Update on the State of Audiology in South Africa

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Dear Editor,

In 2006 the state of audiology in South Africa was reported in the *International Journal of Audiology* (Swanepoel, 2006). Since this time, however, significant changes have occurred within the profession and within the socioeconomic landscape. The country's population has grown rapidly, from 41.5 million people in 2002 to 59 million people in 2020 (Statistics South Africa, 2020) with a predominantly youthful population, with 63% falling between the ages of 14 and 34 (Stats SA, 2020) and only 5.9% 65 years and older. Despite a younger average population age, the country faces many environmental risks for hearing loss including poverty, with approximately 55.5% of the population living below the poverty line, along with a high prevalence of chronic diseases such as diabetes, tuberculosis (TB) and HIV/AIDS (World Bank, 2020; Stats SA, 2020; Wandai et al., 2017). This letter explores the evolution of the audiology profession in the country since 2006 by providing updated information on training, human resources and audiology services.

Human resources in audiology

According to the Health Professions Council of South Africa (HPCSA), in 2023 there were 947 audiologists, 1 616 speech therapist and audiologists (SLT/A), and 127 hearing aid acousticians registered in the country. In 2006 there were 88 registered audiologists and 2461 dually registered speech therapists and audiologists (Swanepoel, 2006). The increase in the number of practicing audiologists can be attributed to the change in training from dually qualified SLT/A to audiologist and SLTs only. Graduates previously dually qualified as speech language therapists and audiologists are now qualifying as in audiologists only (HPCSA, 2023). Uncertainty regarding the number of dually qualified SLT/As who practice audiology contributes to the lack of clarity surrounding the national audiology workforce. Over the past

decade (2008-2017), the combined average annual percentage increase for audiologists, speech therapists, and dually qualified SLT/A was reported to be 9% (Pillay et al., 2019). Several factors have contributed to the relatively modest growth including limited capacity from training institutions to admit a greater number of students, prevailing unemployment, and a general lack of awareness about these professions (Hlayisi, 2022; Joubert et al., 2017).

In terms of work settings, a recent study (Pillay et al. 2019) indicates that 19% of audiologists in South Africa work in public service, while the remaining 81% work in private practice. The racial diversity of the profession is still mainly white (40%), followed by Indian (28%), black (24%), and other ethnicities (7%) (Pillay et al., 2020). While there has been progress in transforming the racial diversity of the profession, further efforts are required to fully reshape the audiology workforce demographics. In terms of professional oversight, practicing audiologists are regulated by the HPCSA, supported by key professional bodies including the South African Association of Audiologists (SAAA) and the Speech African Speech-Language Hearing Association (SASLHA).

Training in audiology

Since 2006, all the training institutions except one (i.e., Sefako Makgatho University) have changed to training audiologists and speech-language therapists separately (see table 1). Previously, most institutions provided dual qualifications in audiology and speech language pathology (Swanepoel, 2006). Training constitutes a four-year undergraduate study program across five universities, with an additional year of community service where graduate students work as community-service audiologists in public facilities. In line with the country and institutional transformation goals, learners from diverse racial and cultural backgrounds are

encouraged and supported to pursue audiology training (Monsamy et al., 2017). Institutional transformation goals extend to the increased enrolment of diverse students into postgraduate studies and research positions. Postgraduate audiology studies are offered as research-based masters and doctoral degrees.

Table 1: Degree change between 2006 and 2023.

Institution	***Average no. students***	***Degree in 2023***
University of Pretoria, Department of Communication Pathology	30	BA Audiology
University of the Witwatersrand, Discipline of Speech Pathology and Audiology	30	B. Audiology
University of Cape Town, Division of Communication Sciences & Disorders	30	BSc. Audiology
University of KwaZulu-Natal, Audiology and Speech and Language Department	34	Bachelor of Audiology
Sefako Makgatho University	25	B. Speech Language Pathology and Audiology (BSLP&A)

Scope of audiology services

The scope of audiology practice in South Africa, as outlined in the Health Professions Act of 1974 (reviewed in 2011), encompasses the assessment and management of hearing dysfunction, auditory and vestibular-related balance disorders, as well as advocacy, education and training, and administration (South Africa Department of Health, 2011). While there have not been any significant shifts in the scope of audiology practice, one notable change is the clear definition and separation of the audiology profession from speech-language pathology (Pillay et al., 2020). Additionally, there have been groundbreaking scientific research and technological advancements within the audiology field, with the majority of publications on mHealth applications (17%) forthcoming from South Africa (Frisby et al., 2022). Newly

introduced advancements approved by relevant regulatory bodies include mHealth solutions, such as applications for hearing screening and diagnosis (Mahomed-Asmail & Swanepoel, 2020).

Over the past two decades, access to audiological services in the country have shown signs of improvement with neonatal hearing screening programs commencing in private hospitals (e.g. 2019 Netcare and Hihopes national neonatal screening) and in some public sector facilities (.e.g. NHI pilot hearing screening in PHCs) including the establishment of new cochlear implant centres within the private and public sector (e.g. Johannesburg Cochlear Implant centre) (Kanji, 2022). The status of cochlear implantation has improved, with 12 independent cochlear implant programs in five provinces (Bhamjee et al., 2022). Most of these services have however been positioned within the private health care sector.

Despite the improvement of audiology services in the private and to a lesser degree in the public sectors, it remains crucial to highlight the ongoing need to raise awareness about audiology among the general public. According to a survey (Joubert et al. 2017), only 14% of participants in rural communities were knowledgeable about the profession of audiology, the role of audiologists, and the range of services they offer. This finding is noteworthy, especially when considering the average urban-rural ratio of 65:35 in South Africa (Laldaparsad, 2012). Thus, there is a clear disparity that calls for concerted efforts to bridge the awareness gap and ensure that audiology's benefits are more widely understood by all communities.

Challenges and areas of improvement

The field of audiology in South Africa face a number of challenges including a projected shortage of audiologists as indicated by the recently passed National Health Insurance (NHI) bill (Makoni, 2023). The NHI bill indicates an additional need for 608 additional positions by 2030 (Pillay et al., 2020). The aim of the NIH bill is to address the uneven distribution of health professionals, including audiologists, between the private and public sectors (Pillay et al., 2020). Although this projected need has been identified, there are concerns around the current unemployment rate of audiologists, reportedly up to 16% at the first-year post-graduation and up to 19% in the second-year post-graduation (Hlayisi, 2020). During the Covid-19 pandemic this rate rose to 35%. Some contributing factors towards the unemployment rate are reported to include limited job opportunities, discriminatory hiring practices, language barriers, requirement of experience and qualification preference (Hlayisi, 2020). In addition to workforce challenges, another significant obstacle in audiology services in the public health sector is the unavailability of resources for screening, diagnostics, intervention, and information systems required to render services (Bhamjee et al., 2022).

The constraints in hearing healthcare resources are partly attributed to prohibitive costs associated with audiological equipment, including hearing aids, which are the characteristics of the traditional centralized model of hearing healthcare (Frisby et al., 2022; Swanepoel 2023). Although decentralized models of hearing health care such as the Primary Health Care approach and task-shifting as called for by World Health Organisation their implementation within the South African context has been slow (Kautzky & Tollman, 2008; World Health Organization, 2021). Service provision is further complicated by linguistic and cultural barriers (Frisby et al. 2023). For instance, relying on audiology resources for diagnosis or management

which may not adequately meet the needs of South Africa's diverse multicultural population (Pascoe & Norman, 2011). Furthermore, audiology services face an escalating burden due to the high prevalence of infectious diseases including HIV/AIDS and TB, which has been linked to hearing loss (Khoza-Shangase et al., 2022).

The future of audiology

Current developments in South Africa, including the passing of an NHI bill, transformation of the professional workforce, alongside the adoption of innovative technologies that support decentralized services are providing opportunities to shape the future of audiology. One significant change that is anticipated is an increase in the employment of audiologists by the Department of Health, with the aim of delivering services to the underserved population through the NHI bill (Makoni, 2023; Pillay et al., 2020). Furthermore, a more robust implementation of decentralized hearing healthcare within Primary Health Care (PHC) settings are being prioritized. Global advancements in technology, such as smartphone-based hearing aid fittings and computational audiology approaches may also contribute towards increased ear and hearing healthcare access (Swanepoel, 2023). The World Health Organization has highlighted task shifting ear and hearing care to community healthcare workers and the incorporation of innovative mobile technologies to increase coverage of detecting hearing loss (World Health Organization, 2021; Chadha et al., 2018; Yousuf Hussein et al., 2018). While the NHI bill could enhance the coverage of hearing healthcare services and aligns with World Health Organization suggestions of universal ear and hearing coverage, its implementation will also bring about certain challenges. Among these are poor infrastructure, budgetary constraints, push-back from health professionals, slow roll-out, poor governance and limited human resources (Makoni, 2023; Sithole, 2015).

Conclusion

During the past two decades, significant strides have been made in the audiology profession. Despite the significant changes that have occurred, more effort is still required to enhance the transformation and access to hearing healthcare services. The journey ahead must include accelerated efforts in workforce transformation, addressing unemployment among new graduates, investing in accessible and culturally competent resources, and implementing decentralized models of care that leverage global advancements in technology. Emphasizing collaborations between government, academic institutions, professional bodies, and the public can facilitate a cohesive and inclusive strategy that resonates with South Africa's unique demographic and socioeconomic landscape. The promise of more universally accessible and equitable hearing healthcare in South Africa aligns with the global vision of hearing care for all (World report on hearing, 2021). Embracing the lessons of the past and the opportunities of the present, South Africa can forge a path toward a hearing healthcare system that is not only robust and innovative but also equitable and reflective of its rich cultural diversity.

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