult it is to remain detached, stating, *"Just like emotionally, it's kind of getting to me 'cause some patients, their situation is a bit like you really feel for them. Like, even if you try not to, you just feel for them."* (lines 289-291). The inability to provide adequate care due to limited resources further exacerbates this strain, as P53 shared, *"It's always great to know that I made some sort of a difference (lines 103-104) just that sometimes you don't have the equipment or the supplies that you need in order to help everyone."* (lines 62-63). Additionally, working with vulnerable populations, such as children, intensifies the emotional burden, with one P76 describing their environment as *"the most emotionally challenging because you become so invested. A- because they're children."* (lines 495-496). The weight of these experiences extends beyond direct patient care, as another participant, P78 noted *"I've heard some pretty horrendous things from both patients and students that have moved me profoundly and that have been difficult for me emotionally."* (lines 304-305). These reflections highlight the profound emotional weight carried

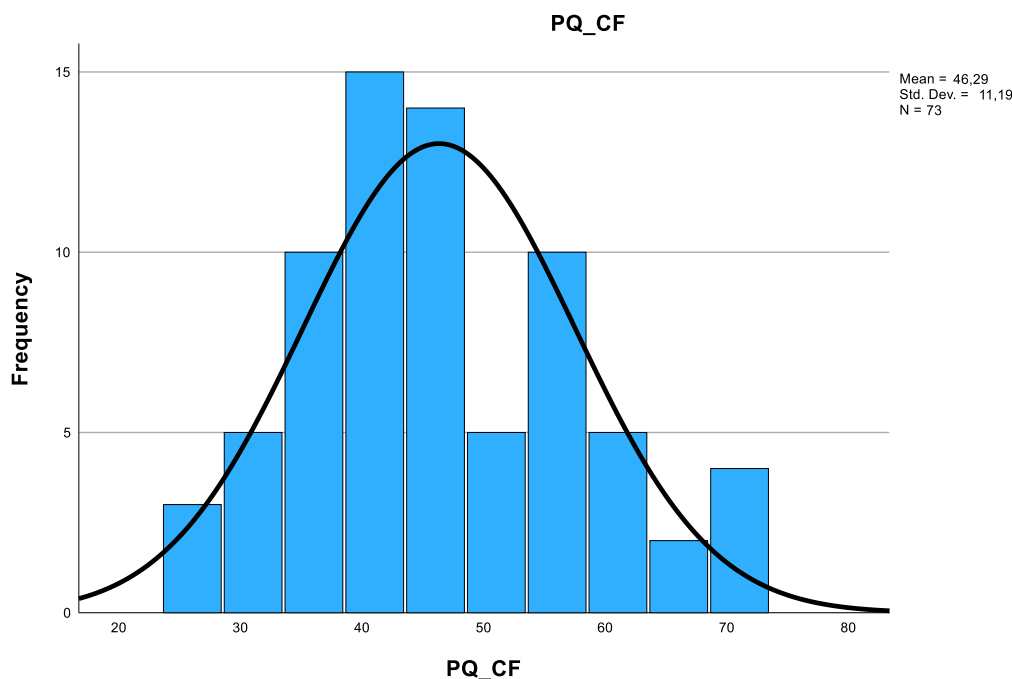
by audiologists, contributing to STS and emphasising the need for adequate support and coping strategies.

Compassion Fatigue

The overall mean score for CF was calculated to be 46.29, with a standard deviation of 11.19 (Figure 7). This indicates a moderate level of CF among the participants. The mean score for CF was higher ($M=46.5$; $SD=12.32$) amongst the older group aged 36 years and above. However, the difference in the mean score between age groups was not statistically significant ($p=0.9$) (Table 7). There was also no statistically significant difference in the mean scores of CF across the different levels of qualifications (e.g. Undergraduate vs Postgraduate) ($P=0.5$) (Table 8). In terms of years of experience, the results revealed that participants who have been working for less than five years have a higher mean score ($M=47.68$; $SD=11.23$) for CF than those who have been working for more than five years ($M=45.42$; $SD= 11.21$), but this difference is statistically not significant ($P=0.4$) (Table 9).

Figure 7

Histogram depicting the spread of Compassion Fatigue scores and normality curve



Compassion fatigue among audiologists is evident in the physical and emotional exhaustion that stems from patient care. The demands of working with patients, especially those who are difficult or require extensive support, contribute to heightened stress levels: P30 *“It does cause a bit more stress because sometimes if the patient is a bit difficult, you obviously have to deal with them, be patient on your part like you are the professional.”* (lines 347-349). Financial and logistical challenges further compound this fatigue, as professionals navigate *“budget constraints, (line 253) time constraints”* (line 271) as mentioned by P6. Empathy overload is another key factor contributing to distress, as continuous exposure to patient suffering can lead to emotional exhaustion: P76 *“They tend to get empathy fatigue and then just stagnate and they don’t try and better themselves.”* (lines 796-797). The overwhelming nature of long waiting lists and understaffing further exacerbates this burden: P34 *“It’s just overwhelming because we have long waiting lists and we are short staffed.”* (lines 197-198).

Moral distress and frustration arise when professionals are unable to provide optimal care due to systemic limitations. The inability to meet patient needs promptly can make the work feel less rewarding: P30 *“Then it becomes a little not so satisfying ‘cause it’s a case of we seeing them, and then we tell them, since this is a public hospital, we have to place you onto the waiting list.”* (lines 132-134). Additionally, limited access to necessary resources creates a sense of professional inadequacy: P33 *“It was prohibiting me from performing my best because of the difficulty in accessing the resources.”* (lines 513-514). These challenges highlight the emotional toll that compassion fatigue takes on audiologists, impacting their well-being and overall professional satisfaction.

Relationship between the professional quality of life variables

The second objective aimed to determine the association between the professional quality of life variables among South African audiologists (compassion satisfaction vs compassion fatigue, compassion satisfaction vs burnout, compassion satisfaction vs secondary traumatic stress, compassion fatigue vs burnout, compassion fatigue vs secondary traumatic stress, burnout vs secondary traumatic stress). Table 11 below illustrates the association between the professional quality of life variables among South African audiologists. There was a strong and significantly negative correlation between burnout and compassion satisfaction ($r = -0.733$). These findings

suggest that South African audiologists who experience higher levels of BO tend to report lower levels of CS and vice versa. Thus, the null hypothesis (H_0), which posited no correlation between CS and BO, was rejected in favour of the alternative hypothesis (H_1). An unexpected weak, though not significant, negative correlation was observed between secondary traumatic stress and compassion satisfaction ($r = -0.223$) ($p = <0.057$), and therefore, H_0 was not rejected. A moderate, positive, and significant correlation between secondary traumatic stress and burnout was observed ($r = 0.460$), and a moderate and significant negative correlation between compassion fatigue and compassion satisfaction ($r = -0.567$). This leads to the rejection of H_0 and supporting the existence of a relationship between these two variables.

There was a moderate and positive correlation between resilience and compassion satisfaction ($r = 0.429$). A moderate and negative correlation was observed between RES vs CF ($r = -0.556$); BO and RES ($r = -0.471$), and STS and RES ($r = -0.480$). These findings suggest that while audiologists with higher resilience are more likely to experience greater CS, this is not the case with CF, BO and STS. A moderate and positive correlation was observed between coping and CS ($r = 0.414$), suggesting that audiologists who employ effective coping strategies are more likely to experience CS. But there was an inverse and negative correlation observed between coping and BO ($r = -0.473$); coping and STS ($r = -0.454$), and coping and CF ($r = -0.543$), suggesting interestingly that coping mechanisms employed by audiologists may not necessarily reduce BO, STS and CF. The null hypothesis (H_0) has been rejected as all correlations between quality of life variables were statistically significant ($p = <0.001$), except between secondary traumatic stress and compassion satisfaction (see Table 11).

Table 11

The correlations between compassion satisfaction (CS), burnout (BO) and secondary traumatic stress (STS), compassion fatigue (CF), resilience (RES) and coping (CPE) scores

	Pearson Correlation	Sig. (2- tailed)	95% Confidence Intervals (2- tailed) ^a	
			Lower	Upper
CS - BO	-,733	<.001	-,824	-,605
CS - STS	-,223	,057	-,431	,007
CS - CF	-,567	<.001	-,705	-,388
CS - RES	,429	<.001	,221	,600
CS - CPE	,414	<.001	,203	,588
BO - STS	,460	<.001	,258	,624
BO - CF	,863	<.001	,789	,912
BO - RES	-,471	<.001	-,633	-,270
BO - CPE	-,473	<.001	-,634	-,272
STS - CF	,846	<.001	,765	,901
STS - RES	-,480	<.001	-,640	-,281
STS - CPE	-,454	<.001	-,620	-,250
CF - RES	-,556	<.001	-,697	-,374
CF - CPE	-,543	<.001	-,687	-,357
RES - CPE	,692	<.001	,549	,795

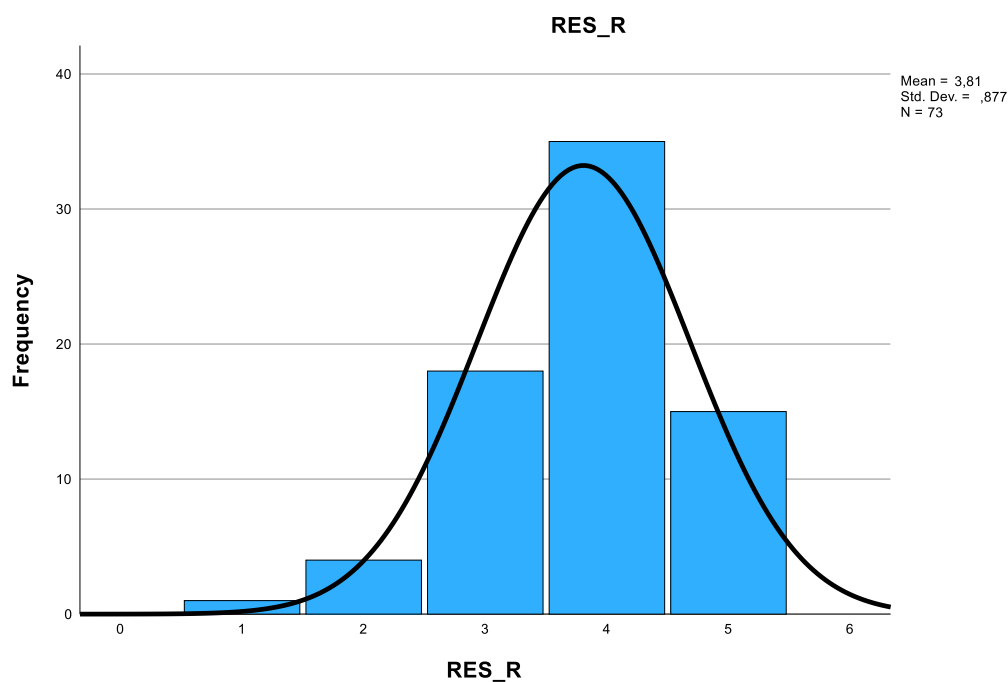
a. Estimation is based on Fisher's r-to-z transformation.

Influence of resilience on professional quality of life

The fourth objective aimed to explore the influence of resilience on South African audiologists' professional quality of life. The overall mean score for RES was calculated to be 3.81, with a standard deviation of 0.87 (Figure 8). This indicates a moderate to high level of RES among the participants. The mean score for RES was higher ($M=3.83$; $SD= 1.09$) amongst the older group aged 36 years and above. However, the difference in the mean score between age groups was not statistically significant ($p=0.8$) (Table 7). There was also no statistically significant difference in the mean scores of RES across the different levels of qualifications (e.g. Undergraduate vs Postgraduate) ($P=0.5$) (Table 8). In terms of years of experience, participants who have been working for more than five years have a higher mean score ($M=3.91$; $SD= 0.93$) for RES than those who have been working for less than five years ($M=3.64$; $SD=0.8$), and this difference is statistically not significant ($P=0.2$) (Table 9). The null hypotheses (H_0) were not rejected as no significant relationships were observed

Figure 8

The overall mean Resilience scores for participants



Resilience emerged as a significant theme, with audiologists demonstrating various coping strategies to navigate the challenges of their profession. Emotional regulation and coping strategies played a vital role in maintaining resilience, as professionals emphasized the importance of perseverance and maintaining a balanced perspective. P25 described resilience as *"the ability to go on and it's the ability to bounce back,"* (lines 282-283) further highlighting the necessity of not internalising negative interactions *"You can't let it get to you because maybe that's just someone that's having a bad day and they're taking it out on you, unfortunately."* (lines 293-295). Similarly, P30 emphasized the need to remain composed in the face of adversity, stating, *"You can't get angry with the patient or you can't let them see that it's affecting you."* (lines 349-350). The capacity to push forward despite challenges was a recurring sentiment, with P76 reflecting, *"I think that took resilience to accept that I can't take this any further,"* (lines 660-661) and P89 reinforcing the idea of persistence by stating, *"It means keeping on showing up and doing the best with what you have and creating an environment in the workplace where you don't add additional stress."* (lines 416-417).

Adaptability and problem-solving also emerged as key subthemes, as audiologists frequently encountered unpredictable situations requiring flexibility and innovation. P12 illustrated this in the context of job searching, explaining, "*The process of job hunting hasn't been easy. I've submitted multiple applications.*" (lines 71-72). Faced with financial strain, they took proactive steps to create alternative income sources, stating "*The finances that I have saved are depleting, so if I allow them to deplete completely then I'm going to struggle. So rather take what I have and start up something that will generate income.*" (lines 87-89). Adaptability was also evident in patient interactions, with P25 acknowledging, "*You're going to get the lovely ones and you're going to get the terrible ones and you just have to deal with it. So you have to be very adaptable.*" (lines 157-159). Similarly, P6 described adjusting to different working conditions over time: "*I've had to adjust myself rather towards working with a variety of people over the years.*" (lines 691-692). Problem-solving skills were also highlighted, as seen in P49's persistence in advocating for necessary resources: "*So I kept pushing and I kept pushing up until the company then agreed to cancel the order and then restarted another order to the relevant company.*" (lines 335-337)

Support systems and teamwork were additional crucial factors in fostering resilience. Audiologists expressed the importance of collegial support in navigating the demands of their profession. P44 acknowledged, "*To be honest, my team has been very supportive,*" (line 129) while P76 reinforced the role of collaboration in strengthening resilience: "*I think if we work together more, we would definitely improve our resilience because it's just so much easier if you have colleagues.*" (lines 848-849). A sense of stability and familiarity within a team environment was also seen as beneficial, as P78 noted, "*So I think it's the teamwork aspect that you get in academia,*" (line 255) further adding "*It's been quite a stable team where everybody knows everybody else really well.*" (line 294). Resilience in audiology is shaped by a combination of emotional regulation, adaptability, problem-solving, and strong support networks. These factors enable professionals to navigate workplace challenges, maintain their well-being, and continue delivering quality care despite the demanding nature of their work.

Available resources to improve professional quality of life

Objective 5 aimed to explore the perceptions of available resources to improve South African audiologists' professional quality of life. Through the process of thematic analysis using Braun and Clarke's six-phase method, two key sub-themes were developed under the broader theme of perceptions of available resources: Managerial and organisational support, as well as access to quality support services. For managerial and organisational support, participants frequently described their managers as playing a pivotal role in shaping their daily work experiences, providing reassurance and guidance helping professionals navigate challenges effectively. Early codes such as emotional reassurance, decision-making support, and managerial intervention were consistently linked with higher perceived professional satisfaction.

For example, P21 emphasised the importance of reassurance and guidance in decision-making and providing direction: *"she can help me with what I'm supposed to do with the steps I'm supposed to take and how I'm supposed to do it. So that reassures me that. It's OK. Like you know what you're doing, you just have to maybe do it this way or do it that way."* (lines 200-204). This type of support fosters confidence and stability in their role. Furthermore, managerial support extends to more than just technical guidance, supportive managers were also seen as emotionally attuned and willing to step in during moments of difficulty. As P21 shared *"So she started picking up when I just can't with a patient anymore, and she'll jump in, you know."* (lines 439-440). This highlights the importance of having a manager who not only provides guidance but also actively intervenes when needed. Additionally, having a reliable and approachable manager allows employees to voice concerns openly, P33 *"So if something doesn't work, I always go to my line manager and say this is not working."* (lines 333-334). The presence of an understanding and proactive manager who can manage workload pressures and provide a safe space for communication contributes significantly to a positive work environment.

The second sub-theme relates to institutional support services which contrasts with the positive role of individual managers. Formal institutional support systems especially mental health services were often described as insufficient or inaccessible.. While participants acknowledged that such services exist in theory, availability and access limitations created significant barriers in practice. . P53 offered a multifaceted critique of the current support systems: *"It would be great if they*

would help us more in terms of funding, yes, but also in terms of access to services such as counselling.” (lines 308-310) “The problem is, there’s only two therapists, and they have to take care of the whole hospital.” (lines 323-324) “Go today, but you’ll only be seen within four months and you’re struggling now.” (line 330). These quotes highlight a disconnect between policy and practice, where services are present but so overburdened that they fail to offer timely, effective support. Long waiting times and limited staffing emerged as recurring issues during coding and were labelled with descriptors such as delayed care, invisible support, and under-resourced systems.. Nevertheless, some institutions were acknowledged for at least attempting to provide structured mental health services. P78 explained: “It’s an institutional counselling and support kind of service, and I think that entitles you to about eight sessions with a psychologist or something like that.” (lines 586–588). However, even in such cases, there was uncertainty and hesitation about the actual utility of these services due to limited access and rigid caps on the number of sessions. Interestingly, where institutional systems faltered, participants often leaned on department-level flexibility and understanding to cope. As P53 shared: “I will say that my department, and especially my HOD, they really help accommodate, and they’re very understanding.” (lines 203–204). This crossover insight reinforces the interplay between formal institutional mechanisms and informal leadership-based supports.

Following the initial phases of familiarisation and coding, the development of these sub-themes emerged through repeated reference to the dual role of both managers and institutional support. During the theme refinement stage, the contrasting yet complementary roles of managers and institutional structures became apparent. These statements indicate that managers who offer guidance and intervention help audiologists cope with workplace stress, thereby improving their professional quality of life. These two sub-themes demonstrate that audiologists’ perceptions of resource availability are shaped by access to counselling services and the level of managerial support they receive. Limited access to counselling and mental health services negatively affects well-being, with long waiting times making immediate support difficult. Strong managerial support enhances resilience by providing guidance and emotional support, reducing workplace stress. To improve South African audiologists’ professional quality of life, institutions must go beyond offering support services in name only. Expanding timely access to counselling and mental health services is critical. Equally important is the development and nurturing of responsive, emotionally intelligent leadership within departments. When both managerial and institutional

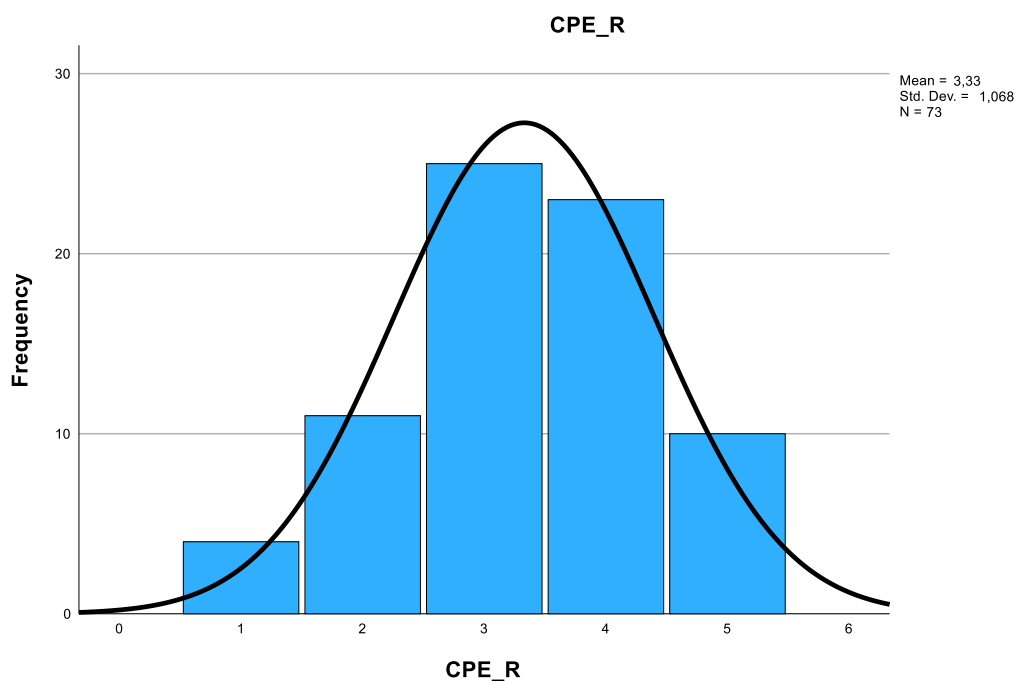
supports function effectively, they serve as vital resources that reduce burnout, promote resilience, and enhance the overall professional quality of life of South African audiologists.

Strategies to improve professional quality of life

Objective 6 aimed to explore strategies that South African audiologists may use to improve their professional quality of life. The overall mean score for CPE was calculated to be 3.33, with a standard deviation of 1.07 (Figure 9). This indicates a moderate to high level of CPE among the participants. The mean score for CPE was higher ($M=3.35$; $SD=1.03$) amongst the younger group aged 18 to 35 years old. However, the difference between the mean scores between age groups was not statistically significant ($p=0.8$) (Table 7). There was also no statistically significant difference in the mean scores of CPE across the different levels of qualifications (e.g. Undergraduate vs Postgraduate) ($P=0.08$) (Table 8). In terms of years of experience, participants who have been working for more than five years have a higher mean score ($M=3.91$; $SD= 0.93$) for CPE than those who have been working for less than five years ($M=3.36$; $SD= 1.03$), and this difference is statistically not significant ($P=0.7$) (Table 9).

Figure 9

The overall mean coping scores for participants



Audiologists employ various personal coping strategies to maintain their well-being in the workplace. Two primary sub-themes emerged: (1) individual coping mechanisms and (2) contextual and relational workplace strategies. These were developed by clustering descriptive codes such as "rest," "exercise," "faith," "peer support," "flexibility," and "professional help," and grouping them under more abstract categories reflecting patterns of meaning across the dataset. For Individual Coping Mechanisms, many emphasise the importance of self-care, such as ensuring adequate rest P12 reported "*Normally, I'd try to sleep,*" (line 223). This comment highlights the preventative function of rest, not just as recovery but as a buffer against emotional overload. Physical activity was another strategy mentioned for maintaining emotional and mental resilience. As P76 put it, "*You know, it's not like you can go to bed at night and just switch off and not think about those things but I think I manage it with exercise. I love exercising, always have.*" (Line 588-590) and P78 added that "*I make sure I exercise. I do Acro-pilates classes every week, which I find really good for stress. We walk 5 kilometres every day so you know, again I try to strike that sort of work life balance.*" (Line 351-353). This strategy was also employed by P30 "*I've also like, recently started going to a boot camp. So exercise, physical exercise. I see that also helps a lot because when I go to the boot camp, you're kind of focused on doing what you're supposed to do*" (Line 654-656). These quotes suggest that physical engagement also serves as emotional regulation, helping audiologists shift out of difficult mental states caused by work-related stress. Setting boundaries between work and personal life was described as crucial to avoiding emotional spillover between work and home life., as P78 shared "*I think I am quite aware of a work life balance. I don't take stuff home with me in my head.*" (lines 336-337). Similarly, P76 also added to this "*I manage it by being very aware of the fact that I have my own family and that I have my own roles and responsibilities at home.*" (lines 590-591). P6 described their approach as "*I compartmentalise things. I know that work is work. Work is not personal for me*" (line 555-557) "*I'm very careful not to let work issues or work related things consume me.*" (line 587-588). These strategies demonstrate how audiologists intentionally construct mental and emotional boundaries to manage the weight of their responsibilities.

Some participants also turned to faith and spirituality as sources of inner strength and resilience in challenging times. P12 reflected "*I'm a Christian. So I pray, even though it does, when it gets*

worse sometimes, it's not easy to pray." (lines 243-244). P34 also highlighted that "most importantly for me the my biggest solution is prayer at the moment." (Line 222). This suggests that spiritual practices provide not only comfort but a framework for resilience, especially during emotionally taxing periods. Professional mental health support was openly discussed by a few participants, reflecting an important shift in how audiologists are addressing mental health. P21 shared "I've been in therapy for a while," (line 422) while P25 admitted "So for me it was it was quite hard to admit. You know, I need help, but I've now been on an antidepressant for about four months and it's just a game changer." (lines 328-330). These examples point to a growing awareness of the importance of formal psychological support, signalling a move beyond stigma. Having strong personal support systems, including family and friends, also proves valuable, with P30 stating "I also have my friends here. So I'll just go and, like, spend time with them. So spending time with loved ones, that also like helps me cope." (lines 667-668). These narratives suggest that social support provides a sense of perspective, stability, and emotional validation, serving as a vital coping mechanism outside the professional domain.

The second sub-theme contextual and relational workplace strategies, goes beyond individual coping mechanisms. Participants emphasized professionalism, team dynamics, and workplace adaptability as factors that play essential roles in maintaining a positive professional quality of life. Quotations were selected to illustrate the emotional and practical nuance of each coping method, thereby enhancing the trustworthiness and transferability of findings. Effective teamwork and communication among colleagues foster a supportive work environment, where professionals can rely on each other for guidance and reassurance. P34 highlighted this saying, "And you know, sometimes it's trying to figure out is it me and what else can I do and to find out from colleagues how are they dealing with these issues and then we can talk about such things " (lines 218-220) while P21 expressed gratitude for their practice manager, stating "my practise manager is always here and she's also the receptionist and because I can rely so much on her." (lines 244-246). Constructive feedback from colleagues is also valued, as P21 noted "They can reassure me that you know this patient the way you dealt with this is a really good way or the way you did this is good or maybe you should have done it this way." (line 195-197). This reflects how collegial validation supports professional confidence, especially in the face of clinical uncertainty. The ability to manage workload and adapt schedules helps prevent burnout, as P21 also shared "I can choose whether I want to see a lot of patients today, whether I want to, you know, maybe just stick

to my admin, or you know, just take it as an easy day." (lines 234-236). Acknowledging workplace challenges, some audiologists advocate for better managerial support, with P34 stating *"implement strategies to train the managers and also make it easy for us to communicate when we experience such challenges."* (lines 337-338). Ultimately, access to supportive relationships, faith, professional development, and flexible work structures allows audiologists to navigate workplace stress and sustain their passion for their careers.

In summary, several null hypotheses were rejected, indicating significant relationships between demographic factors and ProQoL variables. Compassion satisfaction was significantly influenced by burnout and resilience, while burnout was significantly associated with both compassion satisfaction and secondary traumatic stress. Additionally, years of experience and sector of employment were found to be significantly related to ProQoL outcomes. As qualitative data are not suited to statistical hypothesis testing, that section is exempt from that framework. However, the thematic findings complement the quantitative results by illustrating the lived experiences and contextual challenges faced by audiologists. These findings confirm that demographic and contextual factors play a role in shaping the professional quality of life of South African audiologists.

Chapter 5: Discussion

This chapter interprets the study's findings, analysing how they relate to the research questions and objectives. It will explore the implications of the results, particularly in the context of professional quality of life among South African audiologists, and how these findings contribute to the broader understanding of the topic.

The purpose of this study was to explore the professional quality of life of South African audiologists working in various clinical settings. The findings provide valuable insights into the levels of compassion satisfaction, compassion fatigue, burnout, and secondary traumatic stress among audiologists, as well as the associations between these variables and demographic factors. Additionally, the study examined the influence of resilience, perceptions of available resources, and strategies used to improve professional quality of life. This discussion integrates these findings with existing literature and highlights their implications.

The professional quality of life of healthcare professionals is an essential consideration as it directly influences their well-being, job satisfaction, and the quality of care they provide to patients (Gümüş et al., 2021). Stamm (2010) highlights that healthcare professionals operate in emotionally demanding environments where they experience both the rewards and challenges of caregiving. The major findings of the current study revealed that South African audiologists generally experience moderate levels of professional quality of life (ProQoL) in their respective work settings. These findings suggest that while audiologists may experience positivity, feelings of fulfilment, and satisfaction, they may also face challenges in their workplace (Stamm (2010), such as heavy workloads (Gümüş et al., 2021), limited resources (Khoza-Shangase, 2022; Pillay et al., 2020) that affect their quality of life in clinical practice (Gümüş et al., 2021). These results are consistent with studies by de Andrade et al. (2024) and Chung (2020) which similarly reported general moderate levels of PROQoL among healthcare professionals. The findings of the current study highlight the need for targeted interventions to support audiologists' well-being, enhance job satisfaction and mitigate factors that continue to affect their quality of life and may affect patient care.

In terms of specific ProQoL variables, the findings of the current study revealed that the mean score for compassion satisfaction among participants is moderate. Moderate compassion satisfaction (CS) reflects a balance between professional fulfilment and workplace stress, where audiologists experience both satisfaction and challenges in their roles. They derive fulfilment from improving patients' communication abilities and overall quality of life, feeling valued through positive patient feedback and recognition of their contributions to healthcare (Stamm, 2010; Zakeri et al., 2021). Many find motivation in professional growth, particularly in mentoring students and witnessing their impact on future professionals, which aligns with research highlighting the link between

professional development and higher job satisfaction (Sacco & Copel, 2018). This is consistent with previous research which found similar mean scores among participants (de Andrade et al., 2024; Stamm, 2010). These findings suggest that audiologists experience a reasonable degree of fulfilment and positive emotions from their work. Older audiologists and those with more than five years of experience reported higher CS levels, which aligns with research suggesting that professional experience enhances confidence, competence, and overall job satisfaction (Sacco et al., 2015; Bhutani et al., 2012).

In contrast, younger and early-career audiologists exhibited slightly lower CS scores, possibly due to workplace adjustment challenges- adjustment from university to the workplace for community service audiologists, heavier emotional demands, and limited clinical autonomy. These findings are not surprising given that Bhutani et al. (2012) and Chung (2020) reported that clinicians with greater experience reported having developed coping mechanisms, increased confidence, and accumulated patients' interactions and outcomes. Older and experienced audiologists may have relatively built resilience and refined their skills which contributed to their ability to derive satisfaction from their work (van Breda & Theron, 2018). Qualitative findings revealed that CS among South African audiologists is primarily driven by patient progress and professional impact. Participants expressed a sense of fulfilment in witnessing patients regain their communication abilities improving their quality of life and seeing tangible outcomes from their interventions. Additionally, those involved in training future audiologists found satisfaction in mentoring students and shaping the next generation of professionals.

What may be unique to South African audiologists is the balance between high professional fulfilment and systemic challenges. Unlike their counterparts in high-resource settings, South African audiologists must navigate public sector constraints while maintaining job satisfaction. The qualitative findings of this study suggest that while structural challenges exist (Mophosho & Khoza-Shangase, 2018), the intrinsic reward of helping patients and contributing to community well-being sustains CS levels. While moderate CS indicates that audiologists find fulfilment in their work, sustained workplace support is essential to prevent declines in job satisfaction over time. Research by Coetzee and Laschinger (2018) highlights that professional fulfilment is a key predictor of long-term career engagement, emphasising the importance of mentorship programmes, professional development opportunities, and peer support structures in maintaining

or enhancing CS levels. Additionally, higher CS has been linked to improved patient outcomes, as motivated professionals tend to provide better care (Zakeri et al., 2021). Although CS levels in this study were moderate, further efforts to improve job satisfaction, such as reducing administrative burdens and ensuring adequate clinical resources, could contribute to even better patient-centred care.

Moderate CS, when combined with persistent workplace challenges, may contribute to workforce attrition if not properly managed. Research by de Andrade et al. (2024) found that systemic barriers, including high workloads and resource constraints, significantly influence healthcare professionals' decisions to leave the public sector or migrate to private practice. Addressing these challenges through improved working conditions and institutional support could enhance job satisfaction and reduce the risk of losing skilled audiologists. Additionally, resilience plays a crucial role in sustaining CS levels, as professionals who develop adaptive coping strategies are better equipped to manage workplace stress (Sacco & Copel, 2018). The current study found that audiologists who engaged in self-care sought managerial support, and built strong professional networks reported higher CS. Implementing resilience-building initiatives, such as structured wellness programmes and reflective practice sessions, could further enhance professional fulfilment, ensuring that audiologists remain engaged and motivated in their roles.

Burnout levels were relatively low overall for all participants; however, younger audiologists and those with less experience reported higher levels of burnout compared to their older and more experienced counterparts. These findings align with previous research (Blood et al., 2007; de Andrade et al., 2024; Zimmer et al., 2022) suggesting that early career audiologists in South Africa face unique challenges compared with older and more experienced audiologists. The low levels of burnout among the participants were associated with depersonalisation, emotional exhaustion, and professional inefficiency. In terms of depersonalisation, participants reported feelings of detachment such as distancing themselves from patients. Emotional exhaustion was due to high workloads and stressful conditions; while professional inefficiency was influenced by extreme shortages of resources, limited growth opportunities, inadequate compensations, and lack of managerial support. These burnout-related characteristics by audiologists often lean to feelings of frustration, anger, and to some extent, even contemplating leaving the profession (de Andrade et al., 2024).

These findings have implications for governmental interventions, workplace policies, organisational support and any other programmes to develop and support audiologists, particularly early career audiologists. Implementing targeted and efficient measures to address burnout in the workplace is particularly important in ensuring that audiologists are not burned out and depressed and could provide high-quality hearing healthcare service. Severn et al. (2011) reported that while audiologists in private settings experience burnout as well, audiologists in public sectors may experience more stressors leading to burnout. In the South African context, particularly in public sectors, where demand vs capacity challenges continue to exist (Khoza-Shangase, 2022; Pillay et al., 2020), influenced by historical challenges of the country (Kon & Lackan, 2008; Mayosi and Benater, 2014), urgent equitable resources and proper planning of workforce strategies is needed to reduce the stress associated with burnout in the workplace (Akbulut et al., 2024; Maslach & Leiter, 2008).

Similarly, the secondary traumatic stress variable was found to be low among participants, with no significant differences across demographic factors. However, qualitative findings highlighted the emotional toll of working with vulnerable populations, particularly children and individuals with severe communication disorders. Participants reported feeling distressed when faced with long waiting lists, limited institutional support, patient suffering and moral distress due to inadequate resources, a finding echoed by Severn et al. (2012) and Nagdee and de Andrade (2013). While audiologists may be at risk of developing STS, the prevalence remains lower than in other healthcare fields (Zimmer et al., 2022; Severn et al., 2012). The findings suggest that STS in audiologists is not unique to South Africa but aligns with global trends in the profession. The factors contributing to STS—such as resource limitations, emotional engagement with patients, and high caseloads—are consistent with those reported in other contexts (Severn et al., 2012; Zimmer et al., 2022).

Although the South African healthcare context presents distinct challenges that may influence how STS manifests, the overall absence of widespread STS suggests that South African audiologists may possess resilience factors that buffer against the full impact of secondary trauma (Coetzee & Laschinger, 2018; Goncalves et al., 2022; Sacco & Copel, 2018; van Breda & Theron, 2018). Audiologists who actively engaged in coping strategies, such as setting emotional boundaries, seeking peer support, and maintaining a sense of professional fulfilment, were less likely to report

symptoms of STS. Workplace support also emerged as a key factor in reducing STS. Participants who reported strong managerial and peer support experienced lower levels of emotional exhaustion. Institutional factors, such as access to mental health resources and professional development opportunities, further contributed to maintaining psychological well-being. Additionally, audiologists who reported higher levels of job satisfaction, particularly those who found fulfilment in making a positive impact on patients' lives, exhibited lower STS levels. This aligns with previous research that suggests a strong link between professional satisfaction and lower stress-related symptoms (Giddens et al., 2022; Zakeri et al., 2021).

The relatively low STS levels suggest that South African audiologists are employing effective coping mechanisms that allow them to manage emotional distress. This may contribute to increased job satisfaction, reduced burnout, and greater career longevity. This study highlights the importance of workplace support structures, including peer networks and managerial guidance, in maintaining professional well-being. STS may not always manifest immediately but can develop cumulatively over time, particularly in professionals exposed to chronic workplace stress (Giddens et al., 2022). If left unaddressed, these stressors could lead to long-term professional dissatisfaction or burnout. The findings suggest a need for continued support mechanisms, such as access to mental health resources, structured peer support groups, and training in resilience-building strategies. Workforce retention remains a critical issue in healthcare professions, particularly in South Africa's public health sector (de Andrade et al., 2024). Audiologists who experience persistent emotional distress or feel unsupported in their roles may eventually leave the profession. Research by Chung (2020) found that workplace culture and administrative support significantly influence professional quality of life, reinforcing the need for institutions to foster supportive environments to retain skilled professionals.

Compassion fatigue (CF) was moderate, with older audiologists aged 36 years and above and those with less experience (less than five years) showing slightly higher levels. Although not statistically significant, this trend is consistent with previous studies suggesting that professionals with fewer years of experience are more susceptible to CF due to their limited exposure to emotionally taxing work environments and fewer developed coping mechanisms (Sacco et al., 2015; Zimmer et al., 2022; Giddens et al., 2022). This study supports these findings, as audiologists who reported positive workplace environments exhibited lower CF levels.

Moderate CF is characterised by a balance between emotional exhaustion and the ability to manage work-related stress. Participants reported experiencing emotional exhaustion due to high patient caseloads, long waiting lists, and systemic barriers that prevent them from providing optimal care. Feelings of frustration and helplessness were commonly expressed, particularly when audiologists were unable to meet patient needs due to resource limitations. Audiologists with moderate CF may experience occasional feelings of frustration, emotional depletion, and decreased empathy, but they also demonstrate coping mechanisms that prevent CF from escalating into severe distress.

Studies by Bhutani et al. (2012) and Chung (2020) found that healthcare professionals working in government institutions generally report higher CF levels than those in private practice due to poorer working conditions and higher patient loads. Similarly, the qualitative findings of this study indicate that audiologists in public healthcare settings face greater emotional strain due to systemic inefficiencies and resource shortages. The presence of moderate CF among South African audiologists is not unique to this professional group or geographical context. International studies on CF among audiologists, such as those by Severn et al. (2012) and Zimmer et al. (2022), have reported similar findings, indicating that audiologists worldwide face emotional challenges associated with patient care. However, the specific contributors to CF may differ across regions. In South Africa, systemic challenges such as staff shortages, limited access to diagnostic equipment, and administrative burdens appear to contribute to CF. In contrast, studies conducted in high-resource settings, such as the United States, have identified different stressors, including time constraints and administrative overload, as primary contributors to CF (Zimmer et al., 2022). The qualitative findings of this study reinforce the idea that while CF is not unique to South African audiologists, the factors influencing its development may be context-specific.

The presence of moderate compassion fatigue (CF) among South African audiologists suggests that while they experience emotional exhaustion and frustration related to patient care and systemic challenges, they have developed coping strategies that prevent CF from escalating into severe distress. However, prolonged exposure to workplace stressors—such as high caseloads, resource limitations, and administrative burdens—may increase the risk of burnout over time, which could negatively impact workforce retention and professional effectiveness (Chung, 2020). Research has shown that healthcare professionals with lower CF levels demonstrate higher job satisfaction and clinical competence, reinforcing the importance of maintaining well-being to ensure sustained

patient-centred care (Zakeri et al., 2021). Additionally, workplace support plays a crucial role in mitigating CF, as audiologists who reported strong managerial support and access to peer networks experienced lower emotional exhaustion (Nagdee & de Andrade, 2013). Given these findings, healthcare institutions should prioritise interventions such as resilience training, structured peer support programmes, and improved working conditions to reduce CF risk and enhance professional quality of life (Coetzee & Laschinger, 2018; Sacco & Copel, 2018). Addressing these factors is essential for ensuring the long-term sustainability of the audiology workforce in South Africa and maintaining high standards of patient care.

The study found a strong and significantly negative correlation between burnout and compassion satisfaction ($r = -0.733$). This indicates that as levels of burnout increase, compassion satisfaction significantly decreases, highlighting the inverse relationship between these two variables. This suggests that audiologists who experience higher levels of burnout are likely to report lower levels of satisfaction derived from their professional roles, emphasising the detrimental impact of burnout on the overall sense of fulfilment in their work. This is consistent with previous findings indicating that professionals who experience greater fulfilment in their work are less likely to experience emotional exhaustion (Maslach & Leiter, 2008; Stamm, 2010). This confirms that audiologists, like other healthcare professionals, experience a direct inverse relationship between job satisfaction and emotional exhaustion (Blood et al., 2008).

A moderate and significantly negative correlation was also found between compassion fatigue and compassion satisfaction ($r = -0.567$), further emphasising the detrimental effects of compassion fatigue on the positive emotional experiences associated with caregiving, highlighting the protective role of job satisfaction against emotional exhaustion and trauma exposure (Zakeri et al., 2021). Additionally, burnout was positively correlated with secondary traumatic stress ($r = 0.460$) and compassion fatigue ($r = 0.863$), reinforcing prior research suggesting that chronic work-related stress contributes to emotional exhaustion and detachment (Sacco et al., 2015; Severn et al., 2012; Maslach & Leiter, 2008). The weak correlation between secondary traumatic stress and compassion satisfaction ($p = 0.057$) was unexpected, indicating that exposure to patient trauma does not necessarily diminish job fulfilment. These findings contradict those of Nagdee and de Andrade (2013), who found that secondary traumatic stress significantly diminished job fulfilment due to the emotional burden of patient suffering, leading to feelings of helplessness, guilt, and

anger. Similarly, Severn et al. (2012) reported that high time demands and emotional stressors in audiology were linked to lower compassion satisfaction, suggesting that exposure to patient trauma negatively impacts job satisfaction. The difference between the current findings and those published by Nagdee and de Andrade (2013) and Severn et al. (2012) may be attributed to differences in study context and coping mechanisms among participants. While previous studies focused on broader emotional distress, the current study's findings suggest that South African audiologists may have resilience factors that buffer the effects of secondary traumatic stress on job fulfilment. Additionally, variations in sample characteristics and workplace environments may have influenced the observed differences in the relationship between secondary traumatic stress and compassion satisfaction.

Compassion satisfaction is a critical component that sustains motivation and engagement in healthcare work, while the risks of compassion fatigue, burnout, and secondary traumatic stress can lead to emotional exhaustion, decreased productivity, and ultimately, workforce attrition (Maslach & Leiter, 2008). Conversely, those experiencing high levels of burnout and compassion fatigue are more prone to emotional disengagement, increased absenteeism, and diminished quality of care (Sacco et al., 2015; Bhutani et al., 2012).

The hypothesis that demographic factors significantly influence professional quality of life was partially supported. Age and experience were significant predictors of compassion satisfaction, with older and more experienced audiologists reporting higher levels of fulfilment. These findings align with those by Sacco et al. (2015) and Kelly et al. (2015), who reported that experienced healthcare professionals develop better coping mechanisms and professional satisfaction over time. The qualitative data also shed light on how demographic factors, such as age, gender, and work setting, influenced the audiologists' experiences. For example, older audiologists reported higher levels of compassion satisfaction, possibly due to their greater experience and ability to cope with challenges. Female audiologists, who constituted most of the participants, often stress the importance of support systems and work-life balance. Audiologists working in public hospitals reported higher levels of burnout and stress, likely due to limited resources and high patient volumes. This is consistent with the literature, for example, Severn et al. (2012) found that paediatric and public-sector audiologists reported higher levels of stress than adult-serving and private-sector audiologists.

While the results indicate that age, gender, and work setting influence professional quality of life, there is a lack of detailed analysis on how these factors intersect. For example, how does age interact with gender or race to affect burnout levels? South Africa's complex social landscape necessitates an intersectional approach. Further to this, the literature and results only lightly touch on the socioeconomic status and background of the audiologists themselves and how this influences their professional quality of life. This is a critical gap, especially in South Africa, where socioeconomic disparities are significant (Kon & Lackan, 2008). There are also cultural and contextual factors such as language and culture as well as organisational and systemic factors such as workplace policies that may have an impact on the professional quality of life of South African audiologists (Mophosho & Khoza-Shangase, 2018). However, these aspects are largely absent from the literature and results. In addition to this, South Africa's history of apartheid has had lasting effects on its healthcare system which has created disparities between public and private healthcare systems (Mayosi & Benatar, 2014). As such, the evidence of how these historical factors continue to influence the experiences of audiologists, particularly those from marginalised communities, requires further exploration.

The Role of Resilience and Coping mechanisms

The qualitative data from the interviews with the 15 audiologists provided rich insights into their experiences and perspectives, particularly their professional quality of life. The audiologists viewed resilience as the ability to bounce back from challenges, maintain emotional stability, and continue providing quality care. They highlighted the importance of emotional regulation, adaptability, problem-solving skills, and strong support systems in building resilience. Resilience was found to be a protective factor, significantly correlating with higher compassion satisfaction ($r = 0.429$) and negatively correlating with burnout ($r = -0.471$), secondary traumatic stress ($r = -0.480$) and compassion fatigue ($r = -0.556$). These findings support resilience theory (Van Breda & Theron, 2018), which posits that personal and environmental resilience factors play a critical role in mitigating work-related stress and enhancing overall well-being. In the context of audiology, resilience enables professionals to navigate the emotional demands of patient care, manage occupational stressors, and sustain professional engagement despite challenges. Audiologists with higher resilience reported greater emotional regulation, adaptability, and strong support systems, which contributed to improved professional well-being. Emotional regulation allows them to

process and respond to workplace stress constructively, while adaptability helps them adjust to changing work environments and patient needs. Furthermore, strong support systems, whether through colleagues, mentors, or institutional policies, serve as a buffer against emotional exhaustion, reinforcing the importance of workplace culture in fostering resilience.

Research on healthcare professionals has confirmed resilience as a protective factor against burnout and compassion fatigue, enhancing job satisfaction and overall professional quality of life (Ruiz-Fernández et al., 2021; Coetzee & Laschinger, 2018). Ruiz-Fernández et al. (2021) found that resilience not only reduces emotional exhaustion but also promotes psychological well-being by fostering positive coping strategies. Similarly, Coetzee and Laschinger (2018) demonstrated that healthcare workers with strong resilience skills were more likely to experience job satisfaction and lower turnover rates, emphasising the crucial role of resilience-building interventions in high-stress professions. Given the strong correlation between resilience and professional quality of life, targeted strategies such as mentorship programmes, resilience training, and peer support networks could further strengthen audiologists' capacity to cope with occupational demands.

The role of coping mechanisms in mitigating burnout and compassion fatigue was also confirmed by the results. The moderate negative correlations between coping and burnout ($r = -0.473$), secondary traumatic stress ($r = -0.454$) and compassion fatigue ($r = -0.543$) suggest that effective coping strategies help alleviate occupational stress. This aligns with existing research emphasising the protective role of resilience and coping strategies in enhancing professional well-being (Goncalves et al., 2022; van Breda & Theron, 2018). The audiologists employed various personal coping strategies, including self-care activities, setting boundaries between work and personal life, and seeking support from family, friends, or mental health professionals. They also emphasized the importance of professionalism, teamwork, and workplace adaptability in maintaining a positive professional quality of life. Additionally, the positive correlation between coping and compassion satisfaction ($r = 0.414$) confirms that audiologists who actively engage in coping mechanisms experience greater job satisfaction, as suggested in studies on resilience and professional quality of life (Ruiz-Fernández et al., 2021; Coetzee & Laschinger, 2018).

Audiologists reported that having strong personal and professional support systems helped them cope with the challenges of their work. The results provided specific examples of coping strategies used by South African audiologists and shed light on how demographic factors, such as age,

gender, and work setting, influenced the audiologists' coping strategies. For example, older audiologists aged 36 years and above reported higher levels of compassion satisfaction, possibly due to their greater experience and ability to cope with challenges. Participants identified personal coping mechanisms such as self-care, boundary setting, and professional development as essential for maintaining well-being. Teamwork and effective communication were also cited as crucial protective factors, aligning with prior research emphasising the importance of peer support in healthcare professions (Ruiz-Fernández et al., 2021). Workplace flexibility, managerial training, and mental health interventions were recommended to improve the professional quality of life of audiologists. The qualitative data added nuance to the quantitative findings and provided a more comprehensive picture of the factors influencing their professional quality of life.

Perceptions of available support-related resources

Audiologists highlighted managerial and institutional support as key factors in improving professional quality of life. Strong leadership and workplace support helped reduce workplace stress, consistent with Zakeri et al. (2021). However, barriers such as limited access to mental health services and high caseloads negatively impacted professional well-being. Participants emphasised the need for better counselling services, financial support, and workload management, like the findings from Severn et al. (2012). The absence of such resources has significant implications, including increased burnout, compassion fatigue, and job dissatisfaction, which can negatively affect patient care and overall job performance. Without structured workload management strategies, audiologists may struggle to maintain a healthy work-life balance, increasing the risk of chronic stress and professional disengagement. Additionally, limited access to mental health services can contribute to feelings of isolation and emotional exhaustion, reducing resilience and increasing turnover rates (Maslach & Leiter, 2008). Overall, the concept of resource availability is well-supported by the existing literature on professional quality of life among healthcare professionals. Both organisational and personal resources play a crucial role in shaping the well-being of individuals in demanding professions like audiology. Addressing these gaps by enhancing workplace support, increasing access to mental health services, and implementing workload management strategies is essential to sustaining a resilient and effective audiology workforce.

The results of the current study revealed that audiologists experienced moderate levels of compassion satisfaction and relatively low burnout rates. However, the long-term impact of work-related stress on South African audiologists remains unclear. While resilience emerged as a protective factor, the specific mechanisms through which it operates in this professional group require further exploration. Additionally, questions remain about the availability and effectiveness of workplace interventions, particularly concerning institutional support and mental health resources in the South African context.

A significant knowledge gap exists regarding the influence of South Africa's historical and socio-political context, particularly apartheid, on audiologists' experiences. Although systemic inequities stemming from apartheid have contributed to disparities in healthcare access, resource distribution, and professional opportunities, limited research has examined their direct effects on the well-being of South African audiologists. Similarly, the role of culture in shaping resilience, coping mechanisms and professional satisfaction remains underexplored. Indigenous knowledge systems and culturally embedded support structures, which may play a role in mitigating stress and burnout, are often overlooked in professional quality-of-life frameworks. The potential influence of collectivist values, traditional healing practices, and community-based support structures on audiologists' well-being has yet to be fully understood.

Furthermore, the intersectionality of race, gender, and socio-economic factors remains a critical but underexamined aspect of professional quality of life. Given the diverse backgrounds of South African audiologists, their experiences are shaped by complex interactions between these factors. Understanding the interplay of systemic inequalities, culturally relevant coping strategies, and intersecting identities may provide a more comprehensive perspective on the professional experiences of audiologists in South Africa.

Although the study primarily focused on workplace-related factors influencing professional quality of life (ProQoL), it is important to acknowledge that socio-economic challenges in one's personal life are inextricably linked to professional wellbeing. In the South African context, the high cost of living, recurring price hikes, financial instability, and an unpredictable political climate contribute significantly to personal stress, which can spill over into the professional domain. Additionally, systemic challenges such as budget cuts, staff shortages, and resource

constraints within healthcare institutions directly affect service delivery, potentially leading to moral distress, compassion fatigue, and burnout among audiologists. These external pressures — both societal and institutional — create an environment where maintaining a high quality of professional life becomes increasingly difficult. Recognising the intersection between personal socio-economic hardship and structural limitations in the workplace is therefore essential for developing comprehensive support strategies for audiologists and other health professionals in South Africa.

Chapter 6: Conclusion

This chapter summarizes the key findings of the study and their significance concerning the research questions and objectives. It also discusses the study's limitations, such as potential biases or constraints in the research design, while highlighting its strengths, including its contribution to the field of professional quality of life among South African audiologists. Additionally, the chapter will offer recommendations for future research, suggesting areas that require further exploration or development to deepen understanding and improve practice in the field.

This study aimed to explore the professional quality of life of South African audiologists, with a particular focus on compassion satisfaction, compassion fatigue, burnout, and secondary traumatic stress. To achieve this, the study sought to measure and describe the levels of these variables among audiologists and examine their interrelationships, including the associations between compassion satisfaction, burnout, compassion fatigue, and secondary traumatic stress. Additionally, the study aimed to determine the influence of demographic factors on professional quality of life and investigate the role of resilience as a protective factor in mitigating work-related stress. The study also examined coping strategies employed by audiologists, particularly concerning resilience and workplace challenges, to understand how they manage professional demands. Furthermore, it explored perceptions of available resources that could enhance professional well-being and identified strategies audiologists use to improve their quality of life in the workplace. By addressing these objectives, the study provides a comprehensive understanding of the challenges, support mechanisms, and coping strategies influencing the well-being of South African audiologists.

This study provides critical insights into the professional quality of life of South African audiologists, an area that remains under-researched despite the growing recognition of occupational stressors in healthcare professions (Mophosho & Khoza-Shangase, 2018). The findings indicate that while audiologists experience moderate levels of compassion satisfaction, concerns persist regarding burnout and compassion fatigue, particularly among younger and less experienced professionals. These challenges highlight the need for systemic and institutional support to promote well-being and career longevity in the field of audiology. Resilience emerged as a key protective factor, emphasising its role in mitigating workplace stressors and enhancing

professional satisfaction. This underscores the importance of workplace interventions and policies that foster resilience through mentorship programmes, wellness initiatives, and improved working conditions. Addressing these factors can contribute to a sustainable and fulfilling career for audiologists in South Africa, ultimately improving patient care and service delivery.

The hypothesis that demographic factors significantly influence professional quality of life was partially supported. Age and experience emerged as significant predictors of compassion satisfaction, with older and more experienced audiologists reporting higher levels of fulfilment. These findings align with prior research (Sacco et al., 2015; Kelly et al., 2015), which suggests that experienced healthcare professionals develop better coping mechanisms and greater job satisfaction over time. Work setting also played a role, as audiologists in public hospitals reported higher levels of burnout and stress, likely due to resource limitations and high patient volumes, consistent with findings by Severn et al. (2012).

Although the results indicate that age, gender, and work setting influence professional quality of life, there is limited analysis of how these factors intersect. The role of socioeconomic background, cultural identity, and systemic inequalities remains underexplored, despite South Africa's significant disparities in healthcare access (Kon & Lackan, 2008). Additionally, workplace policies, language, and historical factors such as apartheid have shaped the healthcare system, yet their impact on audiologists' experiences remains largely absent from the literature (Mophosho & Khoza-Shangase, 2018; Mayosi & Benatar, 2014). Given these gaps, an intersectional approach is necessary to fully understand how multiple demographic and systemic factors interact to shape the professional quality of life of South African audiologists.

The findings of this study highlight the critical need for comprehensive support systems to enhance the professional quality of life of South African audiologists. Both organisational and personal resources play a vital role in mitigating workplace stress and improving job satisfaction. The high levels of burnout and stress reported in public sector settings suggest a need for institutional reforms, including better resource allocation, mental health support services, and workload management strategies. Additionally, the strong correlation between resilience and compassion satisfaction reinforces the importance of mentorship programmes, peer support networks, and

resilience training to help audiologists navigate professional challenges. From a policy perspective, addressing these issues requires implementing structured interventions that promote work-life balance, ensure fair remuneration, and provide continuous professional development opportunities. Policies should prioritise workforce retention strategies, including structured career progression paths and measures to alleviate job strain in high-demand settings. Moreover, integrating resilience-building strategies into workplace policies can further protect audiologists from occupational stress and enhance their ability to cope with professional challenges.

The study's findings also contribute to the theoretical understanding of resilience theory by demonstrating its role in mitigating burnout and compassion fatigue. Resilience is not merely an individual trait but is influenced by broader systemic and institutional factors. This aligns with resilience theory's emphasis on adaptability and support structures (van Breda & Theron, 2018), highlighting the need for organisational policies that actively foster resilience through workplace culture, leadership support, and access to resources. Beyond workplace interventions, the study underscores the significance of addressing systemic barriers, such as socioeconomic disparities, cultural influences, and historical inequalities, which continue to shape the experiences of healthcare professionals in South Africa. A multifaceted approach that includes structural, institutional, and personal support mechanisms is essential to fostering a more sustainable, fulfilling, and resilient work environment for audiologists.

The findings of this study must be interpreted within the broader socio-economic and structural challenges that characterise the South African healthcare context. Health professionals, including audiologists, often practise under conditions shaped by high levels of violent crime, unemployment, and social instability. Exposure to traumatic events, such as the death of patients or community members due to violence or poor access to care, may contribute to emotional exhaustion and secondary traumatic stress. Moreover, the ongoing threat of unemployment — particularly for newly qualified audiologists after community service — adds a layer of financial and emotional strain that can negatively affect their professional quality of life. These realities are compounded by systemic issues such as resource shortages in public healthcare settings and high patient caseloads, which further challenge audiologists' ability to provide effective and ethical

care. As such, the professional quality of life of South African audiologists cannot be viewed in isolation from the complex and often harsh social environment in which they work.

Strengths of the study

- The study utilised a mixed-methods approach, combining quantitative surveys and qualitative interviews, providing a more comprehensive understanding of the professional quality of life of audiologists in South Africa. Previous studies have utilised predominantly quantitative methods to examine the professional quality of life of healthcare professionals, including audiologists (Giddens et al., 2022; Severn et al., 2012; Zimmer et al., 2022). This approach aligns with the literature review's recognition of the complexity inherent in professional quality of life, allowing for both the measurement of variables and the exploration of lived experiences.
- By building upon the solid foundation provided by the literature review, the study effectively addresses an under-researched area, contributing valuable insights to the field of audiology.
- Focusing on South African audiologists, this research narrows its scope to provide targeted insights into a relatively underexplored population. It acknowledges the unique challenges faced by healthcare professionals in this context, thereby enhancing the relevance and applicability of its findings.
- The study benefits from a robust conceptual framework, clearly articulating key components such as compassion satisfaction, compassion fatigue (comprising burnout and secondary traumatic stress), and resilience, thus establishing a strong theoretical foundation grounded in established constructs.
- The study's reliance on well-established and respected scales, such as the ProQOL, further enhances its methodological rigour. Additionally, the emphasis on resilience, an important factor in high-stress professions like audiology, provides another significant strength.
- By exploring mediating factors that enhance resilience, such as self-compassion, the study delves into a crucial aspect of professional well-being.
- The addition and exploration of the influence of resilience and coping mechanisms on the professional quality of life of audiologists have provided a deeper understanding of the factors that mitigate workplace stress and enhance well-being. This enriched the analysis

by offering a more comprehensive perspective on both the challenges and protective factors shaping professional quality of life.

- The study employed a rigorous data analysis process, using descriptive statistics and inferential tests for quantitative data, and thematic analysis for qualitative data. This ensured that the findings were robust and reliable.
- The study considered cultural and contextual factors—such as high crime rates and unemployment rates—that may influence the professional quality of life of audiologists in South Africa, contributing to a more accurate and relevant understanding of the research problem.
- Overall, the study's strengths lie in its comprehensive approach, rigorous data analysis, and consideration of cultural and contextual factors, all of which contribute to the credibility and validity of the findings and provide a solid foundation for future research.

Limitations of the study

- A key limitation of this study lies in the reduced sample size in Phase 1 ($n=73$), which fell significantly short of the initially projected 283 participants. This smaller-than-anticipated sample may limit the generalizability of the quantitative findings to the broader population of South African audiologists. While the data still provides valuable insights into trends and associations, caution should be exercised when interpreting these results at a national level.
- The cross-sectional design of the study prevents causal interpretations of the data (Creswell, 2013).
- The reliance on self-report measures could have introduced bias, as participants' responses are subjective.
- Given that participants were not randomised, the sample may not accurately represent the broader population of audiologists in South Africa.
- Participants were selected from those who could access social media platforms, such as Facebook, through professional associations, which may have introduced sampling bias.
- With approximately 1,061 audiology professionals in South Africa (HPCSA, 2024), it is unclear how many audiologists were invited to participate in the study, making the response rate unknown and potentially impacting the study's external validity.

Implications of the study

The findings of this research are anticipated to contribute to the understanding of the professional quality of life of South African audiologists, building upon the body of audiology-specific research to improve their well-being and inform policymakers about their specific challenges and needs. This can lead to better-targeted policies supporting professional well-being, while healthcare institutions can use the study's results to implement changes such as enhanced support systems, improved work-life balance, and professional development opportunities. Additionally, insights from the study can help design training programmes addressing identified stressors and enhancing coping mechanisms for audiologists. The exploration of coping strategies and social support can increase awareness of factors influencing professional quality of life, leading to further support programmes, initiatives, and institutional and individual interventions. Findings can also inform the development of educational curricula for audiology students, emphasising aspects of professional quality of life to better prepare them for the realities of the profession. The qualitative component offers insights into how cultural factors influence professional experiences, promoting culturally sensitive practices and workplace inclusivity. By improving the professional quality of life of audiologists, the study can indirectly enhance patient care, as well-supported professionals are likely to provide better services. Furthermore, the study identifies gaps in current knowledge, suggesting areas for future research and contributing to methodological literature by showcasing the benefits of a mixed-method approach in professional quality-of-life research. The findings emphasise the importance of resilience-building interventions and workplace support strategies, urging institutions to implement mentorship programmes, mental health resources, and workload management strategies to mitigate burnout and compassion fatigue. Healthcare organisations should foster supportive environments that enhance compassion satisfaction, provide adequate resources, promote work-life balance, and recognise the contributions of audiologists. Additionally, the study highlights the significance of personal coping mechanisms in maintaining professional well-being, encouraging audiologists to engage in self-care, set boundaries, and pursue professional development. Resilience-building programmes could further equip audiologists with skills to navigate professional challenges effectively.

Recommendations for Future Research

Future research should explore the long-term impact of resilience-building interventions on the professional quality of life of audiologists. Additionally, studies could examine the role of organisational factors, such as leadership and workplace culture, in promoting well-being. Furthermore, it would be beneficial to conduct comparative studies across different regions and countries to identify best practices for supporting audiologists. Future research endeavours should prioritise several methodological approaches to enhance our understanding of audiologists' professional quality of life. Firstly, longitudinal studies are essential to track the evolution of professional quality of life over time, enabling the establishment of causal relationships and a deeper exploration of factors contributing to compassion fatigue and burnout. Secondly, further qualitative investigations are needed to provide a richer understanding of audiologists' lived experiences, elucidating the challenges they encounter and the coping mechanisms they employ. Thirdly, intervention studies should be conducted to evaluate the efficacy of strategies aimed at promoting resilience and well-being, such as mindfulness-based interventions and stress management programmes. Lastly, future studies should prioritise larger, more representative samples to enhance statistical power and generalisability.

The inclusion of audiologists from both clinical and non-clinical work settings offered valuable insight into the diverse experiences that shape professional quality of life within the profession. While much of the discussion has focused on clinical challenges, such as emotional exhaustion from patient care or resource constraints in public healthcare, it is important to acknowledge that those in academic, research, or administrative roles may face different yet equally impactful stressors. These include pressures related to publishing, teaching loads, job security in academic institutions, or managing under-resourced programmes. Future research could further explore these variations to better inform support systems that are tailored to audiologists in all professional contexts.

This study provides valuable insights into the professional quality of life of South African audiologists, shedding light on the factors influencing their well-being and the role of resilience in mitigating workplace stressors. While moderate levels of compassion satisfaction were observed, burnout and compassion fatigue remain significant concerns. Addressing these issues through institutional support, workplace interventions, and resilience-building strategies is essential for

fostering a sustainable and fulfilling career in audiology. By emphasising the importance of professional well-being, this research contributes to the broader discourse on healthcare workforce sustainability and patient care quality, paving the way for future research and policy improvements.

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Appendices

Appendix A: Survey Questionnaire

Professional Quality of Life Scale - 5 (ProQOL)

The Center for Victims of Torture www.ProQOL.org

When you help patients, you have direct contact with their lives. As you may have found, your compassion for your patients can affect you in positive and negative ways. Below are some questions about your experiences, both positive and negative, as an audiologist. Consider each of the following questions about you and your current work situation. Select the number that honestly reflects how frequently you experienced these things in the last 30 days.

1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often

	1	2	3	4	5
1. I am happy.					
2. I am preoccupied with more than one person I help.					
3. I get satisfaction from being able to help people.					
4. I feel connected to others.					
5. I jump or am startled by unexpected sounds.					
6. I feel invigorated after working with my patients/students/learners.					
7. I find it difficult to separate my personal life from my life as an audiologist.					
8. I am not as productive at work because I am losing sleep over traumatic experiences of my patients/students/learners.					
9. I think that I might have been affected by the traumatic stress of my patients/students/learners					
10. I feel trapped by my job as an audiologist.					
11. Because of my occupation, I have felt "on edge" about various things.					
12. I like my work as an audiologist.					
13. I feel depressed because of the traumatic experiences of the people I help.					
14. I feel as though I am experiencing the trauma of someone I have helped.					
15. I have beliefs that sustain me.					
16. I am pleased with how I am able to keep up with [helping] techniques and protocols.					
17. I am the person I always wanted to be.					
18. My work makes me feel satisfied.					
19. I feel worn out because of my work as an audiologist.					
20. I have happy thoughts and feelings about those I help and how I could help them.					
21. I feel overwhelmed because my workload seems endless.					
22. I believe I can make a difference through my work.					

23. I avoid certain activities or situations because they remind me of frightening experiences of the people I help.					
24. I am proud of what I can do to help.					
25. As a result of my helping, I have intrusive, frightening thoughts.					
26. I feel "bogged down" by the system.					
27. I have thoughts that I am a "success" as an audiologist/audiology lecturer.					
28. I can't recall important parts of my work with trauma victims.					
29. I am a very caring person.					
30. I am happy that I chose to do this work.					

© B. Hudnall Stamm, 2009. Professional Quality of Life: Compassion Satisfaction and Fatigue

1. How do you manage and recover from the stresses and challenges you encounter in your professional life, and how would you describe your ability to maintain your well-being despite these challenges?

2. On a scale from 1 to 5, where 1 means 'not at all resilient' and 5 means 'extremely resilient,' how would you rate your resilience in managing professional stress and maintaining your well-being?

3. Which of the following best describes your ability to cope with and recover from work-related stress and challenges?

I often struggle to cope and feel overwhelmed

I have some difficulty but manage to recover with effort

I cope fairly well and usually bounce back from the challenges

I handle stress well and recover quickly from challenges

I thrive under pressure and use challenges as opportunities for growth

Thank you for completing the first phase of this study. If you are interested in participating in the second phase, please indicate your response by selecting 'Yes' or 'No'. Those who opt in will be contacted with further details. The second phase involves a semi-structured interview that will explore your professional quality of life in greater depth, based on your responses to the questionnaire. Your participation and support are greatly appreciated.

Yes/No

Please share your contact details so an interview can be scheduled with you.

Appendix B: Interview Guide

Introduction

- Welcome and thank the participant.
- Explain the purpose of the interview and obtain consent.
- Obtain informed consent from the participant, explaining confidentiality and how the data will be used
- Provide an overview of the interview process.

Opening Questions

- "Can you tell me a bit about your professional background and current role?"

Main Questions

Topic 1: Professional Quality of Life

- "How would you describe your overall experience working in your current role?"
- "What aspects of your job do you find most fulfilling?"

Topic 2: Stress and Challenges

- "Can you describe a particularly challenging situation you've faced in your work?"
- "How do you typically manage work-related stress?"

Topic 3: Resilience

- "How do you manage and recover from the stresses and challenges you encounter in your professional life?"
- "How would you describe your ability to maintain your well-being despite these challenges?"
- "Can you provide an example of a time when you demonstrated resilience at work?"
- "On a scale from 1 to 5, where 1 means 'not at all resilient' and 5 means 'extremely resilient,' how would you rate your resilience in managing professional stress and maintaining your well-being?"

Probing Questions

- "Can you elaborate on that experience?"
- "How did that situation impact your professional life?"

Closing Questions

- "Is there anything else you would like to add about your professional quality of life?"
- "Do you have any suggestions for improving resilience among professionals in your field?"

Conclusion

- Thank the participant for their time.
- Explain the next steps in the research process.
- Provide your contact information for any follow-up questions.

Appendix C: Organisation Permission Requests



Dear (Professional Body/Organisation),

Good day,

My name is Senamile Ntuli, and I am an Audiology master's student at the University of Witwatersrand in South Africa. I am writing to request your support in advertising my research study on your esteemed platform.

The focus of my research is to explore the professional quality of life of South African audiologists. This study aims to determine the professional quality of life of South African audiologists using ProQOL. The study also seeks to explore the influence of resilience on South African audiologists' professional quality of life and to determine whether there are any resources available for South African audiologists to improve their professional quality of life and what strategies South African audiologists may use to improve their professional quality of life. Given the relevance of this topic to the members of your organisation, I believe that sharing this study on your platform will not only benefit my research efforts but also provide valuable insights and opportunities for your members to contribute to advancing knowledge in our field.

I am currently seeking participants who meet the following criteria: South African audiologists working in various settings in South Africa (e.g. schools, private practice etc.). Duly qualified audiologists will also be included. However, these participants need to be practising as audiologists as well. Audiologists who have felt or experienced behaviours/emotions/thoughts associated with compassion satisfaction, burnout, and secondary traumatic stress experienced over the last 30 days. The participation involves answering a 30-question ProQOL V5 scale with three open-ended questions and should the participant be invited to the second phase, they will be part of an online interview. I am committed to ensuring that all participants are treated with the utmost respect and confidentiality.

I would be extremely grateful if you could advertise this study through your newsletter, website, social media channels, etc. Enclosed, you will find the study advertisement and participant information sheet and consent form with all relevant details for your reference.

Thank you very much for considering my request. Your support in disseminating this research study is invaluable, and I am confident that it will contribute significantly to the success of this important project. Should you have any questions or require further information, please do not hesitate to contact me at 1061599@students.wits.ac.za.

I look forward to the possibility of collaborating with your organisation and appreciate your assistance in promoting this research study.

Sincerely,

Student researcher: Senamile Ntuli

Supervisors: Dr Ben Sebothoma and Ms Nabeelah Nagdee

Appendix D: Organisation permission letters



11 October 2024

To whom it may concern

Re: Distribution of research study to SAAA members on behalf of Senamile Ntuli

I, Cornelle Naudé, in my capacity as Administrator of the South African Association of Audiologists (SAAA), herewith acknowledge that SAAA will distribute the request for voluntary participation in the research study titled: Exploring the Professional Quality of life of South African audiologists, to all Audiologists registered with the SAAA.

I acknowledge that I have received the necessary information and have had the opportunity to ask questions regarding the project.

Please do not hesitate to contact me with any questions or concerns that you might have.

Regards,

C Naudé
SAAA Administrator
082 727 5977

 082 727 5977
 admin@audiologysa.com
 www.audiologysa.co.za



NABSLHA
National Black Speech,
Language & Hearing
Association

374 Schoeman Street
112 Louis Pasteur Hospital
Pretoria
0002
11 October 2024

Re: Request for Support in Advertising Research Study

Dear Senamile Ntuli

Thank you for reaching out to the National Black Speech Language Hearing Association (NABSLHA) with your request to advertise your study. We appreciate your initiative in conducting such an important study on the professional quality of life of South African audiologists, especially given the relevance of this topic to our field.

NABSLHA is pleased to inform you that we will assist you by sharing your study through our communication platforms. However, in order for us to proceed, please send us the following necessary documents; participant information sheet, consent form, as well as any other information necessary for your study. We will review the materials and respond accordingly.

Thank you once again for considering NABSLHA as a partner in your research. We look forward to supporting your study and wish you great success in completing your research project.

Please do not hesitate to contact me should you require any additional information.

Warm regards

Clementine Phale
Executive Committee Member
National Black Speech Language Hearing Association
+27730804824
clementine@heartronix.co.za

NATIONAL BLACK SPEECH LANGUAGE AND HEARING ASSOCIATION Registration No: 2013/010587/08
P.O. Box 840 NOORDWYK 1687



16th October 2024

To whom it may concern

Dear Health Colleagues

RE: Senamile Ntuli request for circulation of proposed research "to explore the professional quality of life of South African audiologists"

RuReSA is willing to assist anyone, especially students, formulate questions appropriate for rural therapists and rural rehabilitation services before they submit for Ethics clearance. We are willing to circulate information or requests relating to research on disability or rehabilitation services in South Africa. Circulation options may include: RuReSA members, our rural partners such as the Rural Doctors Association of Southern Africa, and rehabilitation networks that are linked to these, such as Whats App groups. There is no cost.

Our requirements are that the email request should be in an easy to read format for busy professionals with poor bandwidth/connectivity:

- A 1-2 short paragraphs with the Title of the research, target group, and why the research is important. Enough information that someone can quickly decide "this is of interest/not of interest to me".
- Ethics clearance number
- Expected time taken e.g. 30 minute survey, 3 focused group sessions etc
- Contact email & phone number for research and supervisor (if needed)
- Additional information to be available by link to cloud storage is preferred. Note that our bulk mail system means that readers do not see attachments.
- For social media distribution you should provide either a link to your social media information on the research or a message that we can just copy and paste into our social media

This research seems appropriate for rural audiologists..

Regards

Stephanie Homer

RuReSA Office Co-ordinator



SANDTA Office: 083 229 0456

PO Box 13073

Noordstad

9305

E-mail: sandta@internext.co.za

www.sandta.org.za

NPO registration: 167-148 NPO

Re: Permission to conduct research

This serves to confirm that Senamile Ntuli has been granted permission to disseminate her research through the South African Neurodevelopmental Therapy Association (SANDTA).

It is agreed that she will create a communication that will be sent via our database to all members. Members will then have the option to opt-in to participate in her research study. All information reported on by members will be sent directly to Ms. Ntuli and will have no bearing on our institution.

Should members choose not to participate in the study, there will be no follow-up or consequence thereof.

Sincerely,

A handwritten signature in dark ink, appearing to read "P Gibbs".

Pamela Gibbs
SANDTA Chairperson

Appendix E: Ethical clearance certificate



Research Office

HUMAN RESEARCH ETHICS COMMITTEE (NON-MEDICAL)
R14/49 Ntuli

CLEARANCE CERTIFICATE

PROTOCOL NUMBER: H24/09/38

PROJECT TITLE

Exploring the Professional Quality of Life of South African Audiologists

INVESTIGATOR(S)

Mrs S Ntuli

SCHOOL/DEPARTMENT

Human Community Development/

DATE CONSIDERED

27 September 2024

DECISION OF THE COMMITTEE

Approved
Risk Level: Low

EXPIRY DATE

23 October 2027

DATE

24 October 2024

CHAIRPERSON

(Professor J Watermeyer)

cc: Supervisor : Dr B Sebothoma

DECLARATION OF INVESTIGATOR(S)

To be completed in duplicate and A SIGNED COPY returned to the Secretary electronically. Unreported changes to the application may invalidate the clearance given by the HREC (Non-Medical)

I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure be contemplated from the research procedure as approved I/we undertake to submit an amendment of the protocol to the Committee. I/we agree to completion of a regular progress report. For Minimal and Low Risk studies, this is due annually on 31 December. For Medium and High Risk studies, this is due twice annually on 30 June and 31 December.

Signature

25 / 10 / 2024
Date

PLEASE QUOTE THE PROTOCOL NUMBER ON ALL ENQUIRIES

Appendix F: Poster invite

CALLING ALL SOUTH AFRICAN AUDIOLOGISTS!





SCAN HERE TO PARTICIPATE OR GO
 TO [Exploring the professional quality
 of life of South African audiologists](https://office.com/Exploring%20the%20professional%20quality%20of%20life%20of%20South%20African%20audiologists)
 (office.com)

WHY PARTICIPATE?

- Contribute to important research that can enhance the audiology profession in South Africa
- Help identify strategies to improve job satisfaction and well-being among audiologists
- Your insights could lead to better support systems and work environments

WHAT IS THE STUDY ABOUT?

This study is aimed at exploring the Professional Quality of Life of audiologists in South Africa. This study seeks to explore the factors that impact your job satisfaction, stress levels, and overall well-being.

WHO CAN PARTICIPATE?

1. South African audiologist:
 - Registered with the Health Profession Council of South Africa (HPCSA)
 - Duly qualified audiologists practicing as audiologists.
 - Working in various settings in South Africa (e.g., schools, private practice etc.)
2. Audiologists who have, over the last 30 days felt or experienced behaviours/emotions/thoughts associated with:
 - compassion satisfaction
 - Burnout
 - and secondary traumatic stress



UNIVERSITY OF THE
WITWATERSRAND
JOHANNESBURG

Contact: Ms Senamile Ntuli
1061599@students.wits.ac.za

Appendix G: REDCap Agreement

Wits REDCap End-User Agreement#1
Page 1

End-user Agreement
and
Pledge of Best Practice

The Faculty of Health Sciences ("Faculty"), University of the Witwatersrand has an initiative that aims to facilitate collection of data for research and clinical use. The ultimate goal is that all data, whether clinical, research, or other, will be deposited into a central repository operated by the University of the Witwatersrand, Johannesburg ("Wits") and from which the data can be extracted in an integrated manner for clinical, research and hospital management purposes.

Towards this end, and as part of a wider ongoing collaboration between the two universities, Wits has a non-profit Agreement with Vanderbilt University ("Vanderbilt") as a consortium partner for REDCap. As a Wits REDCap End-User, you are also bound to honour the terms of the licensing agreement or risk expulsion from the platform. A copy of the agreement can be found for download below, and the pertinent points are also presented individually for you to agree to.

All data captured on Wits REDCap is stored, backed up and maintained in a secure environment operated by Wits University or Wits Health Consortium (Pty) Ltd ("WHC"), or a subsidiary thereof. The Server Administrator is responsible for maintaining the infrastructure and the REDCap Administrator is responsible for software management are permanent staff of WHC, and bound by their employment contracts to maintain the platform to the highest level of data security and privacy.

REDCap allows for different levels of access control to a project and its data on needs and user rights. The only way for someone besides yourself to access your data is if you or the REDCap Administrator adds them to your project with user privileges. The REDCap Administrator will only add users to a project on behalf of someone else if asked to do so in writing by the current custodian of the data. When you create a project on Wits REDCap, you are the designated custodian of that project unless you choose to delegate that responsibility to another entity.

This document serves as an agreement between you and Wits REDCap. By ticking 'I agree', you are indicating that you agree and you are willing to have your data stored on the Wits REDCap servers and that you are binding yourself to Wits' rules and regulations.

You acknowledge that it is the long-term goal of the Faculty to enable information aggregation for the purpose of clinical service delivery and patient care. Data from the clinical aggregate will not facilitate any research activity. The sharing of information for research or publication purposes can only be done with the approval of the data's custodian.

Wits REDCap Terms of Use

As per the Vanderbilt License Agreement, REDCap may not be used for commercial research. Non-profit research, academic, clinical or other data management purposes like administrative or private data repositories are all allowed.

☒ I agree

As per the Vanderbilt License Agreement, you acknowledge the REDCap source code remains the property of Vanderbilt University. Any modifications to the source code also becomes the intellectual property of Vanderbilt University. The data collected using REDCap, however, remains the intellectual property of the Consortium Partner, in this case Wits University. Vanderbilt has no access to data on the Wits REDCap system and makes no claims on such data

☒ I agree

Your acknowledge that your project data is stored on infrastructure managed by the University of the Witwatersrand or its subsidiaries, like Wits Health Consortium, and you understand that designated members of Wits or WHC staff ("Administrators") will have access to your projects and data during the course of performing their duties to maintain and support the system. Administrators will not access, transmit, use or share any project information in a manner that falls outside of the scope of their support and maintenance duties

☒ I agree

You are required to acknowledge the use of REDCap in any publications that result from data collected or managed with the system. The acknowledgement takes the form of this citation. You can find the link to the citation whenever you export data, or in the FAQ section

☒ I agree

You agree that Wits REDCap reserves the right to change the terms and conditions of this document at any time. If any such changes are made, you will be notified and you will have the option to sign an addendum to these terms and conditions containing the changes or you will be able to terminate your relationship with Wits REDCap in terms of the REDCap data capture programme. If you do not accept the revised terms and conditions and choose to terminate your relationship with Wits in terms of the REDCap data capture programme, then you will no longer be able to use the system, but your existing data will not be affected. A copy of your database will be handed over to you before your access to the REDCap site is revoked

☒ I agree

Wits REDCap undertakes that if, for any reason, it is no longer able to host your data, a copy of your database will be provided to you in either csv or xml format, whichever you prefer

☒ I agree

Wits REDCap Pledge of Best Practice

I understand that when I create or access records on REDCap, I have the responsibility to treat protected health information (PHI) in a professional and confidential manner

☒ I agree

I acknowledge that to maintain confidentiality of protected health information, it is my responsibility to keep my login details private and not share them with any other parties. I can request login details for any collaborators that need to work with me by contacting the Wits REDCap Admin or following this link

☒ I agree

When I create projects on REDCap, I acknowledge that I take on the role of curator and protector of data integrity and privacy. I pledge to flag any fields containing protected health information or individual identifiers with the correct setting in the instrument designer, and to restrict access to those fields by my project collaborators appropriately

☒ I agree

It is my responsibility to obtain either approval or waivers from the HREC or other University mandated research oversight committees whenever I use REDCap for research purposes

☒ I agree

I agree to notify the Wits REDCap support team if I become aware of any unauthorized use of my account details, or of any potential breaches of data security and privacy

☒ I agree

I, Senamile Ntuli have read and understood the Wits REDCap End-User Terms of Use and Pledge of Best Practice Agreement version 2.2 (6 October 2020), and agree to abide by the terms of use stated therein.

☒ I agree

Signature

28-07-2024 21:19

Senamile Ntuli, 2.2 (6 Oct 2020), Wits REDCap End-User

projectredcap.org



Page 3

(Please click on 'Add signature' to add your signature)

Copy of the Licence Agreement between Wits and Vanderbilt

[Attachment: "REDCap_License_Agreement.pdf"]

Appendix H: Research Invite



SCHOOL OF HUMAN AND COMMUNITY DEVELOPMENT
SPEECH PATHOLOGY AND AUDIOLOGY

Good day,

I hope you are well!

My name is Senamile Ntuli, an Audiology masters student. I am reaching out to invite you to participate in my study, which aims to explore the professional quality of life of South African audiologists.

I am looking for South African audiologists working in various settings in South Africa (e.g. schools, private practice etc.) to participate in my study. Duly qualified audiologists will also be included. However, these participants need to be practising as audiologists as well.

These audiologists must have felt or experienced behaviours/emotions/thoughts associated with compassion satisfaction, burnout, and secondary traumatic stress experienced over the last 30 days.

I am conducting a two-phase study, which will entail answering questions from a scale and should you be invited to the second phase you will be invited to an online interview which will entail a debriefing on your professional quality of life and resilience.

Attached to this email are the participant information sheet and consent form for the study. Please kindly read through these documents carefully should you choose to participate. If you agree to participate, please sign the consent form and return to me at your earliest convenience.

If you have any questions or need any further information, please do not hesitate to contact me. Thank you for considering this request. We truly appreciate your time and willingness to contribute to my research.

Warmest regards,

Senamile Ntuli
1061599

Appendix I: Participant Information Sheet Phase 1



SCHOOL OF HUMAN AND COMMUNITY DEVELOPMENT
 SPEECH PATHOLOGY AND AUDIOLOGY

Dear Sir / Madam

My name is Senamile Ntuli. I am an audiology masters student at the University of the Witwatersrand, Johannesburg. I am conducting research as part of my undergraduate research towards a degree in Audiology. My supervisors are Dr Ben Sebothoma and Ms Nabeelah Nagdee. The study title is “Exploring the professional quality of life of South African audiologists.” The aim of this study to explore the professional quality of life of South African audiologists. This study seeks to measure, describe and determine the association of the level of compassion satisfaction, compassion fatigue, burnout and secondary traumatic stress among South African audiologists within the context of various demographic variables. The study also seeks to explore the influence of resilience on South African audiologists’ professional quality of life and to determine whether there are any resources available for South African audiologists to improve their professional quality of life and what strategies South African audiologists may use to improve their professional quality of life.

I am inviting you to participate in this study. If you agree to participate, you will be required to answer 30 short questions from the Professional quality of life (ProQOL v5) scale which will also entail 3 open ended questions. Participation in the second part of the study is optional, you will have an option at the end of the questionnaire to indicate if you are interested in being part of the interviews for the second phase. Your participation will further entail debriefing through an online interview where your perspectives, experiences, and opinions regarding your professional quality of life and resilience will be discussed. The online interviews will be conducted at a time that is mutually convenient for the participants and researcher.

If you decide to take part, you will be required to complete a consent form. Please also note completion of the questionnaire implies informed consent. Your participation in the first phase of

this research study will last about 30 minutes and the second phase about 1 hour. With your permission, I would like to audio record the debriefing session. This data will be stored in a password protected data cloud. Only the researcher and research supervisors will have access to the data. The online interviews will be confidential. To ensure anonymity during the data analysis and write-up, the names of the participants will not be recorded instead the participant's chosen pseudonym will be used.

If you decide to take part in the research study, it should be because you want to volunteer. You do not have to take part. You can withdraw from the study at any point in time. You do not have to answer any questions if you do not want to. You will not get any direct benefits if you choose to join the research study. You will not lose any benefits, or rights you would normally have if you decided not to join. Taking part in the research study will not cost you anything. You will not be paid for being in this research study.

This research study will be written up as a thesis. If you would like to receive a summary of this thesis, I will be happy to send it to you.

If you have any questions during or afterwards about this research study, feel free to contact me or my supervisor on the details listed below. Should the need arise, you can access psychotherapy services free of charge at the Emthonjeni Community Psychology Clinic on East Campus. The clinic can be contacted for bookings on 011 717 4513 or email paballo.lepota@wits.ac.za. If you have any concerns or complaints about the ethical procedures of this research study, you are welcome to contact the University Human Research Ethics Committee (Non-Medical), telephone +27(0) 11 717 1408, email hrecnon-medical@wits.ac.za.

Yours sincerely,

Senamile Ntuli

Researcher contact details:

Senamile Ntuli: 1061599@student.wits.ac.za

Supervisors: Dr Ben Sebothoma ben.sebothoma@wits.ac.za

Ms. Nabeelah Nagdee nabeelah.nagdee@wits.ac.za

Appendix J: Consent Forms



SCHOOL OF HUMAN AND COMMUNITY DEVELOPMENT
SPEECH PATHOLOGY AND AUDIOLOGY

Research Participant Consent Form

Exploring the professional quality of life of South African audiologists

Name of researcher: Senamile Ntuli

I,, agree to participate in this research project.

I agree to the following:

(Please circle the relevant options below)

The research study was explained to me. I understand what this study is about. YES NO

I understand that I can volunteer to take part in the study. YES NO

I agree that the interview session may be audio recorded. YES NO

I agree that direct quotations from my interview session may be used by the researcher in their research report. YES NO

I agree that my participation will remain anonymous (my name or other identifying data will not be used by the researcher in their research report) YES NO

I agree that other researchers may use the information I provide in my debriefing session (depending on their own ethics clearance) YES NO

being obtained) but my name and any personal information will not be used or passed on.

As part of ensuring anonymity, please indicate the pseudonym you would prefer to be referred to as throughout the study:

..... (signature of participant)

..... (date)

..... (signature of researcher)

..... (name of researcher/person seeking consent)

..... (date)

Consent form for audio-taping the interview

I hereby consent to tape-recording of the interviewing. Even though quotes will be used, participants will be anonymised in the write-up of the thesis.

I understand that my confidentiality will be always maintained and that the tapes will be destroyed two years after any publication arising from the study or six years after completion of the study if there are no publications.

Date: _____

Signature: _____

Signed by Senamile Ntuli

Signature: _____

Appendix K: Participant Information Sheet Phase 2



SCHOOL OF HUMAN AND COMMUNITY DEVELOPMENT
 SPEECH PATHOLOGY AND AUDIOLOGY

Dear Sir / Madam

My name is Senamile Ntuli. I am an audiology masters student at the University of the Witwatersrand, Johannesburg. I am conducting research as part of my undergraduate research towards a degree in Audiology. My supervisors are Dr Ben Sebothoma and Ms Nabeelah Nagdee. The study title is “Exploring the professional quality of life of South African audiologists.” The aim of this study to explore the professional quality of life of South African audiologists. This study seeks to measure, describe and determine the association of the level of compassion satisfaction, compassion fatigue, burnout and secondary traumatic stress among South African audiologists within the context of various demographic variables. The study also seeks to explore the influence of resilience on South African audiologists’ professional quality of life and to determine whether there are any resources available for South African audiologists to improve their professional quality of life and what strategies South African audiologists may use to improve their professional quality of life.

I am inviting you to participate in this study. You participated in phase 1 of the study where you answered 30 short questions from the Professional quality of life (ProQOL v5) scale which also entailed 3 open ended questions. You have indicated interest in participating in the second phase of the study. In this second phase of the study, your participation will further entail debriefing through an online interview where your perspectives, experiences, and opinions regarding your professional quality of life and resilience will be discussed. The online interviews will be conducted at a time that is mutually convenient for the participants and researcher.

If you decide to take part, you will be required to complete a consent form. Your participation in the second phase of this research study will last about 1 hour. With your permission, I would like to audio record the debriefing session. This data will be stored in a password protected data cloud.

Only the researcher and research supervisors will have access to the data. The online interviews will be confidential. To ensure anonymity during the data analysis and write-up, the names of the participants will not be recorded instead the participant's chosen pseudonym will be used.

If you decide to take part in the research study, it should be because you want to volunteer. You do not have to take part. You can withdraw from the study at any point in time. You do not have to answer any questions if you do not want to. You will not get any direct benefits if you choose to join the research study. You will not lose any benefits, or rights you would normally have if you decided not to join. Taking part in the research study will not cost you anything. You will not be paid for being in this research study.

This research study will be written up as a thesis. If you would like to receive a summary of this thesis, I will be happy to send it to you.

If you have any questions during or afterwards about this research study, feel free to contact me or my supervisor on the details listed below. Please note there is the risk of discomfort due to certain questions in this interview. Should the need arise, you can access psychotherapy services free of charge at the Emthonjeni Community Psychology Clinic on East Campus. The clinic can be contacted for bookings on 011 717 4513 or email paballo.lepota@wits.ac.za. If you have any concerns or complaints about the ethical procedures of this research study, you are welcome to contact the University Human Research Ethics Committee (Non-Medical), telephone +27(0) 11 717 1408, email hrecnon-medical@wits.ac.za.

Yours sincerely,

Senamile Ntuli

Researcher contact details:

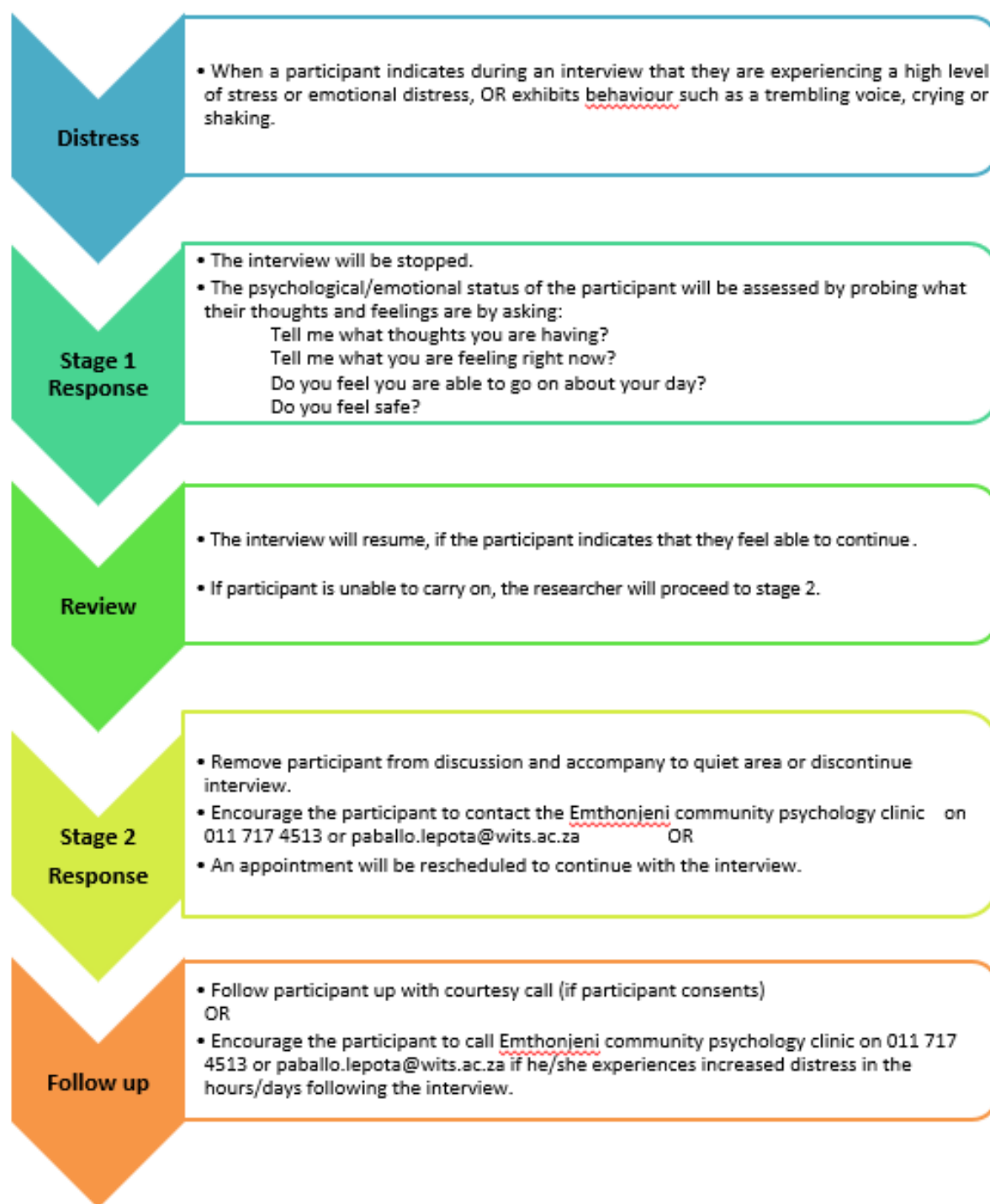
Senamile Ntuli: 1061599@student.wits.ac.za

Supervisors: Dr Ben Sebothoma ben.sebothoma@wits.ac.za

Ms. Nabeelah Nagdee nabeelah.nagdee@wits.ac.za

Appendix L: Distress Protocol

The figure below outlines the protocol which the researcher will implement if participants experience distress during the interview



Appendix M: Pilot study participant information sheet and consent form



SCHOOL OF HUMAN AND COMMUNITY DEVELOPMENT
SPEECH PATHOLOGY AND AUDIOLOGY

Dear Sir / Madam

My name is Senamile Ntuli. I am an audiology masters student at the University of the Witwatersrand, Johannesburg. I am conducting research as part of my postgraduate research towards a master's degree in Audiology. My supervisors are Dr Ben Sebothoma and Ms Nabeelah Nagdee. The study title is "Exploring the professional quality of life of South African audiologists." The aim of this study to explore the professional quality of life of South African audiologists. This study seeks to measure, describe and determine the association of the level of compassion satisfaction, compassion fatigue, burnout and secondary traumatic stress among South African audiologists within the context of various demographic variables. The study also seeks to explore the influence of resilience on South African audiologists' professional quality of life and to determine whether there are any resources available for South African audiologists to improve their professional quality of life and what strategies South African audiologists may use to improve their professional quality of life.

I am inviting you to participate in this pilot study. If you agree to participate, you will be required to answer 30 short questions from the Professional quality of life (ProQOL v5) scale which will also entail 3 open ended questions. You will also be invited for the second part to the study, your participation will further entail debriefing through an online interview where your perspectives, experiences, and opinions regarding your professional quality of life and resilience will be discussed. The online interviews will be conducted at a time that is mutually convenient for the participants and researcher.

If you decide to take part, you will be required to complete a consent form. Your participation in the first phase of this research study will last about 30 minutes and the second phase about 1 hour. You will be required to give feedback to the researcher after each phase on your experience and any changes you would recommend for implementation in the research study. As a pilot study participant, you will not be able to participate in the research study. With your permission, I would like to audio record the debriefing session. This data will be stored in a password protected data cloud. Only the researcher and research supervisors will have access to the data. The online interviews will be confidential. To ensure anonymity during the data analysis and write-up, the names of the participants will not be recorded instead their chosen pseudonym will be used.

If you decide to take part in the research study, it should be because you want to volunteer. You do not have to take part. You can withdraw from the study at any point in time. You do not have to answer any questions if you do not want to. You will not get any direct benefits if you choose to join the research study. You will not lose any benefits, or rights you would normally have if you decided not to join. Taking part in the research study will not cost you anything. You will not be paid for being in this research study.

This research study will be written up as a thesis. If you would like to receive a summary of this thesis, I will be happy to send it to you.

If you have any questions during or afterwards about this research study, feel free to contact me or my supervisor on the details listed below. If you have any concerns or complaints about the ethical procedures of this research study, you are welcome to contact the University Human Research Ethics Committee (Non-Medical), telephone +27(0) 11 717 1408, email hrecnon-medical@wits.ac.za.

Yours sincerely,
Senamile Ntuli

Researcher contact details:

Senamile Ntuli: 1061599@student.wits.ac.za

Supervisors: Dr Ben Sebothoma ben.sebothoma@wits.ac.za

Ms. Nabeelah Nagdee nabeelah.nagdee@wits.ac.za

Pilot study consent form

Exploring the professional quality of life of South African audiologists

Name of researcher: Senamile Ntuli

I,, agree to participate in this research project.

I agree to the following:

(Please circle the relevant options below)

The research pilot study was explained to me. I understand what this study is about.	YES	NO
--	-----	----

I understand that I can volunteer to take part in the pilot study.	YES	NO
--	-----	----

I agree that the interview session may be audio recorded.	YES	NO
---	-----	----

I agree that direct quotations from my interview session may be used by the researcher in their thesis.	YES	NO
---	-----	----

I agree to not participate in the research study	YES	NO
--	-----	----

I agree that my participation will remain anonymous (my name or other identifying data will not be used by the researcher in their research report)	YES	NO
---	-----	----

I agree that other researchers may use the information I provide in my debriefing session (depending on their own ethics clearance being obtained) but my name and any personal information will not be used or passed on.	YES	NO
--	-----	----

..... (signature of participant)

..... (date)

..... (signature of researcher)

..... (name of researcher/person seeking consent)

..... (date)

Appendix N: Pilot study feedback form

Thank you for participating in our pilot study. We value your feedback and would appreciate it if you could take a few minutes to complete this feedback form. Your insights will help us improve the study for future participants.

Participant Information

1. **Age:** _____
 2. **Gender:**
 - ☐ Male
 - ☐ Female
 - ☐ Other (please specify): _____
 3. **Years of Experience as an Audiologist:**
-
-

ProQOL Questionnaire Feedback

4. **How clear were the instructions for completing the ProQOL questionnaire?**
 - ☐ Very clear
 - ☐ Clear
 - ☐ Neutral
 - ☐ Unclear
 - ☐ Very unclear
5. **How easy was it to understand the questions in the ProQOL questionnaire?**
 - ☐ Very easy
 - ☐ Easy
 - ☐ Neutral
 - ☐ Difficult
 - ☐ Very difficult
6. **How long did it take you to complete the ProQOL questionnaire?**
 - ☐ Less than 10 minutes

- ☐ 10-20 minutes
- ☐ 21-30 minutes
- ☐ More than 30 minutes

7. Do you have any suggestions for improving the ProQOL questionnaire?

- ☐ Yes (please specify): _____
 - ☐ No
-

Interview Feedback

8. How comfortable did you feel during the interview process?

- ☐ Very comfortable
- ☐ Comfortable
- ☐ Neutral
- ☐ Uncomfortable
- ☐ Very uncomfortable

9. How clear were the questions asked during the interview?

- ☐ Very clear
- ☐ Clear
- ☐ Neutral
- ☐ Unclear
- ☐ Very unclear

10. How well did the interview help you express your thoughts and experiences?

- ☐ Very well
- ☐ Well
- ☐ Neutral
- ☐ Poorly
- ☐ Very poorly

11. Do you have any suggestions for improving the interview process?

- ☐ Yes (please specify): _____

☐ No

Overall Feedback

12. How would you rate your overall experience as a participant in this study?

- ☐ Excellent
- ☐ Good
- ☐ Neutral
- ☐ Fair
- ☐ Poor

13. Would you recommend participation in this study to other audiologists?

- ☐ Yes
- ☐ No
- ☐ Maybe

14. Do you have any additional comments or suggestions for improving the study?

Thank you for your valuable feedback!

Contact Information

If you have any questions or concerns, please contact:

Ms Senamile Ntuli

1061599@students.wits.ac.za

Appendix O: Emthonjeni Confirmation



07 August 2024

Attention: Human Research Ethics Committee

Confirmation of psychotherapy/counselling services

This serves to confirm that, should the need arise, participants in Senamile Ntuli research study on "Exploring the professional quality of life of South African Audiologists", can access psychotherapy services free of charge at the Emthonjeni Community Psychology Clinic on East Campus.

The name of a specific counsellor cannot be specified at this time, as the counsellor allocated to the case, if the need arises, will depend on which counsellor has availability at that time.

This confirms that I am aware of Senamile Ntuli's study and will prioritise any participants from the study making contact with the clinic. I can be contacted for bookings on 011 717 4513 or paballo.lepota@wits.ac.za.

Kind regards

A handwritten signature in black ink, appearing to be "P. Lepota", is written over a light blue circular stamp.

Ms Paballo Lepota
Emthonjeni Centre Administration
University of the Witwatersrand
011 717 4513
Paballo.Lepota@wits.ac.za

Appendix P: POPIA Compliance Form

PROTECTION OF PERSONAL INFORMATION ACT (POPIA): USE AND STORAGE OF RESEARCH

DATA

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

Name of student	Senamile Ntuli
Student number	1061599
Title of project	Exploring the professional quality of life of South African audiologists
Supervisor/s	Dr Ben Sebothoma Ms Nabeelah Nagdee

Nature of raw data (*Tick all that applies*):

Audio recordings of interviews	✓	Test score sheets	✓
Transcripts of interviews/focus groups	✓	Completed paper-based surveys	✓
Other: ____ Responses received from the survey ____	✓	Other: _____ _____ _____	

What is to be done with the raw data after completion of the project? (*Tick all that applies*): Storage/retention, destruction/use

✓	Stored securely by the researcher
	Stored securely in the supervisor's office

✓	Stored in digital form with all identifying features removed (e.g., in the case of interview transcripts, these should be anonymised)
✓	Stored in a password-protected computer. <i>Specify whose computer:</i> ___Senamile Ntuli_____
	Stored in an archive. <i>Specify:</i> _____
	Stored for future secondary analysis
	Stored in an on-line data base. <i>Specify:</i> _____
✓	Destroyed. <i>Indicate when data is to be destroyed:</i> ___After 2 Years_____

What is to be done with the signed informed consent and/or assent sheets? (*Tick all that applies*):

✓	Stored securely by the researcher
	Stored securely in the supervisor's office
✓	Scanned and stored in a password-protected computer. <i>Specify whose computer:</i> __Senamile Ntuli_____
	Original copies to be destroyed

Any additional comments: