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Speech Language Pathologists'

Development of Practice for Managing

Burn Injuries in South Africa

Angelica Iacovitti – 1627582

Supervisor: Prof Jennifer Watermeyer

DECLARATION

I, Angelica Iacovitti, declare that the work on which this dissertation "Speech Language Pathologists (SLP's) Development of Practice for Managing Burn Injuries in South Africa", is based on original work, except where acknowledgements and references indicate otherwise. This dissertation is being submitted for a Master's degree in Speech Pathology, Humanities, at the University of the Witwatersrand. This work has never been submitted as a part of, or in full, to any other university for examination.



Angelica Iacovitti

The 31 day of October, 2023

DEDICATION

This is dedicated to the brave, kind and inspiring paediatric and adult patients with burn injuries that I have had the honour of treating. You are the reason for the research. Your stories will forever hold a special place in my heart and I am eternally grateful for the life lessons each one of you taught me. Thank you.

I also dedicate this to my fellow SLP colleagues treating patients with burn injuries. Your dedication to these patients is inspiring. Thank you for sharing your stories with me.

ACKNOWLEDGEMENTS

Proverbs 3:6 - “in all your ways acknowledge Him, and He shall direct your path”. The praise and honour is yours Lord. Thank you for giving me the strength and abilities to bring this master to completion.

Jennifer Watermeyer: My supervisor, thank you for the insightful advice, assistance, and wisdom you provided throughout this study. Thank you for seeing its potential, for sticking by me and guiding me to grow this research into something far greater than I would have thought.

Cesare and Tiziana Iacovitti: I am forever grateful for your constant support, encouragement, and unconditional love. Thank you for every sacrifice you have made in order to give me every opportunity to help me achieve my dreams. I am blessed to have you as my parents and I love you.

Danilo and Michele Iacovitti: The best big brothers, thank you for always looking out for me and supporting me. I love you.

To my friends and family who encouraged me through this journey, thank you for your genuine interest, kind words, care and wishes.

To all of my patients: each one of you is an angel that has been sent to me. I treasure you all.

ABSTRACT

Background and Aims: This study analyses how speech-language pathologists (SLPs) have constructed knowledge and practice for burn injury management despite a lack of clinical guidelines and undergraduate training through their experiences of practice. The research project addresses a gap in understanding how clinical practices evolves when evidence-based guidelines are not available. I have selected the example of burn injury management because of its prevalence in South Africa and it is an emerging field of clinical practice for SLPs.

Methods: The study involved a qualitative exploratory design with a metacognitive reflective approach. Participants included 11 SLPs from across the country. Data collection was conducted through online interviews and SLPs experiences were analysed via thematic analysis.

Results: The following themes emerged: The complexities and challenges of working with patients with burn injuries influences the development of clinical practice in burn injury management, clinical practice develops through interactions between dynamic SLP teams and the multi-disciplinary team (MDT), clinical practice develops through the application of cognitive phenomena and generic SLP knowledge, the development of clinical practice for burn injury management is context-dependent, individual SLP's psychological and personality factors influence the development of clinical practice in burn injury management.

Conclusion: In the absence of explicit clinical guidelines and undergraduate training the development of clinical practice and the creation of knowledge in burn injury management is multifactorial and seems to rely on a set of extrinsic and intrinsic factors. A proposed model is presented to explain practice development and knowledge creation in this field. In the context of the South African healthcare system, healthcare practitioners who work in teams possess and apply certain cognitive skills to daily practice. Those SLPs whose personalities appear to align with practice development and knowledge creation essentially take on the challenge of risk and complexity when treating patients with burn injuries, in their pursuit of comprehensive service delivery. As the field of burn injury management evolves, SLPs and other healthcare practitioners need to cultivate intrinsic factors (their individual personality traits and cognitive processes) and commit to ongoing learning and professional development, to provide the best possible care for their patients.

Implications: This research provides insight into the generation of knowledge and clinical practice in a resource-poor context and in a field with limited guidelines or training. The findings have implications for the future research, supporting structures, training and development of healthcare practitioners to encompass care for conditions not explicitly taught in the curriculum.

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LIST OF ABBREVIATIONS

AAC- Augmented and Alternative Communication

AI- Artificial Intelligence

COVID-19- coronavirus pandemic or Severe Acute Respiratory Syndrome Coronavirus or Coronavirus Disease 2019

CPD- Continuing Professional Development

EBP- Evidence-based practice

Hb- Haemoglobin level

HIV- Human Immunodeficiency Virus

HOD- Head of Department

ICF-International Classification of Functioning, Disability and Health

ICU- Intensive Care Unit

IDDSI- The International Dysphagia Diet Standardisation Initiative

IDT- Inter-Disciplinary Team

MDT- Multidisciplinary team

OPD- Out-patient Department

SASLHA- South African Speech Language and Hearing Association

SLP – Speech-Language Pathologist

SOP- Standard Operating Procedure

TB- Tuberculosis

VACs- Vacuum-assisted closure device

GLOSSARY

Augmentative and Alternative Communication (AAC): is a tool used to improve functional daily living for individuals who have an impairment in verbal or written speech-language production and/or comprehension. This tool is used to compensate for or supplement the impairment to enhance communication abilities and could be in the form of an assistive device, technology, strategy, technology or tool.

Cognitive phenomena: refers to the mental processes that healthcare practitioners use to diagnose and treat patients. These processes involve complex reasoning, decision-making, intuition, self-reflective awareness and problem-solving skills that are essential for effective clinical practice (Benner et al., 2008).

Dysphagia: is a swallowing disorder that can involve one or more areas in the oral cavity, pharynx, oesophagus, or gastroesophageal tract (ASHA, 2023). Treatment often focuses on compensatory swallowing techniques, swallowing exercises to strengthen muscles, bolus modification, and always includes caregiver/patient training and education (ASHA, 2023).

Medical condition: of the patient refers to the patient's health condition in more detail along the continuum of rehabilitation (Porter, 2010).

Medical state: refers to a hospital patients health status.

Myofascial release: is a SLP alternative therapy technique or management claimed to helpful in treating weakness, muscle immobility and pain. This is achieved through massaging, loosening and relaxing the contracted muscles which helps to improve blood and lymphatic circulation whilst also stimulating the muscles ability to reflex and stretch. This treatment technique is said to assist with dysphagia (swallowing disorders), voicing and contracture management of the face as it increases active range of motion of the muscles of the face.

Steven Johnson Syndrome: is a rare skin and mucous membrane disorder in which the body has a delayed reaction to medication, drugs or toxic chemicals (Lerch et al., 2018). Macules spread rapidly across the entire body and coalesce which leads to blistering of the epidermis and results in widespread rapid necrosis and sloughing (Zimmerman & Dang, 2020).

CHAPTER 1 INTRODUCTION

In South Africa, there is a high prevalence of patients with burn injuries. Patients that have acquired burn injuries require immediate acute hospitalisation and long-term disability treatment as burns are among one of South Africa's highest causes of mortality and permanent disability (Cloake., 2017) Research in South Africa shows the need for burn injury prevention, promotion, and education (Nthumba, 2015). South Africa is recognised for having limitations within its healthcare system and a scarcity of healthcare practitioners working in this field, yet it lies within the category of countries where the occurrence of burn injuries is higher than most (Nthumba, 2015). This suggests that there is a greater burden placed on the limited resources and limited healthcare practitioners whilst attempting to treat a higher number of patients with burn injuries compared to other countries.

Burn injury management is a new, but growing area of involvement and interest for Speech-Language Pathologists (SLPs) who are exposed to and are required to provide treatment for paediatric and adult patients who have sustained various types of burn injuries (Ferraris, 2021). There is a need for the role of an SLP in assessment, management, counselling, and treatment of these patients in both acute and long-term stages of care. Recent studies overseas have highlighted the need for SLPs to be involved throughout the stages of care (Rumbach et al., 2016). This reasoning is emphasised as burn injuries often result in complications of the

neck, head, and respiratory system which interact together to enable effective swallowing and communication which are areas where an SLP has expert knowledge (Rumbach et al., 2016).

Patients with burn injuries are assumed to fall under an SLP's scope of practice due to the complexity of care, multisystem management required, and, in some instances, the specific involvement of speech and swallowing mechanisms; however, there is no formal teaching pre or post-degree certification that addresses the specific assessment and management needs of these patients. In addition, to date, there is no contextually relevant set protocol or guideline on SLP-related burn injury management in South Africa (HPCSA, 2017). While such guidelines are emerging in various places around the world there is still a lack of overall evidence for SLPs. As research shows, due to SLPs' role and their lines of work within burn injury management being blurred or undefined, it becomes difficult for SLPs to provide evidence-based practice and comprehensive service delivery to these patients, since there is a lack of tangible knowledge about the area (Ferraris, 2021).

Upon working in a burn unit of a tertiary-level hospital during my community service year, I observed that the practice of burn injury management was fairly well developed, continuously progressing for the better, and established despite the lack of explicit guidelines for SLPs practicing in this field. I became curious about notions such as intuitive expertise,

knowledge creation, and clinical judgement which are presumably at work here, and the idea for this project was born. The aim of this study is not to describe the role of the speech pathologist in burn injury management nor to establish the need for contextual, clinically-based protocols (since this need is already established in the literature and is developing), but rather to understand - from the SLP's perspective - the cognitive strategies, processes and influencing factors behind how SLPs have constructed knowledge and ways of practicing in this field despite a lack of explicit guidelines and formal educational training. In particular, I consider how SLPs work with speech and swallowing impairments such a result of burn injuries despite limited guidelines in the form of evidence-based practice, clinical resources, an overall lack of knowledge, and how they develop practices to holistically meet the needs of these patients at the coalface' in a context that - certainly in the public sector - often involves limited resources to facilitate optimal healthcare.

CHAPTER 2: LITERATURE REVIEW

Burn Injuries in South Africa

Worldwide the World Health Organisation (WHO) estimates approximately 30 000 new burn injuries a day and suggests over 11 million people are burned sufficiently to require immediate medical services each year. This was the most recent statistical evidence published in 2004 with the WHO website acknowledging an annual increase to those numbers. The World Health Organisation (WHO) expressed that two-thirds of all burns-related deaths occur in Africa and Southeast Asia (Stokes & Johnson, 2017; WHO, 2019;). The estimated higher occurrence of burn-related injuries and deaths is emphasised through the quadruple burden of disease that exists in South Africa. South Africa is classified as containing a quadruple burden of disease threat. This includes conditions characterised as communicable (high rates of Tuberculosis and HIV/AIDs), non-communicable, high maternal and/or perinatal mother and child mortality rates, and trauma with high levels of violent injuries. Burn injuries are classified as trauma injuries and fall within the quadruple burden threat (Schie et al., 2020). Mortality and long-term disability in South Africa due to burn injuries are greater than that of the human immunodeficiency virus (HIV) and tuberculosis (TB) infections combined per year (Allorto et al., 2018; Ferraris, 2021).

There are various types or causes of burn injuries. Studies of epidemiology in African countries identified that up to 80-90% of burns occur in the home (Stokes & Johnson, 2017). Burn injuries and conditions that can be found within burns units or trauma wards include chemical burns, cold burns, flame burns, ingestion burns, inhalation burns, electrical burns, Steven Johnson Syndrome (SJS), and hot water burns (Ferraris, 2021). Steven Johnson Syndrome results in a 7.5 mortality rate in paediatrics and 20-25% in adults. All of these types of burn injuries present differently and can occur as accidents, violence, and harm or suicidal attempts. Moreover, a study that focused on the epidemiology of burn injuries throughout the world emphasised violence, assault, abuse against women and children and finally burn injuries related to culture, race, or xenophobia as being a high contributing factor to South African burn injury statistics (Peck, 2012). In South Africa burn injuries due to assault, harm, and violence are the most frequent cause of burn injuries in adult cases (WHO, 2018). A lack of resources and population poverty have been directly linked to an increase in harmful violence and crime (Palmer, 2011).

Socio-demographic factors evident in South Africa include, but are not limited to, a lack of sufficient and unsafe housing, poorer education levels, unemployment, overcrowding, and use of alternative sources of energy for light, cooking, and warmth (Alnababtah et al., 2016). These factors are established in literature to place people and specifically children at a greater risk of experiencing a burn incident, particularly in our country (Alnababtah et al., 2016).

Burns are an increasing concern in South Africa with greater demands being placed on alternative unsafe sources of light and heat especially due to poverty, load-shedding, and increasing inflation crises (Sachs, 2021). As a result of COVID-19 the World Bank estimates that an additional 88 to 115 million people are living in poverty around the world (World Bank, 2020). This further highlights the South African population being placed at increased risk of living in poorer conditions and thus the potential for an increase in the number of people experiencing burn injuries in the future.

There are some recent publications in the management of dysphagia for patients with burn injuries, most of which are published in the journal titled 'Burns'. This is an American publication, that includes authors Pavez & Martínez (2019), Clayton et al. (2020), Clayton et al. (2018), Clayton et al. (2017), and Beck et al. (2023). The data collected is not easily extrapolated to our context; although, can be beneficial for insight; it solely covers a single aspect of SLPs burn injury management (International Society for Burn Injuries, 2022). The insights it highlighted was the use of an MDT within burn injury management, some thought processes behind SLP clinical decision making and the specialised equipment (often not readily available to all patients) SLPs used to assess and manage dysphagia in patients with burn injuries. Additionally, a personal communication with Dr Kim Coutts a lecturer at the University of the Witwatersrand who recently attended meetings of curriculum has expressed

that some universities may be starting to include it as part of the dysphagia course, which is a promising start.

The South African Healthcare Context

The South African population is considered to have one of the widest differences in health and wealth in the world (Benatar, 2013). It is estimated that around 16% of the population utilise the private healthcare sector while approximately 84% of the population accesses services through the public healthcare sector (Mahlathi & Dlamini, 2015). The South African healthcare system is considered to have many challenges in service delivery. The government run public sector is set up as a tiered healthcare system, divided into three levels namely the primary (local clinics), the secondary (district-level facilities), and the tertiary hospitals (Malakoane et al., 2020). The private healthcare system in South Africa is mostly maintained and funded by contributions of an individual through their personal medical aid scheme or health insurance. The private sector is said to have shorter waiting times, more healthcare practitioners serving less of the population and greater access to quality resources (Maphumulo & Bhengu, 2019).

It is known that access to healthcare and healthcare practitioners in South Africa is influenced by many factors and while positives are emerging such as new clinical associates being

trained to meet the demands of the population, it is not enough (Couper & Hugo, 2014). There are still negative consequences for healthcare practitioners and patients, and for the implementation of policy developed (Rispel, 2016). There has also been slow progress in improving the system for both public and private care, which could be attributed to an increasing disease burden, the effects of Covid-19, poor management and leadership, and finally an overall lack of funding (Mbunge,2020). Corruption as well as poor governance of healthcare facilities have contributed to this slow progress whilst the larger population continues to access primary healthcare through an impaired functioning district healthcare system (Rispel, 2016). Patients remain relatively powerless and uninformed as they express suboptimal care, negative experiences, and a lack of medical resources and equipment.

The conditions SLPs find themselves working in have certain flaws, including, an overwhelming patient-to-healthcare practitioner ratio, limited functioning equipment, unequal distribution of resources, or overall minimal resources to provide adequate care which services the majority of the population (Mbunge, 2020). The provinces that are predominantly rural account for 64.7% of the population's inhabitants and they all access public healthcare rural facilities (Mahlathi & Dlamini, 2015). There are no specific statistics that explicitly explain burn injuries occurring in mostly rural areas; however, literature shows that the epidemiology of various types of burns occurs predominantly within rural areas, areas overpopulated by informal settlements, and those areas of low socioeconomic status

(Blom et al., 2011; Maritz et al., 2012; Scheven et al., 2012; Toe et al., 2012). As stated above the majority of burn injuries that occur in South Africa are to those people living in poorer communities who would potentially access the public healthcare sector (Ferraris, 2021). It can be deduced that there is inequality between private and public hospitals as well as between urban and rural healthcare facilities. Ultimately, this leaves rural public hospitals and clinics at the lowest portion of the chain.

It is also important to mention that because South Africa has a catchment area policy for accessing healthcare services, a patient is not transferred to the facility with the most specialised care in their diagnosis area (Young, 2016). Additionally, public healthcare facilities are largely serviced by recently graduated or trained healthcare practitioners. This differs from most global north countries where healthcare is freely accessible and often if the hospital does not have a treatment specialist for the condition, patients will be transferred to another centre that is better equipped to meet their needs with professionals that have more experience and knowledge for the diagnosis.

In several studies, healthcare practitioners report feelings of an anxiety and lack of care due to unsupportive management environment, staff shortages, health system deficiencies and go as far as to suggest that they occasionally find difficulty in upholding their professional code

of ethics and providing good quality care (Manyisa & van Aswegen, 2017; Murphy et al., 2011; Rispel, 2016). The Covid-19 pandemic not only brought about healthcare system pressures, but also brought about additional pressures on South African healthcare practitioners who experienced heightened levels of stress, poor supportive environments, feelings of abandonment, and poor ability to adjust to the uncertainty of the changing pandemic (Watermeyer et al., 2023). This information potentially highlights the current mental state and feelings that could affect SLPs experiences of managing patients with burn injuries who already face current healthcare context challenges and feelings of burnout, stress and uncertainty (Docrat et al., 2019; Mbunge, 2020; Morris et al., 2021).

The nature of Burn Injuries Condition

Wallace (1951) formulated the first classification of the severity of a burn injury. It is labelled as a percentage and includes the degree of inhalation burns. It explains that severity is decided by the total body surface area (TBSA) that has been burned and the depth of a burn (Wallace, 1951). Additionally, a patient can present with either or a combination of burn injuries with the depth being described as epidermal/superficial (first degree burn), superficial-partial thickness (second degree burn), deep-partial thickness (third degree burn), full-thickness burn injury (fourth degree burn being the most severe) and or a combination of all four in different areas of the body. This classification is based on the sum of layers of

tissue and skin in a given area that have been damaged (Abazari et al., 2022). The degree of a burn can further be classified in severity as minor, moderate, and major (Abazari et al., 2022).

The burn injury itself can also be accompanied by other burn-related complications such as inhalation burns, which are often associated with long-term deficits in communication and respiration. Inhalation burns refer to damage to the lung tissue or respiratory tract from smoke, heat, or chemicals that have been carried into the airway during inspiration (Mlcak et al., 2020). Inhalation burns occur in approximately one-third of all patients with burn injuries, yet it accounts for up to 90% of all burn-related mortality (Jones et al., 2017). There are different classifications of inhalation burns depending on the type of burn, severity, and location in the body, these include upper airway injury, tracheobronchial injury, parenchymal injury, and systemic toxicity. Each of these aspects is then graded on an Abbreviated Injury Score (AIS) scale of 0-4 grading (Mlcak et al., 2020). The higher the grading, the greater the burn injury will impact on the patient's respiratory, swallowing, and voicing abilities according to severity (Mlcak et al., 2020). Additionally, a study done by Clayton et al (2020) indicates that patients with inhalation burns have a 16 times greater incidence of dysphagia than those without, and all patients present with dysphonia and voice problems. Furthermore, the study highlighted that laryngeal pathology due to inhalation injury increases dysphagia severity as well as the duration of dysphagia recovery (Clayton et al, 2020). Other burn-related complications include infections, physical limitations, or amputation, and the burn

injury is often accompanied by other medical conditions such as stroke, depression or traumatic brain injury (TBI).

Speech- Language Pathology and Patients with Burn Injuries

Burn injuries are complex and heterogeneous and require a dynamic and diverse team for management to provide quality holistic care (Rumbach, 2016). Most patients are left with functional limitations as well as barriers to integration back into society (WHO, 2018). Knowledge of burn injuries and scarring in relation to speech and swallowing function in particular is important for an SLP to know. The classification of severity of burns emphasises that injuries on the face, hands, genitals, or feet cannot be classified as minor despite the small surface area of the burn injury (Lloyd et al., 2012). These are known as areas that can have long-term psychological trauma as well as great functional limitations and need to be managed appropriately for long-term well-being (Lloyd et al., 2012). In Global North countries like Europe, North America, and Australia SLPs are deemed to be an integral part of the MDT for burn injury management (Rumbach, 2016). This is because of the extensive knowledge and understanding that SLPs have in critical areas and so guidelines are emerging within those countries for care of patients with burn injuries. The role of the SLP with patients with burn injuries is twofold: (1) direct assessment and treatment of injury/impairment through the continuum of care and (2) facilitation of communication to enable shared decision-making, consent, and basic communication.

The role of a hospital-based SLP routinely includes the assessment and management of dysphagia, the respiratory system which includes tracheostomy weaning and communication disorders due to orofacial complications, laryngotracheal pathology, voicing as well as neurological components which are all areas potentially impacted by burn injuries (Rumbach, 2016). With that in mind, the logical assumption would be that the prevention of the formation of orofacial contractures, scarring, and the functional limitations they impose on communication and eating would have to be assessed and managed by SLPs. However, according to a South African study conducted by Ferraris (2021), the majority of SLPs working with patients with burn injuries or in a hospital that provides care to them, lack the willingness to engage and feel inadequately equipped to manage these patients in general, let alone in areas such as contracture and inhalation management for speech and voice. Additionally, this lack of confidence and willingness in their clinical skills to treat patients with burn injuries also extends to the counselling of these patients and families.

It is essential to have a basic understanding of the various causes, types, and severity of burn injuries, but most importantly, the understanding that these patients are treated in both an acute and long-term rehabilitation setting. These patients are highly unpredictable: they can move from the intensive care unit (ICU) to general care wards and back to the ICU due to the nature and degree of the burn injuries as well as their susceptibility to sepsis, general

infections, and an extremely weak immune system (Rode et al., 2014). The stages of wound healing and grafting are also crucial factors for SLPs working with patients with burn injuries to consider, as these impact the patient's medical condition and the continuum of rehabilitation. Wound and inhalation healing goes through a process: it starts from haemostasis to inflammation, followed by proliferation and finally maturation, which can take from several months up to several years to complete (Abazari et al., 2022). Oral and facial skin grafting is another factor to be considered by SLPs in their speech, dysphagia, splinting, and contracture management. There are different types of skin grafts that surgeons may perform on a patient's face and neck. SLPs need to be cognisant of this in their management plan and understand the implications of the graft on muscle movements, nerve, and facial sensitivity, as well as the patient's thoughts or feelings about their appearance (Schlottmann et al., 2021).

An essential component of comprehensive service delivery for all patients is counselling for them and their families. Counselling is provided to facilitate greater and more realistic understanding of the condition (educational counselling) and/or emotional support (psychosocial or adjustment counselling) for those who face challenges to improve their quality of life (ASHA, 2022). Informational counselling is educative and includes discussions about the nature of the patient's condition, techniques and management interventions, resources as well as prognosis (Flasher & Fogle, 2012). Personal adjustment counselling

examines the feelings, emotions, thoughts, and beliefs of individual patients and their families that potentially impact service delivery (Flasher & Fogle, 2012).

SLPs need foundational skills to provide effective counselling for patients with burn injuries, which include, understanding the condition, intervention techniques, and possible prognostic outcomes, to educate, emotionally support and motivate the patient and family correctly (SASHLA, 2010; Health Professions Act No 56,1974). SLPs' limited understanding of the management of burn injuries and intervention outcomes as well as the fact that community service SLPs with limited overall experience of assessment and management may be the primary treating SLPs, the quality of the counselling and care being provided for patients with burn injuries is called into question (Ferraris, 2021). Essentially, SLPs should be able to handle some of the emotional counselling aspects as this can be transferred across patient conditions; however, they potentially may struggle with informational counselling as they lack an understanding of the nature and rehabilitation of burn injuries.

When patients are unable to communicate during their treatment it leads to disempowerment and loss of autonomy (Hess & Faarc, 2005). Patients with burn injuries are often unable to contribute to their management healthcare team in terms of decision-making, providing consent, or assisting with their basic needs such as discomfort or pain. When a patient is

intubated, they may wish to communicate but are only able to do so via alternative methods like augmentative and alternative communication (AAC), facial expressions, writing, and gestures depending on the neurological functioning of the patient and their current level of sedation (Batty, 2009). However, often in burn injury cases, these patients could have a severely burnt face, burnt, bandaged, or amputated upper limbs, and/or facial oedema, which renders them unlikely to be able to communicate via gesture, facial expression, pictures or symbols and or writing. This further highlights the need for an SLP to be involved with patients with burn injuries in an attempt to advocate and restore communication through verbal or multimodal communication means (Ferraris, 2021).

In South Africa SLPs are generally not considered as integral members of the MDT when treating patients with burn injuries (Ferraris, 2021). This is because of the understanding that SLPs have extensive knowledge in critical areas and so guidelines are emerging within those countries. In recent years, the Burns Society of South Africa has showcased the annual Burns Congress with an extensive list of affiliated-government and private hospitals with specialists and general practitioners alike. However, no mention is made of speech-language pathology in the Burns Society of South Africa guidelines and papers, despite other members of the allied health/ rehabilitation teams being noted such as physiotherapy, occupational therapy, and dietetics. Although swallowing, oral diets, modification of consistency of food, and facial burns are mentioned in above mentioned guidelines, there is no indication that these should

be managed by SLPs, nor that SLPs are involved in the management of these areas. Oral components and facial burns, oedema, scaring, and smoke inhalation affecting voice are addressed, yet primarily in relation to surgical components (ISBI practice guidelines for burn care, 2016; ISBI practice guidelines for burn care, 2018). No further acute management of these areas is described, nor is there any reference to long-term rehabilitation, all of which would fall under an SLPs' scope of practice.

Nevertheless, various bodies of literature tell a different story of how SLPs play an important role, and indeed already work within the field of burn injury management, despite the underrepresentation of evidenced-based protocols, guidelines, and overall uncertainty of practice in this field. An effective and skilled MDT team including SLPs is necessary for rehabilitation services and counselling of burn injuries (Rode et al., 2011). Publications such as that by Brown et al. (2014) promote the need for MDT outpatient long-term rehabilitation services. The publication emphasised that consistent outpatient wound care treatment and rehabilitative management directly contribute to a decrease in subsequent hospital admission, infection, scarring, and need for surgery. Specific mention was made of the crucial components of SLPs' involvement in facial management and occupational therapists' involvement with hand management.

Postgraduate continuing professional development courses (CPDs) on burn injury management specifically for SLPs are limited in general and particularity in South Africa, but SLPs can access informal podcasts and videos online. There is an online course that was opened on Speech Therapy Professional Development (PD) which is an ASHA approved website. The course is an hour long in duration. The title of the course is Burn 101 and the SLP Perspective (Speech Therapy PD, 2021). Additionally, there was an extra course program offered at the University of Notre Dame in Australia. This program was offered to any healthcare practitioner and gave a basic understanding of burn injuries. The program was a graduate certificate titled "Graduate Certificate in Burn and Trauma Rehabilitation" This program has subsequently been suspended (University of Notre Dame Australia, 2015). This program: however, was also not specific to speech-language pathology and did not include specific assessment and management of patients. It provided an overview of burn injury treatment as a whole, with a special focus on physiotherapy.

Although findings from publications from the Global North are beneficial and provide insight into SLPs practice in burn injury care in general, due to the specific challenges inherent to our context, the findings cannot always be easily extrapolated. The complexity of burn injuries and their lifelong consequences require a range of skilled professionals for optimal and holistic treatment (Ferraris, 2021). However, in South Africa, the SLP scope of practice in burn injury management is not defined.

While attempting to define the scope of practice for SLPs in burns injury management in South Africa, the study completed by Ferraris 2021 included a graph (adapted below) showing the aspects SLPs are required to be involved in, when working with patients with burn injuries in hospitals currently. According to the study, the points highlighted in bold were also the domains of assessment and management that SLPs felt they were the least confident in administering. Importantly, due to the complexity of some burn injuries, SLPs felt the management differed from other conditions, and is not just a case of applying generic SLP knowledge from dysphagia and communication to the case of burn injuries:

- **Facial burn injury management**
- **Scarring or contracture management**
- **Oral splinting**
- **Screening**
- Speech
- **Voice (especially inhalations burn injury management)**
- **Tracheostomy and ventilation (especially inhalations burn injury management)**
- Patient advocacy
- Dysphagia bedside
- Dysphagia (instrumental)
- Communication Disorders

- **Burn injury patient support groups**
- **Burn prevention and promotion.**
- **IDT and MDT training and education for burn injuries**
- **Expanding the scope of SLP for burn injury management**
- **Research patient and caregiver education and training**
- **Protocol and guideline development**
- Language
- Fluency

Essentially, an SLPs role in the management of patients with burn injuries is novel, not acknowledged in undergraduate teaching and is not established or accessible in the form of a clinical standard South African guideline or protocol. Consequently, there are limited SLPs working in this area coupled by the fact that burns injuries is a complex and multifaceted condition that overall SLPs lack confidence in treating. In our resource-poor healthcare context, it is important to utilise all available skills and knowledge for optimal treatment of our patients. This begs the question: how current SLPs have acquired and generated knowledge and developed clinical practice when working with patients with burn injuries? It is critical to understand how despite various limitations SLPs are currently facing the complexity of the unknown burn injury management and meeting the needs of these patients, in our context and importantly, to gain a greater understanding of what skills processes or

skills are being utilised and how to support current and future SLPs who enter into burn injury management. This is important to know as information regarding current practices or skills can be made available to current and future SLPs and support them in gaining knowledge of how to practice clinically with patients with burns injuries. It will also support current and future SLPs in finding the current gaps and progress towards finding solutions through research and knowledge of clinical practice.

CHAPTER 3 THEORETICAL FRAMEWORK

This study explored how SLPs develop ways of practicing when managing patients with burns injuries. There are several relevant concepts and theories related to the central research question of this study. There are cognitive processes as well as external factors that are needed to ensure that healthcare practitioners deliver higher-quality patient care and clinical practice.

Benner's (2001), framework explains a practitioner's development from novice to expert, with a particular focus on nurses and how they gain clinical knowledge through experience. Similar to the "From Novice to Expert" theory, the Intuitive Humanistic Decision-making Model focuses on a continuum of thinking from a novice in the field of clinical practice to an expert, but also delves further into what cognitive areas are at play (Benner et al., 2008). The model combines elements of critical thinking, intuition, clinical judgement, and decision-making to describe how whether evidence-based practice (EBP) is present or not, certain intuitive thinking strategies are applied to experiential knowledge to perform clinically (Benner et al., 2008). The model recognises intuition as an essential component to decision-making and prioritises a healthcare practitioners' emotions, context, affect (Smith, 2016).

The model relies on experiential understanding to create knowledge in a given area and practically apply it to treating patients- in the case of this study, patients with burn injuries. The model explains that healthcare practitioners are able to unconsciously recognise patterns over the course of their experiences and make informed decisions based on this (Benner et al., 2008; Krishnan, 2018; Thompson, 1999). The intuitive decision-making is argued to be subjective because of the correlation to human experience; however, the theory has expressed that intuitive- decision making is distinguishing an expert from a novice in the field (Krishnan, 2018; Thomson, 1999).

Furthermore, one cannot only examine how practice is developed through an individual SLP's cognitive processes, and thus the theory of Emancipatory Practice Development is included as it provides principles for practice refinement and growth (Bradd et al., 2017; McCormack et al., 2013). Emancipatory Practice Development examines getting evidence into practice and creating a clinical practice culture of effectiveness and innovation (Bradd et al., 2017). Although this theory does not account for an absence of EBP, explicit guidelines, or training, some of its principles provide insight into practice development in context which is relevant to this study and its' grounding in the South African healthcare context. Emancipatory Practice Development focused on nursing units and nurses' ability to acquire evidence into practice as well as the creation of an environmental culture for effectiveness and innovation, which is a feature throughout the literature presented in this study

(McCormack et al., 2013; Manley, & McCormack, 2003). The elements held within this field of research focus on creating sustainable change in practice through empowerment and culture (Manley, & McCormack, 2003; Titchen and McCormack, 2008). Although the Intuitive Humanistic Decision-making Model for cognitive processes and the Emancipatory practice development theory were both developed based on the clinical thinking of nurses and general clinical practice in nursing units (Stinson, 2017), the combination of these relevant theoretical concepts in addition to others stated below speak to the design of the study, helped guide the interview questions and were useful in the interpretation of data.

In this section, the concepts of intuitive expertise, clinical judgement and decision making, and finally knowledge creation and practice development are examined in an attempt to understand how SLPs have developed practice in the South African context to assess and manage patients with burn injuries.

Intuitive Expertise

Intuitive expertise is a concept built on the premise that humans have an innate ability to effectively perform demanding tasks. When a situation calls for a decision, involuntarily or automatically professionals use their intuition to make judgement calls and perform tasks, that they have not encountered previously in everyday scenarios, without explicit awareness

that a decision or action should be made. (Banning, 2008; Horvath & Wiegmann, 2021). Without conscious use of reason, healthcare practitioners have immediately accessible knowledge of various ways to perform in a given scenario (Banning, 2008). This is where healthcare practitioners use their abilities to act intuitively in activities that require high performance (Harteis & Billett, 2013). It relies on the Dual Processing Theory, in which rational factual information as well as intuition based on experiences, along with cues from the environment, are processed simultaneously in a given situation (Harteis & Billett, 2013). In medical terms, it is thought to assist healthcare practitioners with conscious and present learning. This occurs through identifying cues in an environment, drawing from previous patterns of experiences, and subsequently making executive decisions for immediate intervention and long-term management (Benner, 2001). Literature notes that EBP and standardised assessments and interventions (most taught at the undergraduate level) are the gold standard for clinical decision-making; however, researchers are attributing an increase in importance to intuitive decisions and expertise (Pearson, 2013).

Additionally, the Dual Processing Theory alludes to the subjective perception of reality and how it affects the treatment of patients (O'Sullivan & Schofield, 2018). Research suggests that in general, medical practice, experiential thinking, and intuitive reasoning are essentially connected to cognitive and affective biases. Similar to intuition these biases function outside of conscious awareness and are linked to fast-thinking processes that implicitly change the

ordinary cognitive process of our everyday thinking (Yager et al., 2021; Jones & Sharpe, 2017). These biases potentially influence clinical assessment and management, clinical reasoning, and decision-making (Yager et al., 2021). Intuitive expertise speaks to the notion of knowing what to do, but not knowing how to do it and then trying to reason and problem-solve solutions to find an answer (Nyatanga and Vocht, 2008).

Intuitive expertise is also associated with the recognition-primed decision strategy (Benner, 2008; Hoffman et al., 2004). This is the decision-making process in which a person uses their experience and plausible solutions to identify best-case strategies on how to act (Kahneman & Klein, 2009). This expertise allows a person to act on and formulate decisions by tapping into their cognitive resources without conscious effort. Medical practitioners unconsciously problem-solve and make decisions by using patterns of recognition and rapidly accessing information from their long-term memory (Gobet & Chassy, 2008). In a SLPs' case, it would mean creating short or long-term intervention plans, without having to consciously balance pros and cons. It entails not following step-by-step protocols or even understanding the exact outcome of the intervention (Harteis & Billett, 2013).

Previous studies on intuitive expertise have mostly been conducted with participants having a basis of learned information to draw on, or the experts have many years of experience to help

formulate conclusions and take action (Kahneman & Klein, 2009). Neither of these is the case for SLPs working with patients with burn injuries in South Africa. The theory behind burn injury assessment and management is not taught at an undergraduate level. Additionally, those working with patients with burn injuries may be first-year community service SLPs in a public hospital setting, who often have had little experience in most areas of clinical practice and especially that of patients with burn injuries. Therefore, SLPs need to use a process of intuition, situational cues, experience, and drawing on other knowledge taught in other content areas to acquire procedural or performative knowledge for treating patients with burn injuries (Norman et al., 2018).

Intuitive decisions do not question how trustworthy the environmental cues are in that given moment. Gobet and Chassy (2008) suggest that, intuition is influenced by emotions because emotions are closely tied to memory. This influences how healthcare practitioners decide to treat patients, what methods are selected, and how conservative healthcare practitioners are, as an emotional intuitive response to a patient can dictate the further actions they take (Gobet & Chassy, 2008). It is important for healthcare practitioners to self-reflect and monitor their decisions continuously to identify which factors and resources helped them reach an assessment or treatment plan (Ericsson, 2015). Some practitioners are more inclined to use intuition than others and there should be an allowance for individual differences (Gobet & Chassy, 2008).

Clinical Judgement and Clinical Decision Making

The accumulation of skills and knowledge which contribute to a clinician's ability to provide evidenced-based interventions and decision-making to improve patient outcomes is known as clinical judgment (Kazdin, 2008). Clinical judgment has been further defined as the final process which is the result of two vital components known as, clinical thinking and clinical reasoning (Alfaro-LeFevre, 2016). Using these two processes allows a clinician to think of multiple components, identify clues, collaborate, weigh up various facilitating and hindering factors, and ultimately, make a final decision or judgment for patient management (Williams et al., 2016). These judgments also involve a certain level of reflective practice as well as ethically based values (Pearson, 2013). The use of reflexive analysis is a component of critical decision-making that allows healthcare practitioners to learn and identify holistic assessment and management practices (Benner et al., 2008).

There is a growing body of evidence related to SLPs and clinical judgment; however, most use similar frameworks to studies in nursing which have been well-researched over the years. Research into SLPs' clinical judgment which differs from the clinical decision- making appears to still be emerging, but factors that contribute to decision-making for management include, the patient context, the patient condition, the multiple disciplinary teams (MDT), and which assessments or equipment are utilised (Coutts & Pillay, 2021). However, Williams (2016) identifies, and others have agreed, that the need for an evidenced-based resource or

the ability to critically interpret information from standardised measures in conjunction with informal measures is of vital importance to patient treatment (Lahey, 1988; Records & Tomblin, 1994).

It must be disclosed that recently, there have been journal publications that speak to SLPs' decision-making at the bedside and long-term care in the assessment and management of adults and paediatric patients with dysphagia. While these publications offer good insight into SLP decision-making and contextualise the South African healthcare system, they focus on a single aspect of assessment and management that are taught and practiced clinically at the undergraduate level (for example dysphagia, AAC or speech sound-sound disorders). These papers do not focus on patients with burn injuries (Coutts & Pillay, 2021, Furlong et al., 2018; Humbert, 2015; Pillay & Pillay, 2021).

Studies in nursing have shown that clinical judgment improves accountability and autonomy of care given to patients (Williams et al., 2016). Those studies also suggest that experience with specific types of patients or environments gives rise to a better clinical understanding of certain patient conditions and treatments (Benner et al., 2008; Stinson, 2017).

Research has found that errors or failures in clinical judgment and the decisions made about how to assess and treat patients, can be attributed to the complete absence of knowledge and/or having the appropriate knowledge, but being unable to apply it to a novel situation (Williams et al., 2016). By extension, a lack of foundational knowledge in burn injury management could affect reasoning and overall patient treatment by SLPs, as the theoretical grounding in this field is not explicitly taught in the undergraduate curriculum. Moreover, other research has proven the integral need for SLPs to use their clinical judgement, to assist patients with burn injuries in areas of oral competence, facial expression, swallowing efficiency, speech intelligibility, and communication (Clayton et al., 2009).

Knowledge Creation and Practice Development

Knowledge creation is defined as the act of creating information or knowledge on a particular topic from individuals who work within the field (Brix, 2017). This knowledge is context specific and linked to previous experiences and the foundational grounding of information (Brix, 2017). Studies researching the clinical decision-making of nurses show that the relationship between intuition and experience enriches clinical decision-making, as it creates greater knowledge and understanding (Banning, 2008). Practice development is a progressive process while aiming to promote and facilitate EBP and person-centred care for healthcare practitioners to deliver a comprehensive service (Bradd et al., 2017).

A study conducted during the Ebola epidemic suggests that context is particularly important in knowledge creation when establishing practices for 'new' or unfamiliar conditions (Bolten & Shepler, 2017). It expressed how groundwork (working on the floor, in the context of the epidemic within a hospital, local community centre, home, or clinic) helped to create a better understanding of the epidemic in general, the spread of Ebola, and the symptoms (Bolten & Shepler, 2017). It also expressed how this groundwork helped establish greater connections for healthcare practitioners and create a better understanding of what community meant for people and patients at that time. Knowledge creation stems from working in the context or environment of the disease. A greater understanding of cause and treatment is gained through working in context (Bolten & Shepler, 2017). Knowledge creation happens when healthcare practitioners generate their expertise and translate these into services (Bolten & Shepler, 2017). Developing clinical knowledge in specific patient populations (such as in the management of burn injuries) relies on extensive experience, as it allows healthcare practitioners to form a network of comparisons and differences that depict patient outcomes (Benner et al., 2008). These experiences help guide healthcare practitioners to use their intuitive expertise, critical thinking, and clinical decision-making to provide care to patients in the absence of EBP and guidelines (Benner et al., 2008).

Furthermore, another study emphasises that knowledge creation is not only a cognitive process but must rely on forms of interactions within the social context of the work

environment (Nilsen, 2010). Knowledge creation not only assists with medical advances but plays an important role in social interactions with patients and between healthcare practitioners (Yang et al., 2010). It allows for better understanding, communication and greater discussions to be held for treatment and management improvements. These discussions often include problem-solving, critical thinking, and intuition to make decisions on the management of patients when the patient circumstances deviate from normal theoretical approaches (Benner et al., 2008). Other methods of quality improvement are said to differ from practice development because it is focused on the context of care, values, and culture and places great emphasis on change (McCormack et al., 2013).

Knowledge creation has also been described as a key component of hospital performance and occurs when individuals take initiative and have a common drive to learn (Hassanian et al., 2015; Yang et al., 2010). Knowledge creation allows hospitals to improve performance and make medical advances when solutions and medical treatments are unknown. Knowledge creation and practice development involves learning within the workspace for service improvement and change (Nilsen, 2010). Elements of knowledge and learning need facilitation through experiences and concrete practical scenarios as well as individual ambition for growth through reflection on clinical practice (Hassanian et al., 2015). In the hospital workspace healthcare practitioners are required to put these two elements into action, to create knowledge and generate practice for the best patient outcomes (Nilsen, 2010).

Knowledge in hospitals is created from knowledge stocks (Yang et al., 2010). Essentially, this is the collection of information held by the hospital and healthcare practitioners combined. Then healthcare practitioners apply this collective information on how to treat patients through discussions and sharing of resources. Knowledge is created through this medium of sharing and practice is developed when healthcare practitioners apply collaborative and participatory approaches (Hardy et al., 2011, Bradd et al., 2017).

During the COVID-19 pandemic knowledge creation became an essential component in treating and managing patients in the absence of knowledge about the virus, at least initially, or how to treat the symptoms successfully. Innovation intensified over a short period to create medical solutions through global collaboration of knowledge and resources (Badre, 2021). There is a common understanding that institutional pressures and environmental circumstances motivate the creation of knowledge and generation of practice, to instil and enhance worthy practices of treating patients (Nilsen, 2010). This makes itself apparent when examining the growing interest in SLPs working in South Africa with patients with burn injuries. Although burn injuries are not an epidemic, literature on how practice is developed with limited explicit SLP training available, is generally linked to the development of practice in times of crisis.

This was evident in and during the COVID-19 pandemic, Ebola crisis, TB outbreak, Swine flu, and even with artificial intelligence (AI) emerging as new methods and means of patient treatments are brought to light with technological advances (Burton-Jeangros, 2019; Maggetti & Trein, 2022; Miller et al., 2010; Nicholas et al., 2008; Randhawa & Jackson, 2020). These moments of crisis require rapid development of guidelines with limited resources, experiences, and understanding of infection or patient condition; subsequently, healthcare practitioners are exposed to critical situations where implementation of services and daily policy needs consideration and substantial changes, as patients are placed at risk while healthcare facilities and practitioner face the unknown (Nicholas et al., 2008).

As the prevalence of burn injuries increases, SLPs find themselves called to create and innovate management practices to meet the needs of patient care in the field of burn injuries. The use of the cognitive phenomena such as intuition and clinical judgement and decision making along with other factors assist healthcare practitioners in creating knowledge and developing practice when met with a scarcity of guidelines and lack of training. These theories provide the basis for investigating what factors have potentially facilitated the process of practice development and knowledge creation in SLP management of patients with burn injuries.

RATIONALE

Burn injuries are an increasing concern for South Africa and how SLPs working in this environment use their skills to aid these patients. Research in South Africa has already established the need for burns prevention, promotion, and education (Nthumba, 2015). The research project addresses a gap in understanding how clinical practices evolve and develop in medical settings when guidelines are not available and there is no formal explicit training. I have selected the example of burn injury management because burn injuries are so prevalent in South Africa. In light of the recent Covid-19 pandemic, this type of knowledge can provide valuable insight into the creation of knowledge and generation of clinical practice in times where rapid interventions and management plans need to be produced, without previous experience, training, or guidelines. It is acknowledged that every condition cannot be covered in undergraduate training or via explicit protocols and guidelines. While the literature has previously focused on clinical judgement and decision-making there has been a shift in thought surrounding the influence of intuitive expertise and experience that along with EBP enables healthcare practitioners to create knowledge and ways of practicing for the management of patients with conditions that healthcare practitioners may not be familiar with.

CHAPTER 4: METHODOLOGY

Research question

How do Speech-Language Pathologists working in the South African context reportedly develop ways of practicing to assess and manage patients with burn injuries?

Aims and Objectives

Overall Aim:

- To explore SLPs' perspectives on the creation of knowledge and development of clinical practice to provide holistic care to patients with burn injuries.

Objectives:

- To explore the use of clinical judgement and clinical decision-making from an SLP's perspective while working with patients with burn injuries.
- To explore the use of intuitive expertise from an SLP's perspective while working with patients with burn injuries.
- To explore how knowledge is reportedly created in the absence of evidence-based practice through SLPs experiences of working with patients with burn injuries.
- To identify other factors that influence SLPs development of clinical practice through their work experiences with patients with burn injuries.

- To describe the reality of these cognitive phenomena and other factors that influence the development of clinical practice through SLPs' experiences of working with patients with burn injuries.

Research Design

This study made use of a qualitative exploratory research design. The qualitative design method meant I had the ability to do interpretive work which could occur throughout the research process (Creswell, 2018). When the outcome or knowledge surrounding what SLP cognitive process, skills and participant feelings for assessing and managing patients with burn injuries was not clear, the exploratory research design was used to better understand and provide contextual meaning. It was an appropriate research design because it allowed for me to identify themes from the results and make inferences, which could then be used for future research to gain greater insight into the topic (Swedberg, 2020). A qualitative design also allowed for greater flexibility as the study evolved through the various stages of research. As a greater understanding of the phenomena of interest developed, I was able to adapt to these changes while continuing to explore the themes and points of unexpected interest (Creswell, 2018). These avenues of unexpected interest included the variations of thoughts and personalities of individual participants as well as elements such as desensitisation when working with patients with burn injuries. With this design, I conducted an in-depth analysis

of SLPs' experiences and gained a greater understanding of the development of practice to meet a need (Maxwell, 2012).

This study followed a metacognitive approach which looked at one's development of thinking abilities (Hargrove, 2013). A metacognitive approach meant that the SLPs were able to reflect on their thoughts and understanding of how they have been able to develop practices for burn injury management. Metacognition is utilised when SLPsare given a task and it represents an SLPs mental plan (Millanzi & Kibusi, 2020). This mental plan allows the SLP to comprehend the task, monitor and solve problems while evaluating the progress towards completion in different contexts that may be rapidly changing (Millanzi & Kibusi, 2020). This approach emphasised the thinking processes behind what the study sought to understand further, which was practice generation and knowledge creation of practice through intuitive expertise, clinical judgement, and decision making.

The practice of reflection encourages healthcare practitioners to actively examine and better understand their practices (Bulman et al., 2014). It places more emphasis on being present and active through management, rather than merely running through the treatment on autopilot without conscious considerations of context and condition. Professionals analyse inwardly and outwardly through reflection. Reflection promotes simultaneously considering

individual emotions, external factors, and active elements involved in caring for patients (Grobbel, 2013). Reflection helps SLPs to have a greater awareness of themselves and their skills. The reflection process assisted SLP participant in expressing how they acquired skills and knowledge to treat patients with burn injuries through their experiences. It is an important component in the development of advanced practitioners who deliver advanced treatments (Grobbel, 2013). I kept a reflective journal throughout my research process and would reflect after each meeting with my supervisor, interviews, hand in of my research for comments and review and presentations.

Data were collected through interviews to allow for flexible variations in participant responses and provide rich descriptions of SLPs' experiences. Interviews created a space for the implementation of a metacognitive approach, as SLPs were mindful of their experiences and reflected on their burn injury practices. This method of data collection allowed for each participant's unique and exclusive experiences to be told, yet it also allowed for flexibility including probing questions for clarification, or when trying to gain a better understanding and answers. The use of semi-structured interviews promotes rich findings. Questions answered about experiences are broad in range and descriptive, but also specific to the participant (Brinkmann & Kvale, 2018; Kvale, 2007).

This research design appears to fit into the Interpretivism paradigm. This philosophy suggests that the experiences and realities of individuals are mediated by multiple factors and senses of individuals (Alharahsheh & Pius, 2020). Each person interacts with the world around them in a manner that is influenced by their own personal values, morals, motivations and beliefs (Rehman & Alharthi, 2016). The aim of an interpretive research paradigm includes using interviews and observations in an attempt to understand the interpretations and interactions of individuals about the phenomenon of interest (in this case how knowledge is generated in the context of burn injury management). It is not to discover context, universal truths or knowledge, but allows room for experiences and individual variations (Alharahsheh & Pius, 2020; Rehman & Alharthi, 2016).

Sample Approach:

Non-probability sampling technique of purposive sampling were implemented for this study. This technique was selected as this study sought to purposefully select a specific niche of SLP participants who had worked with patients with burn injuries. Purposive sampling chooses participants whose character represents a pre-determined range of criteria (Cottrell & McKenzie, 2011). Non-probability sampling strategies were used in this research since participants were not selected randomly, this was essential for the feasibility of the study (Babbie, 2012). Therefore, SLPs who fall into the above-mentioned criteria were selected. Snowball sampling was implemented, and participants were asked to pass the study

information on to other SLPs who they know who may have fitted the criteria for inclusion. Snowball sampling is another type of nonprobability sampling. This is when participants who have already agreed to participate recommended participating in the study to other SLPs who potentially met the inclusion criteria, and might have been willing to find out more information and potentially participate (Parker et al., 2019).

Inclusion Criteria:

- SLPs who have had experience in their community-service year and upwards working with patients with burn injuries. SLPs ranging from their community-service year upwards were included in this study. This is because as seen in the literature review, experience can influence clinical practice and expertise. It is important to acknowledge that the level of experience a clinician has will influence their responses during the interview. Additionally, community service SLPs are exposed to new patients and different environments within the public healthcare sector without having a vast amount of experience with most patients they encounter. So, their ability to create knowledge and generate practice may differ from those who have encountered multiple similar patients and environmental restrictions before, it is important to account for these differences.
- Gender- not specified for this study.

- SLPs currently working with or who have previously worked with patients with burn injuries. The length of clinical work experience with patients with burn injuries was not specified for this study.
- SLPs from both private and public hospital settings and at any level of care.
- SLPs who have worked and/or are currently working in South Africa.
- SLPs who have assessed and managed paediatric or adult patients with burn injuries.

It was important to include SLPs from across the country working in an array of contexts to ensure that as many accounts and experiences of SLPs working with patients with burn injuries were accurately described and accounted for. The responses gained were from SLPs who treat both the adult and paediatric population. This was also done to ensure transferability to not only an array of hospital contexts and geographical locations but also an array of SLPs and other healthcare practitioners who encounter and have to manage unknown medical conditions. The inclusion criteria attempted to ensure that the answers obtained would enhance understanding of how clinical practice is formed through the realities of SLPs working with burn injuries.

Exclusion Criteria:

- Undergraduate SLPs.
- SLPs who have had no experience working with patients with burn injuries.

- SLPs who have not worked or are not working in South Africa.
- SLPs who have received undergraduate training from universities or courses outside of South Africa.

Context and Sample size:

For this study, a sample size of 10 to 20 participants was targeted from across the country. Smaller sample sizes ensure that the research results achieved are in-depth, thorough, and detailed since larger sample sizes can often lead to a superficial with a basic understanding of data (Ritchie et al. 2013). The target sample size number is recommended by Braun and Clarke (2013) for a medium-sized project that involves the chosen methods of this research..

Participant Recruitment:

I recruited participants by posting online advertisements for the study and distributing them via professional organisations and professional groups on social media. Two of the participants were recruited via snowball sampling. Five participants were recruited from social media professional Facebook groups, four participants were recruited from professional WhatsApp groups and two participants were recruited via snowball sampling. The name of the Facebook group titles are Allied Health in South Africa (Professionals only) and Speech and Language Therapy Jobs. The WhatsApp group titles are ST Posts, Speech Therapists in SA. 2 and Speechies. The first post was made on the 22nd of August 2022.

Reminder posts were sent out approximately twice a week on each Facebook group and once a week on WhatsApp.

Sampling Strategy:

Eleven participants were recruited and these were the accessible and eligible target population. I expected to recruit more participants, given that approximately four months of recruitment and repeat advertisements on all platforms took place. The smaller sample size could be owing to research fatigue trends currently noted across other studies. Studies have shown various factors that contribute to a decrease and loss of interest in overall research participation and engagement during and post the COVID- 19 pandemic seen in post-disaster research (Patel et al., 2020; Ashley, 2021; Clark, 2008). According to the literature, research fatigue during and post the pandemic could be attributed to the sudden boom in the constant use of technology and the overwhelming number of studies being conducted on a certain topic. The literature also shows that research fatigue especially exists for those affected by the 'disaster' receiving multiple requests for participation and the ripple effect, contributing to a decline in participation in other research areas and a general lack of reciprocity and evident solutions coming out of the research (Patel et al., 2020; Way, 2013).

Participant Characteristics:

It should also be noted that the group of available SLPs working with patients with burn injuries is potentially smaller and so this may also have affected the sample size, even though, participants were invited from across the country. The participant group were qualified SLPs or dually qualified SLPs and audiologists that have worked in the South African healthcare system with patients with burn injuries. Participants ranged in graduation dates and years of experience working with patients with burn injuries. The participants all studied for their undergraduate qualification at a South African University. The participants ranged in age and race; however, they were all female participants. Participants years of clinical work experience ranged from 1 year to 16 years and averaged specifically for burn injury management approximately 4 years. For further demographic information see Table 1 and Table 2 below.

Table 1: Demographic information of the participants within the research study.

Demographic	**Number of Participants**										
Gender	Female					Male					
	11					0					
Qualified between the years.	P1-2019	P2-2010	P3-2020	P4-2020	P5-2006	P6-2017	P7-2021	P8-2020	P9-2008	P10-2020	P11-2018
Years of experience in clinical practice for each participant.	P1-4	P2-13	P3-2	P4-1	P5-16	P6-6	P7-3	P8-3	P9-14	P10-2	P11-5
Years of experience working with patients with burn injuries post undergraduate qualification.	P1-2	P2-12	P3-1	P4-1	P5-only saw two patients with burn injuries.	P6-2	P7-1	P8-2	P9-13	P10-2	P11-5

Table 2 explains the contextual factors such as where each SLP participant worked and gained experience in assessing and managing patients with burn injuries. As stated previously in the literature review, the discrepancy between private and public healthcare in South Africa affected SLPs' experiences, and thus, a distinction needed to be made between the two. Furthermore, whether SLPs had a team of other SLPs or not was also an important consideration that needed to be accounted for in terms of, problem-solving management solutions, learning, and mentorship. Participants differed in their exposure to treating adult or paediatric patients with burn injuries in private or public hospital facilities. Three participants had exposure in a private facility whilst the rest all gained experience only in the public healthcare setting. All participants included in this study did work as part of a large SLP team or had a few other therapists working with them.

The distribution of experience in treating adults versus paediatric patients with burn injuries was: three participants had only worked with adults, three had only worked with paediatrics and five had experience with both types of patients. The contextual factors illustrated in Table 2 are also referred to under results in theme four. These contextual factors indicated participant explanations of their experiences in the interviews and were important to consider and unpack in greater detail.

Table 2: Participant Context Dependent Factors.

Participant	Place of work where they gained experience with patients with burn injuries.	Experience with adult or paediatric.	Experience of working in a SLP team or not.	Still working with patients with burn injuries.
1	Public and Private	Adult	Yes	No
2	Public	Both	Yes	Yes
3	Public	Paediatric	Yes	No
4	Public	Both	Yes	No
5	Private	Paediatric	Yes	No
6	Public	Adult	Yes	No
7	Public	Both	Yes	No
8	Public and Private	Paediatric	Yes	Yes
9	Public	Both	Yes	No
10	Public	Adult	Yes	No
11	Public	Both	Yes	Yes

Outlier:

There was one participant who presented as an outlier when discussing the use of cognitive phenomena and the patient's condition. An outlier participant is described as one whose

responses are inconsistent and differ from the norm of the rest of the findings (Wang et al., 2019). I decided to exclude the outlier from the results and findings because the participant had very limited experience working with patients with burn injuries population in comparison to the other participants of the study. Additionally, the participant did not align with the rest of the SLP's experience profile. This participant differed from the others in that her understanding of burn injury treatment focused on the treatment of the language accompanying neurological impairments from a TBI only. This could also be attributed to the fact that this participant had moved away from working with this population many years ago and has since practiced in a private healthcare setting with children of preschool and school age. Additionally, the participant's graduation date was 2 years before the nearest participant (who continued to work with patients with burn injuries for 13 years after) which could have impacted her current understanding of the hospital context. The participant was also hesitant in most of her answers during the interview process.

Preparatory work:

Prior to developing the interview guideline, some preparatory work was conducted via observation in a public hospital burns unit in Johannesburg. Preparatory work is thought to be an essential component of the research process (Ortlipp, 2008). This is done before research commences and allows one to conceptualise ideas, examine the feasibility and evaluate the direction of the research idea. The observations allowed me to gain familiarity with the work

involved in managing burn injuries and provided a higher quality process to the study (Viergever et al., 2010). This process assisted me in gaining a greater and more realistic understanding of the public hospital context that the majority of the experiences of the SLP participants from my research is based. The preparatory work enables one to identify any potential unknown factors that could affect the study and help formulate predictions of the findings (Ali, 2006). If these are identified early, they can then be changed before the research commences.

The preparatory work took place over two non-consecutive days in which I conducted some informal observations in a public hospital burns unit. No patients were actively treated by me, no professional opinions on management or thoughts were provided by myself to any of the healthcare practitioners in the ward and no patient names were divulged or files read to ensure patient privacy. These observations allowed me to formulate interview questions and determine their credibility based on the typical clinical scenarios SLPs faced in the unit. These scenarios included those with members of the MDT.

SLPs explained and educated other healthcare practitioners on their role and more specifically, on their management plans going forward for each patient they consulted with during the ward rounds and after patient consultations. SLPs often asked questions to better

understand the burn injury itself, but also asked questions such as when to begin contracture management post-burn injury or surgical procedure. Interactions between SLPs and patients included assessment and management of dysphagia, voice, communication disorders, and contracture management of the upper and lower face, neck, and within the oral cavity. It was noted that SLPs took time to discuss management solutions with one another. When unsure of how to proceed, ideas were brainstormed to find the best solutions, especially for long-term patients and rehabilitation post-discharge. Much like the Ebola study of context for knowledge creation suggested, these observations served as additional groundwork for the study (Bolten & Shepler, 2017).

Pre-test Interview Exercise and Review of Questions:

A mock interview and review of the interview questions were conducted to ensure questions asked during the interview would give comprehensive responses that linked to the central research question. This was done to ensure greater rigour within in the study (Buschle et al., 2022). In qualitative research pre-test interviews make use of professionals in the field of study related to the research question. This pre-test exercise allows for professionals to provide further information on questions, to ensure suitability and creates an opportunity for them to advocate for additional considerations that may not have been identified by the researcher (Hurst et al., 2015; Buschle et al., 2022).

The pre-test interview was conducted with a qualified SLP who works in a public secondary hospital facility that has experience with complex adult and paediatric cases as well as some burn injury management. The interview duration lasted 25 minutes. I made use of a reflective journal and discussion post the interview to analyse the questions and identify areas that needed to be modified. Modifications were made to some of the questions to facilitate greater clarity under the section on knowledge creation. The questions were rephrased so that participants were asked to explain their thought process behind decision making and creating of their management knowledge and skills through their experiences rather than merely retell their experiences. The questions referenced the how and why of the story instead of what was their experience. An additional two questions were added with regards to SLPs' experiences that focused on, the difference between working with patients with burn injuries in comparison to other medical conditions and differences between the adult and paediatric populations.

Data Collection

Interview questions were derived by examining the literature available surrounding the phenomena of intuitive experiences, clinical judgement, decision-making, and knowledge creation as highlighted in the literature review. Preparatory work helped to shape the interviews questions by giving me a better understanding of the current practices of SLPs working with patients with burn injuries. The literature phenomena and the preparatory work

provided context for the questions and ensured they were open to broad and descriptive answers, to not limit the extent of the potential data that could be gathered. Initial questions were biographical to get a better understanding of the number of years of experience and types of settings the SLPs had worked in. The remaining questions were based on SLPs' experiences of working with patients with burn injuries. SLPs were also allowed to express any other experience or opinion not asked, but that they felt may be helpful for me to know.

Semi-structured interviews were conducted with individual SLPs across the country. The interviews were conducted in English. All participants were interviewed via Zoom. All interviews were held via the online platform to ensure that Covid-19 regulations were met and also to widen the pool of potential participants beyond Johannesburg. If a participant was unable to make use of the online platform due to data costs, data for the interview duration was offered; however, no participants took up this offer. Interviews lasted between 30- 50 minutes and averaged 37 minutes.

Data preparation and management

The data collected was in the form of audio recordings that were then transcribed. These were kept on a password-protected laptop in a separate folder with each participant having their folder containing their consent form, audio recording, and the transcribed interview. Each

interview was transcribed in the days after completion. The transcriptions were completed using software called Descript; however, each transcript was read over and adjusted by myself to ensure accuracy and reliability as the software is not precise, particularly for jargon terms. Once all interviews were completed and transcriptions were finalised, the interview scripts were then printed out to be analysed using the data analysis process below.

Data Analysis

Thematic analysis (TA) was used to interpret the interview data. The TA method assisted me with identifying themes within and across datasets (Braun, Clarke, Hayfield & Terry, 2019). Reflexive thematic analysis was used to explore themes in greater depth (Braun, Clarke, Hayfield & Terry, 2019). A deductive approach as well as an inductive approach was used during analysis of the data. Deductive approach entailed using the predetermined general theme ideas were sourced through the literature review and the preparatory observations and these were highlighted in the analysis. For example, experiences that pertained to the theme of intuitive expertise or the use of intuition were highlighted. However, an inductive approach was used when additional themes were identified in the interviews and thus reflexive analysis was needed to incorporate those areas not initially considered. This allowed for greater depth to the analysis and ensured pertinent patterns from the interviews were noted and addressed. The 6-step process is recommended by Braun and Clarke (2006) when

analysing results to determine patterns of shared meaning, and core or fundamental ideas that are formed (Braun et al., 2019).

The tables 5-7 below detail the process of using the transcribed interview scripts, then formulating multiple common codes based on what was said, linking common codes together to formulate subthemes, and finally linking each to an overall major theme. This was first completed in paper-based form as interview scripts were printed out and once subthemes were identified, they were then placed on a Microsoft Excel document to be refined further into major themes.

Table 5 provides a brief explanation of how the codes were identified based on a quotation from a participant's response found in the interview transcription. In Table 5 the participant's response is broken down into colourful boxed segments and analysed to see elements of commonality within itself or between other transcripts. Identifying the initial codes and reducing data assisted in separating the relevant information from the irrelevant. This assisted me as I began to identify more prominent themes within each interview and patterns of shared meaning across interviews. Each section is broken down into multiple initial themes and grouped according to colour.

Table 5: First stage of data analysis.

First stage of data analysis	
Example of a participant's response	Initial codes identified
"So, you kind of learn on the ground, um, from people around you. So, you draw on all of these different aspects to try and equip yourself to do the best thing for the patient clinically with good reasoning. Um, yeah, so I would definitely say from other speech therapists. Through their experiences, um, through their knowledge and what they feel is best. Um, and then in MDT as well, because they come from a different perspective, um, in terms of readiness. And sometimes they even see the patients before us for a few weeks even before we get the referral. So, they kind of know where the patients are at so they can provide insights"	1. Experiential/ exposure learning/ learning in context 2. MDT 3. Clinical skills- EBP and Cognitive phenomena 4. Clinical reasoning 5. SLP colleges 6. Senior expertise 7. MDT knowledge 8. MDT management plan

Table 6 then shows how these initial codes were examined further and grouped based on common core or fundamental ideas. Once these relevant patterns were analysed, they were then compared with the original research aims and objectives. I then proceeded to identify which codes overlapped and which were new areas that had emerged. These groupings were made into grouped subthemes that had specific colours assigned to them that could be flagged across interview transcripts.

Table 6: The second stage of data analysis.

Second stage of data analysis	
Themes Identified	Grouped subthemes
1. Experience/ exposure learning ⇦ 2. MDT ⇦ 3. Clinical skills ⇦ 4. Clinical reasoning ⇦ 5. SLP colleges ⇦ 6. Senior expertise ⇦ 7. MDT knowledge ⇦ 8. MDT management plan ⇦	1. Clinical expertise 2. SLP colleagues 3. MDT

Table 7 then illustrates how the grouped subthemes were finalised into major themes that could stand alone while still ensuring they encapsulated the central ideas across the participant interviews. This process also allowed for the relevant information and themes to be viewed in their entirety and be transferred to a Microsoft Excel spreadsheet in which they could be further examined and refined.

Table 7: Final stage of data analysis - major themes.

Final stage of data analysis	
Grouped subthemes	Finalised theme
1. Clinical expertise 2. SLP colleagues 3. MDT	Major Theme 1: Clinical practice develops through interactions between dynamic SLP teams and the MDT. Major theme 2: Clinical practice develops through the application of cognitive phenomena and generic SLP knowledge.

The major themes on the Microsoft Excel Spreadsheet allowed for easy access and allowed me to reflect on initial aims and objectives with the major themes in mind. In addition, this document was sent to my supervisor for further review. These were then refined further and altered if necessary.

These were then written up in the results section of this dissertation. The themes then went through a process of refining and consolidating in the results section writeup. The results were arranged in a structured format and discussed in such a way as to show importance as well as how they connected and influenced each other.

Ethical Considerations

An application was approved by Wits Human Research Ethics Committee (HREC) (Non-medical), ethics clearance number H22/07/10. See Appendix B for clearance certificate.

1. Confidentiality, anonymity and safekeeping of information

Each of the SLP participants was assured that any experiences and information divulged during the interview would be kept confidential. Consent is only truly given if participants feel comfortable and assured that their confidentiality will be protected (Petrova et al., 2016). The audio recordings and scripts were kept safeguarded in a password-protected folder on a password-protected laptop that only I have access to. The application Zoom has the function

to download and record audio only so no identifying pictures or videos of the participants will be kept. Additionally, participants were asked to turn off their cameras after introductions for the duration of the interview. This was to ensure the recordings remained audio only and to assist both sides with optimal connectivity.

The participants were also given the choice to log into the meeting with a pseudonym; however, none of them used this option. Pseudonyms are used in this dissertation to preserve anonymity. Most importantly when signing consent and before the interview started, participants were reassured of this confidentiality. The SLPs' responses have not been shared with any hospitals and will only be shared upon request in a combined, anonymous format. No hospitals where the SLPs work were named.

Autonomy

Participation for SLPs remained completely voluntary. Participants were allowed to withdraw from the study, and this could be done at any point in time, or they could have refused to participate or answer a specific question should they have wished. The snowball sampling used to recruit participants was managed in line with the POPIA Act. SLPs that I interview advertised the study to others they knew that met the inclusion criteria and asked them to

contact me should they wish to participate. They did not give me the contact details of potential participants.

2. Consent

Informed consent was obtained before any interviews commenced. The SLP participants were provided with an information sheet. This sheet explained what the study was about, what their participation entailed, and how their confidentiality was maintained. The information sheet and consent forms were provided in a written format and no participant requested it in verbal form; however, this option was made available to them. An opportunity for me to answer clarifying questions before consent was signed was extended to participants. The final consenting signature was required before interviews took place.

3. Beneficence and non-maleficence

There did not appear to be any direct risks to the participants nor ways in which the participants could benefit materially or financially from this study. Participants could have benefitted indirectly during the interviews as the metacognitive approach was applied. As mentioned previously there are possible benefits of reflecting during an interview for the SLPs as they examine their own clinical expertise, skills, and reasoning. Reflective practice is a vital skill that aims to support SLPs (with any level of experience) in problem-solving and

critical thinking which has implications for improvements in practice and clinical expertise (Cook et al., 2019).

4. Justice

SLPs who participated were assured that participation in this study carried no overt risks. As stated above all relevant information was disclosed beforehand with an opportunity to ask clarification questions should they have been concerned that something was not unclear. The participants were at liberty to withdraw at any point or refuse to continue as their participation was completely voluntary. The target population was not considered vulnerable. Interviews were not longer than necessary, and no participant wished to take a break; however, this offer was extended and explained to them before the interview commenced. This was extended to avoid fatigue and distractibility and to allow time for thinking through answers. This was done to ensure the maintenance of the appropriate quality of answers given by participants (Rowley, 2012).

Throughout my study, I made sure to treat all participants with honesty and respect, and I always maintained appropriate interactions with them (Rowley, 2012). By listening to the insights of speech-language pathologists (SLPs) working in unexplored areas and reporting my findings ethically and accurately, I am contributing to the fair treatment of future patients

and helping SLPs find answers. I did not place any burdens on the participants, and I recognize that my role was to facilitate and gain a better understanding of the research while the participants were the experts with valuable knowledge to share.

5. Debriefing and results for participants

There was no evidence to suggest that participants needed debriefing post-interview as the questions did not relate to a sensitive topic, but rather related to routine clinical work. All participants were allowed to receive feedback on the results of the study once it was completed. This was made available by me to them.

Ethical dilemmas

Minimal ethical implications were anticipated for this topic of research. There was the possibility that some of the participant group included colleagues I had previously worked with. To minimise coercion, advertisements for the study were posted on Facebook groups and circulated through formal social media platforms to ensure minimal contact. The study was completely voluntary without any expectation to participate. Furthermore, all discussions about the study were communicated via a formal email platform and not through private messenger systems.

Trustworthiness

Rigour places emphasis on qualitative research needing to be trustworthy. Strategies such as proper record keeping, seeking out similarities and differences across accounts for data triangulation, and ensuring reliability and validity of results (Noble, 2015). Utilizing dependability, credibility, transferability, and confirmability is how rigour is maintained (Maher et al., 2018). The research needs to investigate the aims and objectives of what it seeks to measure so that then the results can be taken and used in other situations. The results need to be repeatable such that they are an accurate reflection of participants' views and not the researchers' (Shenton, 2004).

1. Credibility

The questioning style of gathering information based on asking about another's experiences promotes true reflections without bias and minimises the researcher from being leading in any way. Yin (2016) suggests that credibility is achieved when information gathered from the interviews contains correlations with one another, is consistent in format and it is coherent in nature. The types of research method theories (e.g., convenience, purposive, and snowball sampling as well as reflective thematic analysis) proposed for this study are all well-established and suited to qualitative research. Each was selected as the best option to facilitate the process of achieving the aims and objectives of the research question whilst ensuring an authentic representation of the interpreted data (Becker et al., 2012).

2. Transferability

This research was conducted with SLPs working across private and public/ urban and rural healthcare systems in South Africa. Despite there being a smaller sample group, it included SLPs from different types of healthcare settings across the country. This allowed for additional challenges often faced in the public healthcare sector, which were noted in the literature review, to be accounted for and thus promoted greater overall transferability. It also ensured that the results obtained apply to the realities of an array of SLPs working with patients with burn injuries. The answers gained related to SLPs treating both the adult and paediatric population. I was mindful of the questions developed as well as how they were posed in the interview, to ensure the generation process of knowledge and clinical practice was the core focus. This core focus is transferable as it is rooted in the South African healthcare context, whilst ensuring the answers are also applicable to an array of SLPs who work with patients with burn injuries and to other healthcare practitioners. The results obtained sought to enhance understanding of how clinical practice is formed through the realities of SLPs working with burn injuries. This insight will enable healthcare practitioners to explore solutions, to better our management of patients with burn injuries, as we attempt to meet the need without predetermined protocols and guidelines.

3. Dependability

All aspects of this research have been described in detail and explained thoroughly enough for the study to be replicated. These aspects include the research design, methods of collection and analysis of data, and participant information. All interviews were audio recorded and then transcribed using a software called descript and checked again for accuracy to ensure each response was recorded accurately. This allowed for the type of thematic analysis to be replicable. The same themes that are created through comparing and contrasting the data should be found. My supervisor and I have had regular meetings about the recordings, transcripts, and themes to ensure my thoughts and analysis are true reflections of the data collected.

4. Confirmability

During the interviews, each response given by participants was recorded and transcribed. Documentation of the verbatim transcriptions allowed for accuracy when analysing the data. To ensure bias was eliminated, I examined my own beliefs about working with patients with burn injuries and made sure that these thoughts were separated from the research space. This was achieved through a reflective journaling process. Reflection is a necessary component of qualitative research and thus to ensure further rigour was maintained a reflective journal has been kept throughout. Moreover, supervisor and peer debriefing took place. The analysed data was reviewed by my supervisor. This guaranteed that both the analysis and how the data was presented showed no bias in this study (Long & Johnson, 2000). In addition, to eliminate

any power dynamic between the researcher and participants, questions posed in the interview were not subjective, forceful, or leading towards a particular stance.

CHAPTER 5: RESULTS

Through the analysis the results have been developed into five major themes namely:

1. The complexities and challenges of working with patients with burn injuries influences the development of clinical practice in burn injuries management.

2. Clinical practice develops through interactions between dynamic SLP teams and the MDT.

3. Clinical practice develops through the application of cognitive phenomena and generic SLP knowledge.

4. The development of clinical practice for burn injuries management is context dependent.

5. Individual SLP's psychological and personality factors influence the development of clinical practice in burn injuries management.

These themes essentially encompassed the different areas in which SLPs were able to express what influenced their learning and development of skills through their experiences of treating patients with burn injuries. It expressed how they created the knowledge needed to manage these patients. It also shows how these factors influenced their growth of clinical expertise and thus the development of practice and knowledge within the field. Table 8 illustrates the themes and subthemes which are then unpacked and explored further in greater depth under their respective theme headings.

Table 8: Description of themes and subthemes.

	Major Theme	Sub-themes
`1	The complexities and challenges of working with patients with burn injuries influences the development of clinical practice in burn injuries management.	⇒ The burn injury condition and critical care management by SLPs. ⇒ SLPs' experiences of critical care management of burn injuries. ⇒ Desensitisation of SLPs working with patients with burn injuries. ⇒ Counselling of patients with burn injuries.
2	Clinical practice develops through interactions between dynamic SLP teams and the MDT.	⇒ The need for an MDT. ⇒ Decision making and management collaboration. ⇒ Supportive and dynamic MDTs and SLP teams.
3	Clinical practice develops through the application of cognitive phenomena and generic SLP knowledge.	⇒ The use of intuition in management of patients with burn injuries. ⇒ The use of clinical judgement. ⇒ Combining generic SLP knowledge and cognitive phenomena while treating patients with burn injuries.

4	The development of clinical practice for burn injuries management is context dependent.	⇒ Learning in the context of the South African healthcare system. ⇒ SLP burn injuries management in the South African healthcare system. ⇒ Private vs public hospital settings. ⇒ Hospital setting and MDT/SLP setup.
5	Individual SLP's psychological and personality factors influence the development of clinical practice in burn injuries management.	⇒ Personal passion for working with patients with burn injuries. ⇒ Burn injury management as a space for growth and fulfilment. ⇒ Differences in participants' personalities and psychological Approaches to managing patients with burns injuries.

It is important to structure the themes in a manner that guarantees greater understanding but also to express how each theme influences and links to one another. These themes are not mutually exclusive but have areas that overlap and affect one another. The themes have been organised in two ways:

Firstly, themes one to five were evident across all interviews. All the SLPs expressed similar thoughts on these factors when explaining their experiences of working with patients with burn injuries. These five themes had the most commonalities and shared experiences among participants. The fifth theme was presented last as it was the only theme that participants appeared to have differing responses when telling their stories.

The first theme links to the complexities of treating patients with burn injuries and is presented first as this establishes the foundation and intricacies of working with patients with burn injuries and how these intricacies influenced all the other themes. The nature and complexity of the condition of burn injuries was alluded to in other themes, but needed to be highlighted as the participants expressed a strong distinction and additional challenges between burn injuries, as opposed to other conditions. Patients with burn injuries are heterogeneous and complex, as each one presents differently. Their management ranges from acute care with patients that are immunocompromised and highly susceptible to infection, to long-term rehabilitation and counselling.

Due to the nature of the burn injury, the circumstance surrounding the injury as well as the road to recovery, these patients have a history of further difficulties and possible additional neurological complications, and psychological and physical implications that impact on the

type of treatment provided by SLPs. Fundamentally, the nature of the condition of patients with burn injuries and the subsequent trauma and limitations associated with the burn complications alters what areas of practice and how practice is developed for this population which was highlighted in the first section of the results. Due to the nature of the burn injuries, SLPs admitted to greater trauma and heightened risk when working with these patients and how this then impacted their problem-solving, MDT discussions, the hospital environment, and their personal feelings towards the condition which are the additional four themes.

Following that the next two themes relating to the MDT and cognitive phenomena are recurrent themes that crossed over into other parts of the SLP's experiences. Thus, it was important to present these two themes next and provide a solid foundation to ensure clarity later when they appeared in other themes. The MDT theme was a prominent feature and a shared comment across participants and themes. The application of MDT work when working with patients with burn injuries was at the forefront of most of the interviews. This was because it appeared that the MDT work impacted the cognitive phenomena SLPs used, the context in which they worked, the patient's condition, and their approach to treatment.

The third theme relating to cognitive phenomena (decision-making, intuition, problem-solving, clinical judgment) was also evident in other themes, as the SLPs reflected on what

cognitive components they used when treating the condition. The cognitive phenomena and working with the MDT had a common thread of problem-solving which appeared in the later theme of the SLPs personality factors and psychological approach to managing patients with burn injuries. SLPs expressed that they made use of certain cognitive phenomena to problem-solve assessment and management solutions. MDT work and patient discussions revolved around the patient's condition to enhance patient outcomes. Furthermore, clinical reasoning and the use of intuition as well as the lack of EBP was another area of overlap. The application of these cognitive phenomena was influenced by the hospital setting and the SLPs' approach to applying these skills in clinical practice.

The healthcare context was an important theme to explore as it was not only brought up by SLPs when comparing South Africa to other countries but also imperative to ensure the research is relevant to all healthcare settings and practitioners in South Africa. Moreover, the hospital setting was an influencing factor for practice development resources and also exposure to patients with burn injuries among the SLPs. It also had a strong link to the theme of the MDT and affected participants' experiences and perceptions of teamwork, mentorship, and discussions regarding patients with burn injuries.

Finally, the last theme linked to all other themes in how the SLP participants reflected on their clinical practice development and knowledge creation regarding patients with burn injuries. Although they shared a common understanding of all other themes, this theme was individualised to the SLPs and influenced their overall viewpoint and decisions in working with patients with burn injuries. It emphasised how personality differences influenced their confidence, coping mechanisms, desensitisation, reflection, risk-taking or challenge, and sense of fulfilment for SLPs working in this field. Overall, each theme showed the areas that influenced the SLP's knowledge creation and their development of clinical practice when treating patients with burn injuries.

THEME 1: The complexities and challenges of working with patients with burn injuries influences the development of clinical practice in burn injuries management.

The results of this dissertation need to be examined and interpreted with an understanding of the complexities of working with patients with burn injuries as well as the burn injury hospital environment, as expressed by the participants. It is important to explore how the participants dealt with and acquired the skills needed for working with patients with burn injuries. Some terms and experiences need to be described that are related to the current practice and practice generation in the field of SLPs managing patients with burn injuries. This theme provides a greater understanding to fully comprehend the intricacies and extent to

which patients with burn injuries and their subsequent management differs from patients with other types of conditions.

The burn injury condition and SLPs critical care management by SLPs.

The literature review in this dissertation highlighted the notable differences that need to be accounted for when managing burn injuries, compared to managing other medical conditions. This was confirmed in the interviews and many of the participants highlighted the complexity of these cases. The complexities and heterogenous nature of burn injuries, means they can co-occur with other medical conditions such as TBI, suicidal attempts, and stroke which can often result in neurological fallout. For example, a violent attack on a person who is subsequently set alight may result in a TBI, that causes hemiplegia and communication disorder, together with burn injuries to the face and body, with a possible amputation of a ligament (be that arm or leg) due to the severity of the burns (Nthumba, 2015). The SLP would need to treat the communication disorder and other possible neurological impairments due to the TBI such as memory. The SLP would need to effectively find a communication technique that considers not only the physical hemiplegia and amputation, but also the facial burns and scaring. The SLP would also need to treat the patient for dysphagia, inhalation burns and facial contracture management. Another example is a patient with primarily head and neck full-thickness burns and also inhalation burns that occurred when they fell because of an epileptic fit (Nthumba, 2015).

SLPs now need to consider rehabilitation of muscle movement, oral splinting, stretching, contracture management, voicing, speech, communication, swallowing, and how if the face is skin grafted this will impact the previously listed management, appearance, and counselling of the patient and their family. It was evident in the participants' responses that the more experience SLPs had the more comfortable they were in handling these complex or multiple condition types of patients with burns injuries.

Participant 6: He had presented with, yes, a lot of burns, but also a lot of neurological complications, um, which made his case quite complex.[…] So even if it, when they were compounded together, as I said, you're never a hundred percent like confident, um, in your like results or your assessment..

Illustrated and reinforced through the quote below, working with a patient with burn injuries requires a lot more consideration of the holistic nature of the injury as well as examining how it impacts the patient acutely and then chronically. Then finally problem-solving to provide swallowing and communication management that is meaningful and accessible to the patient.

Participant 9: *It's very means. It's very needs based. So, I mean, I know like even seeing stroke is very needs based, cause you would, you know, say like, what does that person need*

to communicate with primarily? But, I think all the burns even more because they, um, some of them can't look around. I mean, for example, the girl with a full facial, full frontal burn, she got burnt in her face so she didn't open her eyes. The girl that had the inhalation burns, her arms were cast, right? So, she would cast full arms and she had to have an elevator [an piece of equipment for lifting body parts of the patient], so she couldn't, she wasn't mobile. Mm, um, and when I say mobile, I don't mean like getting up and walking around; I'm talking like in her bed. Um, yeah. So, it's, it's, you know, it's quite specific. So even when you make these massive [AAC] boards, I have to place them, hang them from the ceiling. Um, in a specific way that she could see them because otherwise she couldn't turn her body or, you know, she couldn't like move her arm. Um, so you have to be like super, super specific about the size of the board, where it's like more attention to detail, I would say.

Working with patients with burn injuries as expressed by participants often required far more skills and problem solving than they had anticipated or what is considered standard practice for an SLP. The example below illustrates, how SLPs working with critically injured patients were often exposed to more intensive care scenarios than one would anticipate. Two scenarios below were based on an SLPs experience after one patient became septic and the other had a failed extubation:

Participant 9: Um, and I had to do CPR on the kid, and I had never, never done CPR. I didn't know what it was, and they [Other healthcare professionals with the patient] were like, "we can't do it. You gotta be here, you gotta do it", and I was like, "Okay". So definitely, I think it's, it's, it's definitely something that we need to be trained in a bit more.

Participant 9: I think I got home at like seven at night while the doctors tried to re-put in the tracheostomy. She was… the child [the patient], she was, she was, she was so distressed. She wet herself, um, she couldn't, it was so traumatic for her, for me, I promise you. And I was with the doctor, and the doctor was like, "please try and find", we couldn't find a vein on her. He was like, "start sticking needles", and I was like, "I'm not trained to put needles in a person", but we couldn't find a, a vein. We, we eventually got one, I think in her head. Um, I mean, it, it was just, it was just terrible and there was absolutely no protocol or procedure or anything in place.

SLPs have had to learn how to clinically assess and manage patients with burn injuries that have multiple and often complex physical, psychological, and neurological limitations that impact communication and swallowing, but that also contribute to the patient complexity with physical wound restrictions and facial scarring or contractures. All participants expressed the compounded combination of these limitations that affected the development of

practice and participants felt they had to pay more attention to detail when providing care for patients with burn injuries.

Throughout the interviews, it was evident that there are certain clinical skills needed for the treatment of patients with burn injuries. Burn injury management along the continuum of rehabilitation appears to require more than just what is taught at an undergraduate level in terms of speech, communication, and dysphagia. Participants advocated for burns injury exposure and training. Participants spoke about experiencing this area of patient care as "*daunting*" (P6) without any specific theoretical input, highlighted the importance of teaching students how to integrate the content that is taught:

Participant 6: I think a lot more research needs to be done into burn specific, um, kind of management principles. Just because if I think about how different it is to, to other patients that I manage, it's, it, it is quite a daunting process.

Participant 2: I have also been pushing for burns to be incorporated into undergrad for years now because it really is so important and just not considered.

Participants admitted to there being a need for not only an integration of knowledge and to apply it practically to tackle unfamiliar patient conditions in the real world, but also to

consider additional external factors that affect the overall patient condition and development of practice in the field:

Participant 7: So, I do think that that burns is a very good area to just, how you can integrate all your knowledge, um, to ensure functional outcomes in a patient where you do not necessarily understand the diagnosis as well.

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Confirming what was stated in the literature review, participants indicated there is a large range of areas or tasks involved in rehabilitation for burn injuries including physical, emotional, educative, and psychosocial areas; however, SLPs expressed a lack of confidence in assessing and managing those areas. The quotes from the participants above express a greater need for the integration of clinical knowledge and its practical application to ensure functional outcomes. It strongly reflects that working with patients with burn injuries requires significant integration of knowledge and skills. While some of that content stated as well as the areas listed below, are arguably covered in the undergraduate curriculum, many aspects are not. Additional areas mentioned by participants when referencing specific cases of patients with burn injuries with which they worked included:

- Head and neck skin grafting rehabilitation
- AAC
- Infection control

- Myofascial release/ adaptations of the technique
- Educational and supportive counselling
- Dressing (of wounds)
- Respiration
- Covid-19 adjustments to assessment and management as well as informing families and caregivers new hospital procedures such a visiting protocol and infection control.

Myofascial release therapy (defined in the Glossary) and inhalation burns are a complex area of SLP treatment for patients with burn injuries that needs careful consideration. Myofascial release technique is not taught at the undergraduate level, but a course can be done at the postgraduate level to learn these skills and techniques. While the broader SLP community does not have a definitive answer on whether this therapy approach should be implemented as part of SLPs' standard practice, there is evidence to suggest that these techniques can play a role in the effective management of patients with cerebral palsy, head and neck cancer and muscle tension dysphonia. As noted in a few of the participant's interviews myofascial release and adapted versions of the techniques based on patient-specific requirements are being used by SLPs to manage patients with facial burns. The core principles of the therapy are being applied potentially along with other oral motor exercises and participants report positive results in terms of patient outcomes.

Additionally, as previously discussed in the literature review, the type and severity of the inhalation injury will impact the patients' respiration, swallowing, and communication. SLPs understand to an extent, the need for a well-functioning respiratory system; however, SLPs need to be equipped with the knowledge of the mechanisms of lung functioning as this is crucial in terms of speech production and management for patients with inhalation burn injuries. However, Participant 1 along with some others alluded to the need for facial management techniques (such as the myofascial release above), instrumental dysphagia management, and grafting procedures that further emphasized the results and literature which highlighted that these are areas where SLPs feel unequipped to practice. There is a depth to burn injury management not targeted at an undergraduate level. However, It seems the complexity of the condition does not make it a suitable condition to teach at undergraduate level and potentially something to be targeted at a postgraduate level. These kinds of skills need to be unpacked, and resources needed to be taught and provided for SLPs working with patients with burn injuries. Access to this technique, resources, and this knowledge was expressed in interviews by SLPs as giving them greater confidence to work in this area, in addition to the other themes spoken about below -for example MDT, cognitive phenomena, etc.

SLPs' experiences of critical care management of burn injuries.

To further understand the complexities expressed by participants some terms need to be clarified. According to literature a patient's medical state is generally used to describe only hospital patients at their current health state as well as their short-term prognosis (worsening or improving) (Porter, 2010). This medical state is noted to be rarely used by clinical physicians as it does not provide enough detail. Hence, in this dissertation, the medical state of a patient with burn injuries refers to their acute care journey, when they are considered at higher risk and immunocompromised.

Patients with burn injuries are critical care patients, and have rapidly changing medical states which are often due to higher incidences of sepsis. However, the medical condition of the patient refers to the patient's health condition in more detail along the continuum of rehabilitation (Porter, 2010). For example, although the patients' medical state might be stable and they have been in the hospital for a prolonged period, their medical condition could be severe, in that they were exposed to severe burns, post the skin graft they have poor overall functioning of the face due to contractures and poor take of the graft, and general paresis of the muscles needed to swallow due to prolonged intubation. Although their medical state is stable, the patient is functioning poorly and has areas of rehabilitation that require extensive work - and thus their overall medical condition is severe. Burn injury management

goes beyond just providing intervention to improve feeding and communication and this was a flagged pattern through all themes in this study:

Participant 6: But it is very, um, patient specific and day specific. So, a lot of the time it's not a, it's not a linear process. […] You're gonna go around and in circles, um, where patients, you know, have setbacks and then they right back down at the beginning and you've gotta take it up again.

Participants believed that the heterogenous nature of patients with burn injuries and the altering medical state forced healthcare practitioners to think on their feet, make decisions and be acutely more aware of minor details in the patient's current medical state. Participants had an understanding that the patient's medical state fluctuates over time and how this fluctuation occurs and that it is often mediated by surgeries, rehabilitation, and the healing process. Participants mentioned additional knowledge and practice factors learned when working with these types of patients such as heightened infection control procedures and an increased sensitivity or awareness towards patients' clinical state, and physical, psychological, and often neurological deficits during clinical practice. Again, participants admitted to needing more knowledge and guidance in their clinical practice and to account for the unpredictable medical state:

Participant 6: *if I think about burns in particular, because they are so physically fragile a lot of the time. I'm much more aware of their physical deficit and I'll ask nursing to assist me a lot more just in terms of if we need to position the patient, if we need to change something, if they need to like, um, be a lot of the time if these patients have got facial bandages or, or [….] dressings that are quite intense, then that is something that you need to be aware of. […] , like you're not gonna do a lot of physical manipulations on patients, um, or positional manipulations, rather, let's say on patients that are, you know are so ill, um, and have got such severe physical deficits. […] Um, I also think a lot of the time, it's inhalation injuries, so you need to understand kind of what the mechanism of the inhalation injury and intubation injuries as well. Um, and try and figure out how that would affect the patient.*

In the absence of clinical guidelines and foundational knowledge of burn injury assessment and management, these skills were developed, and additional infection and critical care management skills were implemented or considered by SLPs when providing patient treatment. Participants expressed that often patients were seen actively or through various stages of medical states despite their instability and what the acceptable generic SLP knowledge or gold standard for 'point of intervention' would suggest. For example, SLPs are taught to not put patients at greater risk or under more pressure when they are in a fragile state such as if the patient is intubated or has a low haemoglobin (Hb) level and is undergoing a blood transfusion no speech therapy management should be conducted. SLPs knew

clinically that a patient needed to be treated even though they present as critically ill. Contrary to what generic SLP knowledge about point of intervention might say, SLPs have become more aware of a patients medical state and clinical unpredictability and they are able to adapt their management to treat the patient with burn injuries even though they are critically ill.

Participant 6: […]burns patients I think tend to be more so than, , critically ill, but burns patients tend to be quite unstable a lot of the time because they're going for repeat surgeries, they're going for debridement's, they've got VACs [Vacuum-assisted closure device]. You know, it's, it's, it's a lot of the time, it's very, there's a lot going on. It's a very clinical environment. It's also very, um, it's very changing. It's not predictable and so that is something that you really gotta be aware of when you manage a burns patient because their condition really can change at any time. So, you need to be very, very aware and very acutely looking at how your patient is looking human dynamically. So basically, like watching the blood pressure, watching the sats, watching, all of that, because if you are doing something that's stressing the patient out, then you need to actually stop because it can actually just have such a negative effect on him.

Patients with burn injuries often incur other complications beyond the physical deficits. Participants felt that individual patient progress differed greatly and influenced the development of management plans, compared to treating other types of patients who had conditions that present in a more controlled, homogenized, or better-understood manner. The participant below not only described the fluctuating medical state of the patient as being another difficult element in the management of patients with burn injuries but more importantly expressed how this inconsistency made it challenging to identify patient progress. Essentially, it was challenging for this participant to know whether the intervention was helping this patient and the participant was unable to set predictable therapy outcomes as the patient's progress fluctuated so much. SLPs need to learn to work more with uncertainty in patient conditions.

Participant 4: […] I think, yeah, it was difficult for some of the patients to actually determine if what you're doing is working or progressing the way you want to. Because, if they were in the high care side where it's more severe and they were kind of inconsistent. You know, you think one day we are doing this and it's going well, and the next day you're getting there, and we are back to square one. So, I think sometimes it is a bit difficult to determine whether what you were doing was helping or kind of, you know, not really. You check what's appropriate for now because they [are] so inconsistent still.

Desensitisation of SLPs working with patients with burn injuries.

Participants spoke about burn injury management as a '*scary*' (P10, P11, P4) and *'unknown'* (P6) area. However, once they had started gaining some experience, and growing in knowledge and skills, with MDT input it appeared to be not as '*daunting'* (P6) as initially anticipated. This idea of desensitization appeared across all the interviews, where participants needed a period of adjustment to work with patients with burn injuries. They described cases as being "*traumatic*" (P7, P9) and that often patients were very disfigured to the point where participants felt "*horrified"* (P9) after their injuries. SLPs' reactions and responses to the disfigurement of the patient's burn injury and associated disabilities, after the burns injury, were potentially psychologically threatening:

Participant 1: I had no idea. And I saw a few patients like that, so, the first ones were a lot of leaving the patient alone and let them heal a little bit first because I don't know if you've seen it, but oh my God.

Participant 9: *I was horrified [at seeing the disfigurement and extent of injury of the patient]. Um, yeah, so I mean, like, when I think about what my, what my face might have looked like, like looking at this child who had been burnt.*

Participants described feeling "*no confidence*" (P3, P2) in their abilities and described their clinical experiences as a "*daunting process*" (P4, P8, P6) or "*challenging*" (P4, P8); additionally, they also found it incredibly difficult emotionally.

Participant 3: The overall kind of feeling for me with burns is that, um, I'm not confident and I don't feel completely competent as a, as a therapist in the Burns ward.

Participants described working with patients with burn injuries as being "*traumatic*", "*intimidating*" and a "*hurdle*" (P11) to overcome. They expressed initially feeling overwhelmed and distressed. They described that often when working in the burn injury context they lacked confidence, were unsure, and described certain cases and scenarios as emotionally difficult to deal with:

Participant 11: No, I think that with burns, I think at first it is very, it's very scary and I find that it is intimidating because I think it's got this reputation of 'what do you do? What is our role?'. It, it looks scary, which it does, and I don't think you ever become desensitized to it because like of exposure.

The quotation below further illustrates how difficult these cases can be from an SLPs perspective, predominantly in the beginning when there is limited understanding of the condition. Those who work within this field need to be resilient and overcome the challenges of the complexity of the burn injury, but also learn to cope with the disfigurement and trauma cases:

Participant 7: Confidence and I think I've also learned a lot about understanding which areas to prioritize when you see a burns patient for the first time. Um, because it is quite overwhelming when you see them the first time.

Counselling of Patients with Burn Injuries.

Another common element that proved challenging to SLPs was patient counselling. As described in the literature review, there are types of counselling that an SLP working with patients with burn injuries would need to be skilled in. Participants felt that they were inadequately equipped with the skills and knowledge needed for counselling. Participants felt that they had poor knowledge of the condition, treatments, or outcomes and therefore, did not feel confident to engage in informational counselling. Counselling is an essential component of comprehensive service delivery and SLPs had to develop new skills to counsel patients and families. Occasionally, SLPs found themselves counselling for more than just educational purposes, but also for emotional matters, because burn injuries are often compounded by

significant circumstantial and situational trauma or psychological factors. SLPs sometimes faced challenges in dealing with more personal adjustment counselling to proceed with management or because of the contextual barriers to the SA healthcare system, as previously mentioned, such as not having the appropriate social worker or staff available to counsel the patient or their family.

These psychological and now physical limitations affected the patient's response and motivation towards treatment, which was another element of practice management that needed to be refined by SLPs working in this area. Participants felt that there was a call for greater empathy and better counselling that influenced management because multiple components can be co-occurring. Participants felt that over time this was an enhanced skill and an area of practice developed when working with patients with burn injuries. The practice was created here as SLPs became more aware that these patients are cases and that SLPs had to assume a role beyond that of the norm:

Participant 1: […] whatever burn it was, but then it, it comes with the, the psychological elements of what the patient's going through. And if you can't empathise with that or you can't help them push through that to try rehab, then everyone's gonna get nowhere. So, the management plan, I feel stays the same, I'm still gonna do the same therapy. It's the way I approach the situation and help the patient approach the situation.

Participants suggested that an SLP management plan can be the same, but with these patients' there are additional elements of confidence, knowledge created in terms of patient awareness, and effective counselling skills with an informed understanding of burn injuries. They felt that these elements were a must for effective treatment and management. Patients with burn injuries are not only medically high-risk, complex patients, but they are also emotionally vulnerable. This needs to be addressed and there is a lot of psychological processing and time needed on the patients' side, for them to come to terms with their new reality, post the burn injury. The quote below highlights that SLPs need to address all the elements as a patient needs time to process their emotions otherwise it can affect clinical outcomes:

Participant 2: It [patients psychological and emotional state] can affect the outcomes and it can be quite frustrating as the speech therapist, because you know how well they can do or could do, or you feel like they can do better and yet they're not. And it's, it's quite frustrating cause you in a situation where you feel like you want to do more for them, but at the end of the day, you can only do so much. […], If they're not in a space where they're willing to do it, you know, they're not going to improve and that can be quite challenging. I think when working with the population.

The opinion expressed below appeared to be a common link among SLPs working in burns and also showed crossover between themes. The hospital context and the patient itself play a role in the development of practice and knowledge growth for SLPs treating patients with burn injuries. The participants tried to explain that burn injury management potentially requires even more buy-in and motivation from patients and families than for other conditions. There potentially needs to be a greater focus on psychological and counselling aspects in burn injury management compared to other conditions:

Participant 8: Perfect. So, I think with the setting that you [the SLP] work in, so I think one aspect is obviously the patient itself, um, and the condition they have and the, the degree of burns they have and things like that. But I think another challenging aspect would be the context that we are in. So, a lot of the patients that we see, and I'm thinking of one specific by example, um, the social con, um, context or the social circumstances also affect the patient a lot. So like family wise. For example, you're trying to do therapy or you're trying to get to a certain point, but if there's no buy-in from the family, they're not understanding your role and where you're coming from. It's kind of very difficult to progress in any way, and that's just like a very big barrier or challenge to therapy and to providing a service.

Reflection:

Through the results of theme one it is apparent that this section reveals both knowledge and skills that are required when treating patients with burns injuries. The participants referenced myofascial release, tracheostomy management and one participant went on to further mention

CPR. There appears to be both clinical skills elements as well as knowledge highlighted. While this research literature, theoretical framework and questioning only sought to examine the means as to how knowledge has been created in burn injury management, it is important to highlight that knowledge goes hand-in-hand clinical skills. For future research there is a potential to examine how knowledge and skills manifest with managing complex patients such a those with burn injuries.

THEME 2: Clinical practice develops through interactions between dynamic SLP teams and the MDT.

MDT and teamwork are known to be crucial components of patient management and learning in the hospital environment. This is evident literature and was confirmed in the results of this study. In this section, the need for and the role MDT and SLP teams play in the development of practice will be discussed. This theme was expressed in all interviews conducted and emphasises the benefits of MDT work. Participants considered the MDT to include the treating doctors, nurses, and other allied healthcare members who were all working with the same patients that presented with burn injuries or who worked within the same burn unit. This theme explored how practice is developed through the knowledge that is gained from the advice and experience of the MDT and SLP teams. This knowledge was transferred in meetings, ward rounds, discussions, and when co-treating patients. Various subthemes that

emerged and literature that was reinforced included, the need for an MDT, decision-making, and collaboration, supporting and dynamic SLP teams. Participants expressed that the ability to learn from others and feel comfortable enough within the MDT was an influencing motivation behind wanting to treat patients with burn injuries. The MDT and SLP teams were the facilitating factor behind how SLPs learnt about the burn injury condition. Participants suggested that dynamic SLP teams were those who took it upon themselves to strive for continuous quality progress, development of patient care, and SLP training. This was to enhance the management provided by SLPs within that team. SLP teams that were dynamic and focused on improving practice or helping one another, showed to encourage practice development.

The need for an MDT.

Participants relied heavily on members of the MDT to gain an understanding of the burn injury condition; particularly, in the absence of explicit training, protocols, and EBP. Participants felt that the MDT and SLP colleagues who had acquired more experience working with patients with burn injuries, were a vital component to their overall confidence and growth in knowledge for management. The participants below reinforced needing the MDT members' knowledge and guidance to better understand the condition of the burn which influenced their overall clinical practice:

Participant 7: I um, definitely have encountered things where I dunno what to do and then, um, I've learned from my colleagues and the MDT. So, I would say multidisciplinary education or interdisciplinary teamwork.

Participant 6: I called in more of the specialists, so I got the ENT involved. I got, I spoke to, you know, the intensive care. I spoke to the physio mm-hmm. and, and it was kind of like a multidisciplinary approach.

There is a strong need for the MDT. The participants below emphasised how management focuses on the whole patient and thus the whole team needs to be involved and not treated in isolation. They express that learning through the experiences of others, who are more specialised in the field, provides greater understanding and enhances solutions. It reinforces the need for an MDT when treating diverse patients with burn injuries as it facilitates knowledge creation and practice development:

Participant 9: I think spending time in, in the burn's unit, um, with the nurses and the other professionals and learning about burns holistically, like understanding how the skin grafts work, how the contractors work, how the different professionals, I mean even like the chest physio is different. Um, I think that really helps give you an overall idea because yeah, I mean, I really enjoyed it, like I said to before.

Participant 4: I think, yeah, that was definitely one of the, the wards or units where I'd say working in the team was actually more productive or, you know, like cohesive or where it actually happened a bit better.

Additionally, SLPs' involvement was hospital-setting-dependent and individual SLP-dependent. This is further explored and mentioned later in theme four which examines the development of practice being influenced by the healthcare context and theme five which examines individual SLP personality differences. Some SLPs sought greater engagement with members of the MDT to learn and initiated the MDT and SLP team interactions. It highlighted that doctors, nurses, and other members of the MDT were aware that SLPs had a limited understanding of the burn injury condition, especially concerning contracture management. SLP participants admitted that these were opportunities to ask questions, particularly since most members working in that environment had experience and a bank of burn injury knowledge which SLPs did not. Some SLPs were in hospitals or units that had established ward rounds and patient meeting discussions. These were a part of the standard practice at the hospital to ensure comprehensive patient treatment. SLPs were automatically included in the teamwork; however, the extent of their learning and involvement was left up to them to take the initiative, establish rapport with members, learn terminology, and be active members of the team. Although, these were set up to facilitate greater MDT work and did provide a foundation for learning and problem-solving with other MDT members.

Decision-making and Management Collaboration.

SLPs reported that clinical decisions and management plans were often discussed with the help of colleagues or other allied healthcare members, due to their lack of experience or knowledge to treat patients with burn injuries. They felt it best to go through ideas of management with others who had more exposure with these patients and could provide different perspectives, to develop clinical expertise and deliver effective management. The participants below described how MDT collaboration helped influence their decision-making and management plans:

Participant 8 when probed further on what influenced decisions for management: *I would definitely say from other speech therapists. Through their experiences, um, through their knowledge and what they feel is best. Um, and then in MDT as well, because they come from a different perspective, um, in terms of readiness. And sometimes they even see the patients before us for a few weeks even before we get the referral. So, they kind of know where the patients are at so they can provide insights.*

Participant 10: You can be dynamic and you can work it out, but sometimes like you need that experience and that exposure to know exactly what to do with the complex people.

Supportive and Dynamic MDTs and SLP teams.

All participants suggested that co-treating of patients helped increase their confidence in the assessment and management of patients with burn injuries. Participants reported that it assisted them in developing key skills and experiences they would have otherwise not gained or been exposed to. Co-treating of patients was when SLPs worked with other SLPs to treat the same patient and it also occurred when SLPs treated the same patient, at the same time with other healthcare practitioners (such as occupational therapists (OTs), nurses, physiotherapists (PT)). Yet, each healthcare practitioner continued to work within their scope of practice. Since the cases involving burns were considered more complex, therapists would ask for more help from the MDT and they were more willing to give ideas and assistance, based on the type of burn injury case presented. They felt more supported in SLP teams that were willing to co-treat or have discussions to try new speech therapy-based management options and develop new practice methods. The MDT and SLP teams were shown to be important facilitator for practice development highlighted in the quotations below. Additionally, one participant mentioned that having a good SLP team and MDT motivated them to work with the patients to improve general burn injury management practices. It also motivated them to ask questions and seek knowledge from others.

Participant 8: I think cases where I felt a lot more confident is when I was co-treating a patient with a therapist that was a lot more experienced.

Participant 4: Um, definitely I would say, um, asking a more like senior, more experienced therapist, to assist with assessments or management or give their input as well. Uh, maybe, you know, co-treat the patient just to kind of learn from them because they, you know, have more experience, kind of, would better know what to do. But then also I think asking questions or like, um, working with the doctors or the OTs or whoever was also involved with the patient just to see.

Overall this theme confirmed that MDT work contributes to a greater understanding of the condition, helped participants create knowledge of assessment and management, and develop skills for clinical practice. It highlighted the importance of and need for progressive SLP teams as the support gained and the willingness to work together to find solutions was an essential part of developing practice for working with patients with burn injuries. SLP teams that are dynamic and open to new ways of learning, growing, and practicing enhanced SLP knowledge and encourage environments of clinical learning. This also includes having support and good mentorship as well as discussions and collaboration with the MDT team which increase confidence and understanding of ways to treat patients with burn injuries.

THEME 3: Clinical practice develops through the application of cognitive phenomena and generic SLP knowledge.

Cognitive phenomena were linked to elements found in the theoretical framework and these appeared to help SLPs develop practice and create knowledge during patient treatment. These notions were said to underpin clinical expertise and skills that assist with the development of clinical practice for individual healthcare practitioners. Through the interviews, it was evident that multiple cognitive phenomena are at work when developing clinical expertise and creating knowledge.

The cognitive phenomena that were expressed by participants included intuition, clinical judgement, decision-making, reasoning, and self-reflective awareness abilities such as understanding one's strengths and weaknesses. These phenomena will be unpacked in the subtheme sections below. The participants suggested that the use and development of these cognitive phenomena are imperative, especially in the absence of explicit guidelines, but that some generic SLP knowledge can be transferred across clinical areas. Regardless of the type of patient condition the gold standard of assessment and treatment for speech therapy can be applied in some cases. Generic SLP knowledge can also be used to help facilitate the development of management goals and outcome measures, which can be applied across an array of patients, but often this is not enough to assess, manage and develop goals for patients with burns injuries. Thus, the cognitive phenomena are then used to develop appropriate

practice. The subthemes that emerged included: the use of intuition in the management of patients with burn injuries, the cognitive phenomena of clinical judgement, and generic SLP knowledge and its link to cognitive phenomena in treating patients with burn injuries.

The use of Intuition in Management of Patients with Burn Injuries.

Clinical intuition as spoken about in the literature review, was reinforced by participants as they reported using intuitive components within their assessment and management of patients with burn injuries. Participants explained how in moments of treatment uncertainty, the lack of explicit knowledge about burn injury management forced them to draw on other elements, such as intuition and clinical judgement to come up with solutions. Instinctively SLPs knew they had a role to play in an area of management, but were not always certain of the management going forward. In the absence of guidelines, SLPs used intuition as part of the foundation for their assessment and treatment plan. This intuition was used to better understand the burn injury condition and adjust the treatment approach.

The thoughts of the participants below explain using intuition through the stages of their management plan. When expectations of patient progress were not being met or novel situations such as skin grafting were performed on patients, SLPs used their intuition to try to understand what to do next, and how to alter their management plan to treat the patient.

Participant 6: And I remember being very much in that situation, relying intuitively or using my intuition. Yeah. Intuitively I knew that there was something wrong, um, but I could not figure out what it was.

Participant 4: Yes, definitely multiple times. Um, yeah, I can literally recall like specific names and stuff of situations where I had no idea what was happening. Um, but obviously knew something, something was up, you know, something had to be done. Um, just not sure where to start or where to go from there.

Furthermore, both these quotes show that participants could use and apply intuition to their cases, but that this could only help them to a certain extent, possibly due to their lack of knowledge in this area of management and the complexity of the burn injury condition. The participants were hindered in their progress and after a certain point did not know what to do, to help their patients with burn injuries, but understood intuitively that something still needed to be done.

Another commonality among the participants was relying on intuition to know what a patient's medical state was, particularly considering the fluctuating nature of the condition of the burn. From the below, it appears that participants relied on their intuition in terms of figuring out what to do to treat the patient or how to develop an appropriate management

plan. They also referred to intuitively knowing that there was something (P6) ‘wrong’ - essentially the patient's current medical state fluctuations were inconsistent and SLPs could use their intuition to identify when another fluctuation would occur. There appeared to be something unsure or unsettling in terms of the patient's diagnosis or condition. Participants below reported that often according to protocol the patients' state would not be for active management; however, intuitively they knew that some type of management needed to be completed (for example orofacial contracture management), even if the patient was intubated, unconscious or unaware. This quotes also speak to a level of reflective practice being executed here which is explored further in theme 5.

Participant 4: I think a lot of the times it also happens the way you kind of get there, the patient's intubated or whatever, and you kind of think they may be not for active management due to the [medical] state. But what you kind of need to also go on your own intuition … but I think, yeah, having that intuition and observation and judging from your own point of view as well to determine, you know, maybe it really is necessary to intervene at a specific point for some patients.

Moreover, the overall patient's medical condition was not aligned with the management plan and intervention progress provided by the SLP. Participant 6 above specifically speaks on patient progress. This participant relied on intuition when proceeding with management to ensure better patient-centered care and this reinforced the idea that cognitive phenomena

influence the development of clinical expertise, practice, and knowledge of patient condition. It also appeared that some SLPs had an element of confidence in themselves to trust and use their intuition in a clinical setting, as seen in Participant 1's quotation below. Similar to the cognitive-debias skills spoken of in the literature review, some SLPs were able to reflect on challenges and errors of treatment. Confidence and intuition appeared to be linked in this study. Those participants who felt confident in managing patients with burn injuries appeared to also have greater confidence in their intuitive decision-making skills. Intuition and confidence appeared to be joined together. Participants who made use of their intuition appeared to have a certain level of confidence in their intuitive abilities and thus they used their intuition to understand the patient's medical condition and intuitively make decisions and use skills to achieve a satisfactory level of patient care.

Participant 1: Um, I think it's more of a confidence thing more than knowing what to do because you, you gotta trust your gut sometimes.

<u>The use of Clinical Judgement.</u>

The cognitive phenomena of clinical judgement or reasoning were expressed by most participants when asked to discuss cases they had found easy or difficult. Participants suggested that their clinical judgment developed over time with more exposure to patients, but that it was also enhanced with the MDT and that most importantly, clinical judgement had a foundation of knowing the basics of the burn injury condition and its' intervention.

Participant 2's quote illustrates that SLPs used clinical reasoning skills to be able to recognise challenges in management and intervene immediately, to overcome these difficulties. Clinical judgment influenced the development of clinical practice for patients with burn injuries:

Participant 2: I think I just used my clinical judgment. Um, I think, you know, I generally speaking, I would always start with, um, the contracture management, because if you don't sort that out can lead to permanent contracture, which will cause all sorts of problems with communication and swallowing later on down the line. Um, but at the same time, dysphasia is equally as important in terms of their medical managements and getting them to a point where they can swallow safely and, and be on an oral diet.

The subjectivity of the cognitive phenomenon of clinical judgement was noted in the literature review and reinforced by the interviews as it differed between healthcare practitioners, but it was also a key component in creating knowledge of assessment and management of patients with burn injuries. When discussing clinical outcomes most participants based the effectiveness of the treatment techniques they use and their skills on an individual patient's progress, but often used their subjective clinical expertise, clinical judgement, and the knowledge they created through dynamic assessment, to evaluate and

develop expectations for management outcomes and adjust treatment approaches where necessary:

Participant 7: I really rely a lot on my clinical expertise, my clinical opinion of how the patient is progressing and what I see clinically.

The importance of and need for the MDT has already been discussed; however, clinical judgment promoted by the MDT was noted in participants' descriptions of their experiences in treating patients. Clinical reasoning and expertise were the main focus in MDT sessions as combining therapy plans through discussions called for greater problem-solving as a team. As stated previously problem solving was an area where the themes of the MDT and cognitive phenomena overlapped. In the absence of explicit guidelines and EBP SLP therapists used their clinical judgement while working within the MDT to treat patients holistically:

Participant 11: I think using clinical judgment, definitely, um, knowing the basics, so using clinical judgment, but definitely speaking to other therapists who had worked in the area prior to myself, I was able, able to use that information, the information that I read up and clinical, my clinical judgment.

Participant 6: it was kind of like a multidisciplinary approach that allowed us to figure out.

Combining Generic SLP knowledge and Cognitive Phenomena while Treating Patients with Burn Injuries.

Essentially, participants understood that foundational generic SLP knowledge is, as the literature says, the gold standard that healthcare practitioners should aspire to use in all assessments and throughout the management journey of patients (Dwight, 2022). Generic SLP knowledge is needed for quality and effective patient treatment, but for patients with burn injuries in the absence of explicit training, protocols, and guidelines generic SLP knowledge does not form the foundation of all clinical practice. While all participants acknowledged the value it holds and how generic SLP knowledge can be transferable among patient conditions; admittedly, there is room for improvement and development of EPB, standardised guidelines, or practice for the treatment of patients with burn injuries. Participants were specifically asked what aspects of undergraduate or general training helped them in their assessment and management of patients with burn injuries. The interview results showed that some aspects of EBP from other parts of SLP's undergraduate qualifications such as dysphagia influenced clinician's management and made certain components of treating a patient's condition less demanding.

However, having a basic understanding did not make healthcare practitioners more confident to treat patients with burn injuries despite the fact that all the healthcare practitioners admitted that some generic SLP knowledge was transferable. The kinds of traditional SLP

practice that were transferable to burn injury management included blue dye assessments and some aspects of dysphagia management, AAC communication, for those with neurological impairments some aphasia management. Participant 2 below also felt; although, they knew some generic SLP knowledge in other areas of speech therapy, they still needed to problem solve, take risks or consider more factors than what the generic SLP knowledge or procedural management solutions would usually suggest when providing care to someone with burns.

Participant 2: "Um, you know, so yeah, I guess in the beginning I might have been treating incorrectly without knowing, like, not knowing that this patient would actually need more intensive rehab than this patient yeah [pause] or frequent rehab. Um, and I think that would've affect the outcomes."

Participant 1 below explains assessing and managing a patient with burn injury in terms of dysphagia. The participant expresses the EBP is the gold standard for assessing and managing dysphagia which is learnt at an undergraduate level, but sometimes this does not always apply to the patients and thus SLPs should combine the generic SLP knowledge as well as their cognitive phenomena in order to come up with management solutions for patients.

Participant 1: Um, no, the management plan works for some patients and it doesn't work for others. So, you've gotta take what you know is evidence based. Yes, but you also gotta have a go and see if that even works, maybe a little better.

Participant 8 below reaffirms and provides a key statement that links this idea to what was discussed in theme one of the results which highlighted the experience of working with burns patients. It reiterates how working with patients with burn injuries is unfamiliar territory, despite there being overlap with generic foundational SLP knowledge from areas such as dysphagia.

Participant 8: It's very new and very strange. So, you kind of learn on the ground, um, from people around you. So, you draw on all of these different aspects [participant referring to clinical judgement, the MDT, senior SLPs and experience] to try and equip yourself to do the best thing for the patient clinically with good reasoning.

Cognitive phenomena and learning across a continuum where generic SLP knowledge intertwines with clinical judgment, decision-making, and the risk of using intuition and experience, appeared to play a significant role in the development of SLPs' clinical skills or practice as well as their overall confidence in treating patients with burn injuries. SLPs and potentially healthcare practitioners in general who appeared to apply cognitive phenomena as part of their approach to treatment; were able to recognise the challenges and complexities of working with patients with burn injuries and appeared to develop the necessary skills to manage patients effectively and create knowledge and clinical skills to deliver care.

THEME 4: The Development of Clinical Practice for Burn Injuries Management is Context Dependent.

Context-dependent factors refer to the types of hospitals SLPs gained experience in, the number of patients with burn injuries at the hospital, what stage of recovery for treatment of burn injuries therapists were exposed to, and other factors such as how big the SLP team is, what resources they had access to, languages they were exposed to and how frequently they had this exposure. The subthemes included: learning through the South African healthcare system, SLP management in the South African healthcare system, Private Vs Public hospital settings, hospital settings, and MDT/SLP Setup. These themes indicate how the context in which an SLP works shapes the development of practice in that setting. Healthcare practitioners are aware that our experience, exposure, and the hospital environment all influence the way that we manage and treat patients going forward. Hence, the development of clinical practice will differ among healthcare practitioners based on their experience and the contextual factors of their hospital placement.

<u>Learning in the context of the South African Healthcare System.</u>

Participants admitted that one's hospital placements during both undergraduate studies and while practicing as a qualified healthcare practitioner influenced their confidence and knowledge base, for assessment and management of patients with burn injuries. Those who had greater exposure to various kinds of conditions in previous years felt more confident to

try to treat patients with burn injuries - in more than just dysphagia and communication such as areas of voice and contracture management. Participants were also able to acknowledge that the South African healthcare system can hinder the development of practice because of its structural set-up, lack of resources, and poor continuity of patients, especially in the absence of explicit guidelines and protocols. The impact of not learning EBP for the burn injury condition at the undergraduate level for burn injuries (such as grafting and healing process, inhalation burn injury management to name a few) means it is not standardised across SLP graduates. Thus, knowledge gained and created as an SLP treating patients with burn injuries is dependent on on-site exposure and learning from the hospitals themselves. This ultimately influences SLP development of clinical practice.

Participant 8 below gives a clear indication of how she was exposed to and able to learn in context, which equipped her to manage patients with burn injuries. Participant 8 further acknowledged the South African healthcare system and how these impacts management, particularly when there is a lack of undergraduate training in this area.

Participant 8: And I feel like that's a good model of learning and that's how you come to learn a lot more about these patients in this specific population, um, and also just getting information from the site you're in also equips you with a lot of knowledge, I think. And yes, I feel like it's very context dependent.

Participant 8: As an undergrad when you're not really exposed [to burns] that much and when you're going into the setting, um, it just sometimes can feel very daunting or challenging because it's so new and it's so strange. And it can also be overwhelming, especially as a new therapist where your knowledge base isn't that great. So, um, I feel like at an undergrad level, maybe it should be something we should be exposed to, just considering the South African context and the kinds of patients we see. And we know that burn's prevalence is high in South Africa, especially during the winter months.., So I feel, in our setting, it's important to equip speech therapists, especially, um, graduating speech therapists with this kind of knowledge just to prepare them better to the settings they're going into. So, for example, a hospital I worked at did have a, specialised burns unit. But, um, other hospitals, especially rural hospitals, a small hospital still do see burns. Patients might not be in a designated unit, but they're still there. So, um, they might come across them still. So, it's important to know, um, what to do, why you're doing what you're doing, um, and just to advocate for this, um, population.

It is important to reiterate that participants continued to comment on burn injury management as being a different, new, and unfamiliar field of practice for SLPs due to the lack of knowledge and guidelines, but acknowledging that learning from the hospital setting and SLP team was beneficial in developing practice and creating knowledge such as participant 1 expressed below:

Participant 1: I was very lucky at where I was placed as a fourth year. And I got very good mentorship and clinical experience, that made sense, theoretically, I can't find any of that in my notes.

Essentially, this participant shared their experience of mentorship and clinical practice training in a private healthcare setting during their fourth-year practical. This experience allowed them to gain a better understanding of patient treatment for burn injuries. With the help of an experienced SLP, they were able to make sense of the new knowledge gained through practical application of concepts and theoretical guidance.

SLP burn injuries management in the South African healthcare system.

The participants discussed the quality of patient care in South African healthcare facilities, particularly for patients with burn injuries in comparison to Global North countries. The literature indicates that these facilities are often understaffed, overcrowded, and lacking in resources. SLPs noted that patients are treated for acute purposes and then discharged without proper follow-up care or adjustments to their new lifestyle. This lack of continuity of care impacts the development of clinical skills for SLPs as long-term treatment is often not followed through, and patients do not have access to SLP specialists. This contextually

dependent experience impacts the SLPs' clinical development during their undergraduate and community service.

Participant 2: … but the thing is that it doesn't work here because over there [referencing Global North countries] if you're not experienced in burns you just transfer the patients to those therapists that are specialised into the field or that facility because healthcare is so accessible, and they have access to treatments and equipment that we do not have. Here you're generally treated at your local hospital or clinic whether they have experience, equipment or even a therapist in burns or not and the long-term rehab is always at local facilities so it's really not ideal.

Above is another illustration of the general feeling amongst the majority of participants that burn injury management requires something more than just what was taught at an undergraduate level or generic SLP knowledge. The quotation below further illustrates the point of specialised care especially when it comes to the post-acute phase of rehabilitation for patients with burn injuries. Patients are often discharged once stable, but there is more to be done. The rehabilitation journey requires continuity of care which the South African healthcare system does not always account for. Long-term rehabilitation (examples include educative and supportive counselling or facial scaring management) appears to not always be followed through due to the healthcare context SLPs find themselves and/or because SLPs have not been equipped with the knowledge to continue with the care.

Paediatric patients living with burn injuries are a lifelong physical impairment that will change and develop as the child ages. This participant below suggests it requires management over a longer period. There is more to be done for those who are discharged, and this does not account for those patients who are unable to attend regular check-ups. The participant poses a question of patient advocacy with regards to SLPs treating patients with burn injuries post-acute discharge or dysphagia management in the context of the South African healthcare system what further management, support or counselling for patients with burn injuries is being done post discharge:

Participant 11: I just think that there's a lot more work from a speech therapy view from a medical point of view that we need to be doing for our kids, and I think not just looking at in an acute setting and looking at, okay, the child's been burned. I'm gonna do facial stretches, feed them and let them be gone, but what are we doing further for these kids? And that doesn't end. When they discharge from the hospital and once they've seen an OPD [Out Patient Department], what more are we doing for our kids.

Private vs Public Hospital Settings.

Two SLPs who have worked in the private sector were able to provide valuable insight into the reported differences that exist between the private and public healthcare settings within South Africa when it comes to providing management for patients with burn injuries. These participants expressed that they had a greater number of physical resources and access to

more equipment (newer or more specialised) and resources compared to what they had experienced in the public hospital setting. Examples of these included x-rays, video fluoroscopies, FEES, mouth measures, myofascial release, AAC technology boards, Vital Stim, and certain creams for numbing and scaring. That access meant they were able to explore various learning opportunities to develop practice and treat patients in different ways. There were also more readily available nurses and doctors treating the patients with greater time for each patient. Because of these differences, it can be deduced that knowledge and practice that is created in a private healthcare setting will differ from that of a public healthcare setting, as highlighted by Participant 1:

Participant 1: I got very lucky that I was tertiary yeah … But, um, I got very, very lucky that my HOD [Head of Department] was extremely experienced in, acute therapy. And my actual mentor who was just happened to be working at the hospital, had a huge passion for ENT related work. my fourth year prac [practical], I was placed, I was placed privately. Actually, I didn't go to government, my fourth-year speech, adult rotation […], but, um, I got access to brilliant equipment. I got access to barium swallows, whenever I felt like it. I got access to myofascial release. I got exposure to, um, proper, proper MDT work […] that's a luxury to get that kind of exposure in comm-serve. Again, I also got lucky with what kind of patients just arrived in the wards, but I know that if I was placed in a community clinic, there's no ways that I would've had that kind of,. A, have the confidence to, to do it, or B even go to see

them. Cause, we just know how the public healthcare system works, but you never you, you don't see patients regularly. So how are you gonna get that exposure?

The participants expressed that time of discharge was hospital dependent. Private hospitals focus on different levels of care or could prolong a patient stay for further intervention if need be, in comparison to government hospitals where patients are often discharged prematurely. This could be due to a lack of space in the hospital or a greater risk of infection. The participant above alluded to this point and the participants below explored it further. The participants expressed that the facility could determine a lot about the outcome of the patients. These differing outcomes included length of hospital stay, frequency, and duration of treating patients, discharge outcomes that either focused on acute care (where the patient will be considered stable) or long-term care and rehabilitation (where there is a concern for the patient long-term functioning and integration back into society):

Participant 6: That they can continue their rehab at another facility elsewhere. And so that's where, you know, that's kinda the success of our, for us is I suppose. Your, your setting definitely has a role to play in, in what, um, your outcome measures are.

Participant 9: Um, the girl that was trache-ed eventually, she was sent home and I wanted her to come as an out-patient and she like lived in [Lenasia] and it, like, she got so lost in the system. I don't even know where she landed up.

Additionally, Participant 4 explained that the consistency of a single SLP or team of therapists was not always a given in public healthcare facilities so patient handover and follow-through also influenced the development of clinical practice and knowledge of burn injuries for therapists in terms of long-term management. This is possibly due to understaffing in the hospital or poor overall management handover or continuity of patient care. Management is impacted as SLPs treat patients differently and place greater importance on certain areas of management. Those who are inexperienced with burn injuries may not be able to continue with therapy as effectively as those who have worked in the setting for a prolonged period.

Participant 4: I think what maybe made it difficult to start off with is that, if I remember correctly, he was, um, assessed by a different therapist and then kind of handed over. So yeah, it's always a bit difficult if you have to step in and start seeing someone that you didn't, you know, see from, from the get go.

Hospital Setting and MDT/SLP Setup.

SLPs' experiences of working with patients with burn injuries highlighted the different types of MDT and senior SLP structures, as well as the resources and availability of time that SLPs were exposed to through their undergraduate and professional years. It is important to

comment here that SLP's involvement with the MDT was hospital and clinical setting dependent, which is why it has been included under this context section. This overlap enhances the ideas of the previous theme, but I have separated it out in order to focused on how the context of the team influences practice development and not necessarily the members themselves. Some SLPs sought greater engagement with members of the MDT to learn and initiated the MDT and SLP team interactions. Others had hospitals and units that had ward rounds and patient meeting discussions in place as part of the standard practice for the hospital to ensure compressive patient service delivery. This was hospital and context-specific, where in some instances hospitals allowed and encouraged MDT work.

Those participants who had MDTs and SLP teams with structures in place for communication and teamwork had the time to encourage therapists to treat a variety of patients and learn from the team as a whole. Participants (such as Participant 10) who had a poor context in terms of MDT assistance, resources, time, and exposure in this area felt that it hindered their progress in treating patients and contributing to further knowledge in burn injury patient treatment:

Participant 10: Mm- mm Um, so definitely had more like discussions in case presentations with colleagues or with speech therapists about these patients. Um, and while we tried to reach out to other MDT members, like the surgeons. Um, I wouldn't say communication was very effective.

Later during the same interview Participant 10 admitted that the MDT work was not ideal in this setting, but her colleague and team were able to provide her with enough support to combat the lack of MDT communication and structure. She was able to acknowledge that her management and confidence to handle patients with burn injuries would have differed without the hospital SLP team and colleagues helping her.

Participant 10 in reference to her community service year which involved treating burns patients with no experience: *Yeah, sucks, a hundred percent. I was actually literally just thinking that like, thank goodness I had this colleague who had done some training through Bara and knew something about burn's patients, because otherwise, I don't know what I would've done necessarily. Um, yeah, that's actually really scary. People who aren't working in a dynamic team, they don't have anybody to rely on.*

Overall, the development of practice and knowledge creation depended on the healthcare practitioners' hospital context. Factors outside of the SLP's control influenced the areas they were exposed to, the training they received, the equipment they had access to, and how motivated or encouraged they were to treat these types of patients. Fundamentally, the knowledge created shaped how practice for treating patients with burn injuries was developed for individual SLPs and how practice differs among SLPs because of the context in which

they had received experience. This is also dependent on ‘luck of the draw’ as the hospitals one trains at as a student as well as in ones community services year placements is randomly assigned and generated.

THEME 5: Individual SLP’s Psychological and Personality Factors Influence the Development of Clinical Practice in Burn Injuries Management.

This theme showed a contrast of opinions in participants' responses. The core of this theme pinpoints reasons as to whether SLPs continued growing in knowledge and development of practice when treating patients with burn injuries or not. Some participants working with patients with burn injuries found the experience valuable and learnt a great deal, but did not see themselves continuing or contributing to knowledge or practical treatment in the area. Other participants in contrast seemed to have a passion, and drive and actively wanted to continue working with patients with burn injuries.

These participants appeared at the forefront of creating treatment plans, protocols and using these as foundations for training and practice development. Despite understanding the (P11) “scary reputation” and “intimidation (P11)” associated with patients with burn injuries, they sought to become actively involved in pursuing development of practice for this field. This is possibly due to an internal desire or intrinsic motivation to help. Certain SLPs' personality traits appeared to enable them to take on the unfamiliar and somewhat risky management of

patients with burn injuries. This was a strong influencing factor which appeared to influence whether they continued to work primarily with patients with burn injuries. It also influenced how they approached clinical practice in an unfamiliar setting with an unfamiliar patient condition.

Some participants expressed that their reasoning for no longer working with burns patients with burn injuries and/ or in a public healthcare facility was because of the demanding workload, family, and financial commitments and constraints. However, these participants said they would go back and work with these patients if it were not for these barriers. These participants felt that working in a public healthcare facility with limitations of resources, staff, time explained in the literature review made it more difficult to manage patients with burn injuries. This is a significantly contrasting reason to those who no longer worked with this population due to their personal feelings towards treating patients with this condition.

This theme highlighted individual SLPs' self-reflective awareness and intrinsic motivations for working with patients with burn injuries. The subthemes that emerged were personal passion for working with patients with burn injuries, burn injury management as a space for growth and fulfilment and the differences in participants personalities and psychological approaches to managing patients with burn injuries.

It appeared that participants' interests, personality, and approach to growth and life-long learning impacted their willingness or desire to treat patients with burn injuries. Some participants grew a passion for the area and expressed feelings of beneficence and justice for patients with burn injuries. These participants were motivated to go beyond the "overwhelming" experience and the norm or standard practice for their patients. Practice, research, and investigation into the development of clinical skills appeared to be dependent on elements of participants' self-reflective awareness and internal intrinsic core characteristics.

Personal Passion for Working with Patients with Burn Injuries.

Some SLPs who expressed a passion for working with patients with burn injuries explained that their participation in the journey of providing management to patients with burn injuries was of great encouragement and reward to them despite the challenges – especially given the absence of explicit guidelines, compounded by the trauma and risky reputation held towards working with these patients. Those SLPs whose personalities appeared to align with wanting to take on the challenge saw a greater need to provide holistic management for these patients and wished to further develop practice and knowledge in this field. This was not only for the acute stage but through the rehabilitation journey. It appeared that their values were committed to social justice. They were inspired to go beyond the call of duty, despite the fear,

uncertainty, and inherent trauma associated with treating these patients. These SLPs enjoyed the challenge and knew their treatment had a greater impact and effect on these patients.

It appeared that psychologically these participants were able to overcome the "hurdle (P11)", "overwhelming (P6)" feeling, and "trauma (P9)" that often accompanies these patients. These SLPs expressed a sense of empathy for these patients that potentially drove their will to develop or improve practice and create knowledge. It appeared that their psychological and personal attributes enabled them to identify it as an opportunistic challenge for the development of practice and a space to provide better patient-centred care.

Participant 11: […], once you've got over that hurdle in your head [of burn injury management being scary], I think it's not as intimidating as, as it seems, the difference that you're making is like a huge difference. The kids are with you for a long time. You get to see that progress. You get to work with them. You get to just establish relationships with them. And I just think that there's a lot more work from a speech therapy view, from a medical point of view that we need to be doing for our kids. And I think not just looking at in an acute setting and looking at, okay, the child's been burned. I'm gonna do facial stretches, feed them and let them be gone. But what are we doing further for these kids? […] So, I think we need to be doing more in terms of trauma for these children, but I don't think burns is as scary as everyone thinks it is.

Participant 9: Um, yeah. And then when I actually went into burns, I loved it. I must tell you that I really enjoyed my time, time in burns. I found it very rewarding and very challenging. And I mean, you really are making a significant difference, difference in these people's lives.

Burns Injury Management as a Space for Growth and Fulfilment.

SLPs who pursued treating patients with burn injuries also felt that the types of cases were conducive to learning and growth in clinical skills. Participants saw it as facilitating growth in confidence and knowledge as a therapist. In addition, some SLPs found it motivational to take on the challenge of treating these patients and enjoyed the problem-solving aspect and complexity of the work. The burn injury management environment presented itself as a space and a place for exploration and practice development. As Participant 1 admits below, some participants expressed a need for a challenge and it was a driving force for personal achievement as a therapist.

Participant 1: […] It was more intrinsic motivation to, to get this right. More for your own ego sometimes than the sake of the patient. And I know that sounds really weird, but you wanna get it right? Yes, um, you wanna treat the patients as best as possible, but it does feel really good when something works because you figured it out. So, a lot of that is like motivation.

The below quote by Participant 9 provides a good description of the general sense among participants who continued work with patients with burn injuries. It was interesting to note that burn injury management, while risky, also stretched therapists in terms of creativity and problem-solving (as highlighted in the cognitive phenomena and MDT themes). This is potentially due to it being a much more challenging area of practice than some other conditions routinely seen by SLPs, but also potentially more fulfilling according to participants.

Participant 9: I found the medical and surgical wards were so restrictive. When I got into burns, I was free to be creative.

It appeared that SLPs who pursued working with patients with burn injuries had a common attitude toward the notion of risk-taking. Participants felt that working with patients with burn injuries meant they had to take on a challenge with a certain amount of risk. This risk was present when providing treatment or utilising new techniques that were problem-solved solutions. In an area where EBP for SLPs is underdeveloped, certain personality traits of the participants appeared to push them to take risks and experiment to develop ways of practicing and figure out how best to manage the patient's condition. These quotes as also speak to a level of reflective practice being executed.

Participant 1: So experimenting works. Experimenting really, really works. […] Um, so, the management plan works for some patients and it doesn't work for others. So, you've gotta

take what you knows evidence based, yes, but you also gotta have a go and see if that even works maybe a little better.

Participant 6: Um, you're doing a lot of kind of educated guesswork, which sounds terrible to say, but it is, it is about risk mitigation and, um, trying to make sure that you are, you're progressing the patient, but without compromising them.

SLPs felt justified and wanted to do more research or trial clinical plans while using their experience from working with these patients to produce documentation and develop practice guidelines for other SLPs to effectively manage patients with burn injuries. SLPs felt it was their duty to create new procedures, produce documentation and be advocates for burn injury intervention. Participants who pursued working with patients with burn injuries found it to be an avenue of exploration of practice because it is an under-researched area for SLPs. Participants pointed out that they were the driving force behind the creation of documents for treating patients with burn injuries, to meet a need for practice and especially one that was context specific. These documents were used for tracking patient progress, record keeping, intervention techniques, standard operating procedure, and assessment of facial burns. These documents were health facility-specific and informed by the experiences and knowledge of generic SLP knowledge and clinical expertise that the SLPs possessed or developed over time while working with these patients:

Participant 6: Yeah, we do have an SOP [Scope of Practice], so a standard operating procedure for trauma burns patients that I helped develop and, and create.

Participant 4: So yeah, from what I know, everything was kind of self-created by the people working with the patients.

Their personal feelings towards growth assisted them to identify patients with burn injuries as an area in need of intervention and they then sought to fulfil that need. Participants admitted to feeling a greater sense of personal fulfilment in this environment because it was conducive to the integration of knowledge, growth, and importantly they were able to help patients achieve outcomes while still exploring practice interventions.

Participant 7: […] So I think that was really cool for me to learn from burns is to know, oh, I actually can do something for these patients. I actually have a role to play. So, I do think that, that burns is a very good area to just, how you can integrate all your knowledge, um, to ensure functional outcomes in a patient where you do not necessarily understand the diagnosis as well.

Differences in Participants' Personalities and Psychological Approaches to Managing Patients with Burns Injuries.

All participants used cognitive phenomena and integrated new knowledge gleaned from other professionals to develop ways of practicing to treat patients with burn injuries. As noted in the comments from the SLPs who are passionate about working in this area. It appeared that those SLP participants are perhaps more self-reflective, have been able to reconcile working with risk, manage the desensitization and overcome their lack of confidence while acknowledging that they do not know everything. There was a distinguishing component between participants who sought to continue to develop practice and those who did not, which appeared to relate to factors within their personality and contributing psychological beliefs and views. Participants that worked with patients with burn injuries, but did not or would not continue further had multiple valid reasons for their stance towards not treating these patients. SLPs who stepped away were arguably acting in an ethically and professionally positive way, in realising their limitations in this field. Participants felt they were not confident or did not have or gain enough expertise in the field to be able to treat patients appropriately. Others much like the participants below, felt that ethically they were not competent enough in the field and could not provide an adequate service. They potentially also could not cope with the trauma associated with working with patient with burns injuries and thought it best to not continue.

Participant 3: Um, so yeah, the overall kind of feeling for me with burns is that, um, I'm not confident and I don't feel completely competent as a, as a therapist in the burns ward. […] I think I grew a little bit, but I wouldn't have called myself completely competent, competent, um, or confident.

Participant 2: [..], I don't feel like it, it developed to where it probably should have been, um, when treating patients like that. So yeah, I just kind of did a standard assessment and I guess it grew a little bit based on what I was seeing and just from kind of my own knowledge and being a speech therapist.

The stark contrast comes through as some SLPs participants position themselves at the forefront of creating knowledge in an unfamiliar area of practice, while others took the stance of not knowing enough or having the appropriate clinical expertise. Participant 10 reflects that despite approaching patients with burns injury management in a manner that utilised a colleague to learn from or work with and conducting additional research; it was not enough to feel confident in providing care for patients with burn injuries.

Participant 10: I feel like I learned what I could from my colleague and I did a bit of self-study until I, I felt a bit more comfy, comfortable and competent seeing these patients. Um, but I don't feel like it's necessarily continued growing in that same trend. It's sort of

plateaued a bit. […] So this is, this isn't just, um, you know, this is a population that deserves a really high level of care. Um, and we are just not in the position to give it."

It appeared that the difference in SLPs' personalities and psychological approach to management was highlighted through this theme. The stark contrast comes through as some SLPs participants that developed a passion for working with patients with burns injuries, discussed in the first subtheme, position themselves at the forefront of creating knowledge in an unfamiliar area of practice, while others noted above took the stance of lacking appropriate clinical expertise. They remained self-reflective and acknowledged their limitations or barriers in offering their services to these patients with burns injuries.

CHAPTER 6: DISCUSSION

Patients presenting with burn injuries are complex to manage, both from a physical and a psychological point of view, and working with them can be an overwhelming and daunting experience for several reasons. The condition itself necessitates a period of desensitization and it deviates significantly from typical clinical practice. It requires a more advanced set of skills involving problem-solving, teamwork, application of existing knowledge, treating a patient holistically, etcetera. Working with patients with burn injuries can be challenging, but it can also provide opportunities for SLPs to develop their skills and expertise, contribute to the development of best practices, new knowledge, and cultivate a culture that creates a meaningful difference in the lives of these patients.

The development of practice is multifactorial. The findings of this study appear to suggest that there are extrinsic and intrinsic factors that influence SLPs' development of clinical practice and knowledge for the treatment of patients with burn injuries in South Africa. There are limited guidelines and protocols for SLPs working in this field, but when met with the unpredictability and limited explicit guidelines or undergraduate training, some SLPs are able to embrace this new challenge. Some SLPs seek to get involved and create new ways of practicing in this field to ensure these patients are provided with holistic quality care and comprehensive service. It appeared that these SLPs' personalities which align with the

exploration and discovery of clinical practice looked to the MDT and dynamic SLP teams to gain knowledge and understanding to treat patients with burn injuries, received mentoring from more experienced practitioners in this field, and worked in a context conducive to encouraging practice in this field. Clinical practice is formed when some SLPs are met with a new challenge, and they use their experience and cognitive phenomena informed by personality and psychological factors to meet the needs of patients with burn injuries. Some SLPs can create new knowledge, draw from, and create expertise within the MDT, and take risks to figure out how to provide optimal care to individual patients with complex sequelae from their burn injury.

Whether an SLP ends up feeling passionate and confident about working in this field or instead chooses to step away seems mediated by several different factors which include the context of practice and experiences gleaned in that context, the availability of an MDT and/or supportive SLP team, the severity of the individual patient's condition and the ability of the SLP to manage that, and personality and psychological factors in the individual SLP. Other SLPs realise the limitations of their experience and skills as well as their lack of confidence in working in this field and may not have had the benefits and support of MDT input. In such instances, they may step away, choosing to leave the management of patients with burn injuries to other therapists.

All SLPs use cognitive phenomena, the MDT, patient condition, and healthcare context to shape their management of patients, but it appeared that those whose personalities align with a passion for this field, the pursuit of knowledge creation, investigation, and care toward patients with burn injuries are at the forefront of practice development. The results alluded to certain intrinsic personality traits and characteristics of SLPs that potentially facilitate the development of clinical practice. As the field continues to evolve, healthcare practitioners need to remain committed to ongoing learning and professional development, to provide the best possible care for their patients. Yes, all cognitive phenomena and the MDT are used to find and problem-solve solutions for patients with burn injuries, but the pursuit of practice development and knowledge creation appears to rely heavily on the individual SLP healthcare practitioners' personality and psychological traits. The SLPs who found a passion and are motivated to innovate and create a practice in the face of uncertainty and provide quality and holistic patient-centred care to patients with burn injuries who need it. This will be explored further in the discussion and supported by literature involving other healthcare professionals.

In this study, the creation of knowledge and the development of clinical practice has been explored through SLP experiences of managing patients with burn injuries. The identified themes have shown various avenues from which SLPs gain clinical skills and create knowledge as well as certain influencing factors that contribute to their development of clinical expertise in this field. Fundamentally, this study sought to better understand how in the absence of

explicit guidelines and undergraduate training clinical practice is created, how the knowledge of these skills is reportedly acquired, and ultimately what factors influence SLPs to venture beyond typical conditions seen, move beyond feelings of apprehension and a lack of confidence and meet the needs of patients with burn injuries. There were a few themes that stood out as fundamental components for SLPs to become confident burns practitioners and these will be explored further.

This discussion will first focus on how a model of practice development for patients with burn injuries and how this model was created. It will explore how the findings of this study compare to those of other studies. Then the discussion will highlight key components of the MDT, cognitive phenomena, and SLPs' personality traits and psychology that play a part in the development of clinical practice for patients with burn injuries.

As referenced in the literature review, research conducted by McCormack et al (2013) examined the foundations of the development of practice for nurses. It focused on practice development and refinement where basic guidelines and EBP are already in place, and nurses are placed in environments that then contribute towards further growth and experiential knowledge (Bradd et al., 2017; Manley & McCormack, 2003; McCormack et al., 2013). The evidence found in these publications provides further confirmation of the extrinsic factors

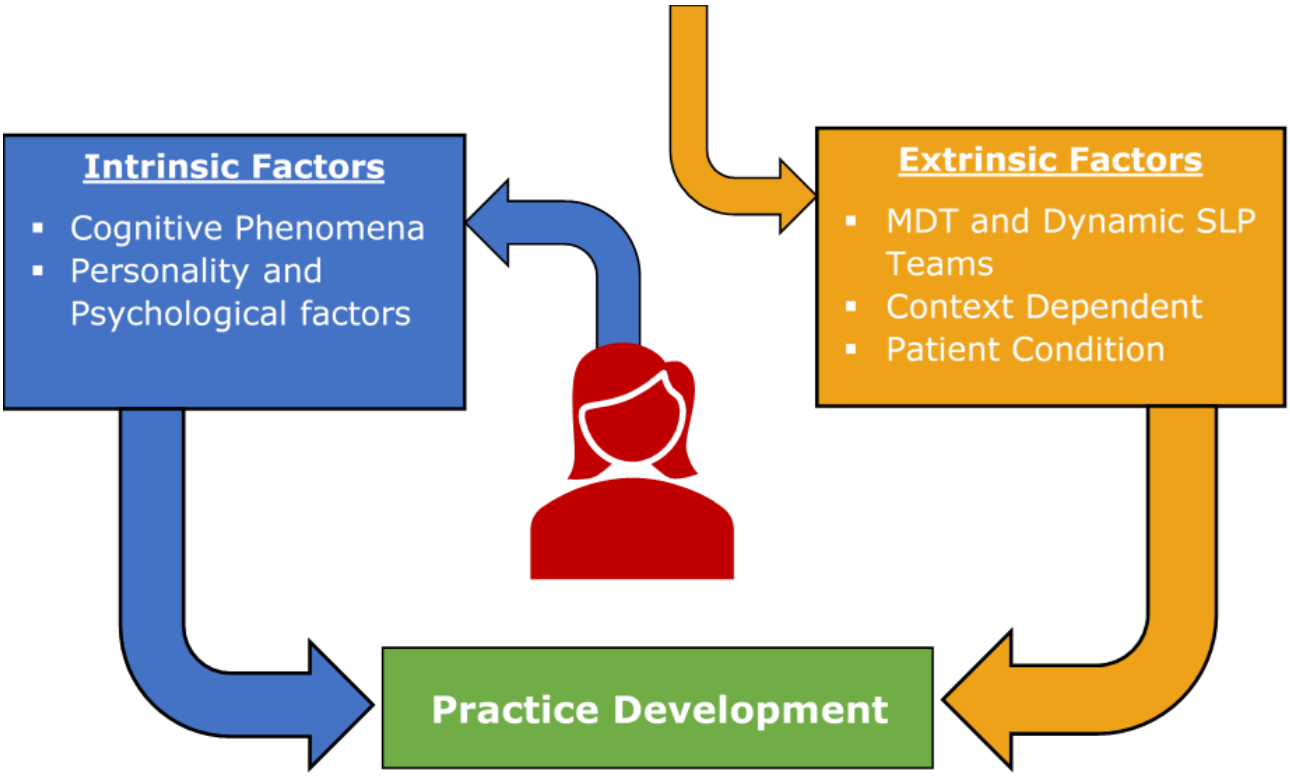
identified in the model below as facilitators of practice development for SLPs treating patients with burn injuries. Although burn injuries are not an epidemic, literature on how practice is developed with limited EBP, guidelines, or explicit training is generally linked to the development of practice in times of crisis or an everchanging and uncertain patient condition or working environment. Hence, this proposed model (Figure 1) includes elements that are potentially consistent extrinsic and intrinsic factors that SLPs and other healthcare practitioners can turn to in times when explicit guidelines are limited to facilitate the development of practice and create knowledge in an unfamiliar area or of practice or for an unfamiliar patient condition.

A Model of Practice Development for SLPs Assessing and Managing Patients with Burn Injuries in South Africa

Clinical practice is a constantly evolving field that relies on the integration of multiple disciplines (the MDT) and the use of advanced cognitive phenomena skills and individual healthcare practitioners' psychological and personal factors. The findings of this study show that practice development in the context of burn injury management does vary depending on the condition of the patient and the context in which healthcare practitioners find themselves working; however, these factors differ across patient and clinical settings. It is necessary to acknowledge all themes that influenced the development of clinical practice through SLPs working with patients with burn injuries. Below is a proposed model used to represent the suggested influencing factors of how practice in this field is mediated through both extrinsic

and intrinsic factors of individual healthcare practitioners. The model (Figure 1) describes the extrinsic factors as those elements outside of the healthcare practitioners'' control, yet each one plays a pivotal role in how healthcare practitioners access and pool together resources to gain clinical expertise and help form and refine their assessment and management experiences in a given area. Additionally, the intrinsic factors link to those clinical skills, personal and psychological elements found within a clinician that help to shape, motivate, and guide their approach to clinical practice.

Figure 1: Model of Practice Development for SLPs Assessing and Managing Patients with Burn Injuries in South Africa.



Additionally, that the sentiments in the responses of participants did not indicate that there was a reciprocal relationship with the arrows represented within the model. The arrows appeared to be unidirectional i.e. Intrinsic and extrinsic factors influence practice development and not visa versa. This discussion confirms that the knowledge and clinical practice related to burn injury patients are shaped by various factors. These include the contexts in which speech-language pathologists (SLPs) work, their relevant experiences, and the individual condition of the patients. However, teamwork within a multidisciplinary team (MDT), using cognitive phenomena and generic SLP knowledge and the personal traits of healthcare practitioners that drive their intrinsic motivation for knowledge and practice development are the most significant factors. By understanding these three elements, SLPs and SLP educators can work towards improving and enhancing clinical practice in the field of burns injury management.

The findings of this model described reflect that of Coutts and Pillay (2021) mentioned in the theoretical framework in terms of clinical decision making in terms of dysphagia. The similarities show common elements among SLPs in how they are able to apply clinical decision-making skills to patients- and this model specifically, to burn injury patients. The difference in the models seem to be that the model of practice development for SLPs assessing and managing patients with burn injuries in South Africa described here is_unidirectional

whereas the other models described in Coutts and Pillay (2021) are often multidirectional in nature.

The MDTs influence on the Development of Clinical Practice

The MDT is an essential component of modern clinical practice. According to research, by bringing together specialists from different fields, such as doctors, nurses, allied healthcare teams, and social workers, the team can provide a more comprehensive and effective approach to patient care (Falzone et al., 2021; Morley & Cashell, 2017; Rosen et al., 2018; Taberna, 2020). In a study by Mitchell and colleagues (2015), multi-disciplinary teams were associated with better clinical outcomes, higher patient satisfaction, and improved efficiency.

As reported in the literature and expressed by the SLP participants in this study, working with other healthcare practitioners in the field and especially patients with burn injuries, has assisted with the growth of confidence, knowledge of the condition and facilitated problem-solving and treatment plans for better holistic quality patient centred care (Mitchell et al., 2015). My research study offered further confirmation to the already existing body of literature that highlights the importance of the MDT in treating patients holistically. It further illustrated how crucial the MDT is to the development of clinical practice in the absence of explicit training (Mitchell et al, 2014). The efforts from the different professionals and within

the SLP teams themselves helped to reduce the fear of working with patients with burn injuries, as it became a joint effort to ensure the best possible outcome for each patient (Taberna, 2020).

Admittedly, the role of an SLP within the burn injury management team is still emerging and strides are being made in having it defined for greater utilization of services and accessibility, yet there is still more research and advocating to be done (Rumbach et al., 2016). In the absence of undergraduate training for burn injury treatment, the participants of this study reflected similarly to other studies such as Taberna (2020), - that the MDT helped reduce the gap between daily clinical practice skills and a basic understanding of the burn injury condition (Taberna, 2020).

Burn injuries themselves deviate significantly from typical clinical practice and requires a more advanced set of skills concerning problem-solving, teamwork, application of existing knowledge, treating a patient holistically, etcetera along a continuum of acute care to long-term rehabilitation. Patients presenting with burn injuries are complicated to work with, both from a physical and a psychological point of view. Furthermore, as seen in the results the condition of burn injuries places these patients at high risk as they are immunocompromised and possess a constantly changing unpredictable medical state. Research suggests that

healthcare practitioners who choose to work with high-risk patients may be motivated by a desire to work collaboratively with a team to develop innovative and effective treatment plans (Suter et al., 2009).

A key aim of practice development is to involve all individuals at any level of healthcare and generate an environment or culture in which they feel listened to, can actively participate and feel they have the ability or potential to make a difference in the lives of patients (Lamont et al., 2009). Participants from this study agreed that gaining knowledge from the MDT and having an environment to discuss management plans gave them more confidence and helped them to learn about the condition of patients with burn injuries. Dynamic SLP teams are a clear example of how the team or culture participants work towards facilitating their understanding and growth. The SLP teams that helped to discuss patients and cotreat complex cases gave the participants the necessary support and guidance to build confidence in the field of burn injury management.

In addition, the literature illustrates that the team approach can help to reduce errors and improve communication between healthcare providers (Mitchell et al., 2015). Through the research, the MDT has proven to be a vital component to the success and quality of patient care. SLPs used an MDT approach to treat patients with burn injuries effectively as it allowed

for, the integration of multiple healthcare practitioners' clinical expertise (Karam et al., 2014). The existence of a strong MDT has been shown to improve job satisfaction and organisational commitment to patient care (Proenca, 2007). SLPs in this study acknowledged that they could not learn enough in isolation so they used the MDT as a means to pool resources, thus improving the quality of care they can provide. SLPs have found their scope (i.e., SLP participants were able to build up and develop practice in the area of burn injury management whilst building confidence in their skills to manage patients with burn injuries) within the MDT. They too have found a clinical purpose when working with these patients. Overall, these findings strengthen what is well known in research and highlight an incentive for healthcare practitioners to work with an 'MDT mindset', to access a body of knowledge and opportunity for growth of clinical expertise. Through this study, it was made apparent that SLPs want to help educate and promote the need for SLP management for patients with burn injuries.

Cognitive Phenomena

Whilst the MDT is notably a great source for support, growth, and development it is imperative to acknowledge that there is more to practice development than merely working within a team. Cognitive phenomena were brought to light in this study including internal resources for the development of practice for patients with burn injuries. According to Shaw

(2013), practice development aligns with the ability of healthcare practitioners to critically evaluate and self-reflect to promote action-based reasoning and learning.

This study showed that SLPs made use of multiple cognitive elements to help problem-solve assessment and treatment of patients with burn injuries. Factors that have been well-researched in healthcare such as clinical judgement, decision-making, and clinical reasoning all came forward as being vital components to treating and problem-solving management solutions to patients (Custers, 2013). SLPs treating patients with burn injuries expressed how they accessed these cognitive skills throughout their assessment and treatment at various stages of care. In conjunction with experience and basic foundational knowledge and/or self-researched elements, SLPs were able to self-reflect and acknowledge that an unconscious intuitive phenomenon was used during the assessment and treatment of patients with burn injuries to develop practice.

From the findings, it is clear that cognitive phenomena work alongside evidence-based practice, but in the absence of explicit training and guidelines, SLPs relied more heavily on cognitive phenomena as well as guidance from the MDT. According to Croskerry and Singhal (2013), cognitive debiasing is a critical skill for healthcare practitioners who work in underdeveloped areas of clinical practice or under-researched areas. Cognitive debiasing

involves recognising and challenging these errors and biases that can often lead to inaccurate diagnoses and treatments. Healthcare practitioners who possess strong cognitive debiasing skills are more likely to develop practice effectively in underdeveloped clinical areas (Croskerry & Singhal, 2013). This is because they make use of the discussed cognitive phenomena which are considered the critical skills of clinical reasoning, judgement, problem-solving, and risk mitigation to optimise decision-making for the development of clinical practice (Daniel et al., 2017). The SLP participants in this study showed a level of confidence in using their cognitive phenomena to treat patients.

Guidelines and protocols are said to promote clinical practices and are based on the current best available evidence whilst intending to improve the physical, behavioural, and mental health of patients (Hollon et al., 2014). It has to be acknowledged that generic SLP knowledge underpins clinical treatment and is the gold standard of practice. When used appropriately, shared decision-making and identification knowledge gaps can be facilitated by the use of high-quality guidelines (Hollon et al., 2014). Though components of generic SLP knowledge did assist SLPs working in this field, the lack of explicit guidelines and protocols allowed SLPs to draw on greater knowledge and find more value in their experience of treatment and the use of their intuition and creativity. Practice development through the application of cognitive phenomena is long-lasting and these skills are

transferable to any patient and context in which all healthcare practitioners might find themselves.

The SLPs approaches to using trusting the use of their cognitive phenomena or only relying on generic SLP knowledge differed in their management of patients with burn injuries. Those that felt confident in their ability to explore their intuition and clinical reasoning responses during the interviews differed from those who stuck to standardised assessment and goal-setting plans. These same SLPs were also different in personality and approach to challenge and ideas of taking risks while treating burn injuries explored in the next discussion section. Ultimately, practice is developed when the two systems work simultaneously and SLPs treat patients with burn injuries using both cognitive phenomena parallel to generic SLP knowledge (Custers, 2013). In the principles discussed by Manley et al. (2008a), and McCormack et al. (2013), practice development requires the use and integration of evidence-based practice blended with cognitive creativity to promote new ways of thinking.

Therefore, healthcare practitioners need to develop and maintain their cognitive skills through ongoing training and education where healthcare practitioners are continuously challenged to critically problem solve and use their clinical judgement and intuition to further refine these skills. Institutions cannot be expected to teach every kind of possible condition that

healthcare professionals might encounter, but as the evidence in this study suggests what institutions could work on is promoting the use of and strengthening cognitive phenomena amongst student healthcare practitioners.

Personality and Psychological Factors

Moreover, taking initiative for continuous development and progress was important for SLPs who sought to develop a clinical practice for patients with burn injuries and those that do not. In essence, the question then posed is: What was the difference between those who continued to and enjoyed working in this field to create knowledge and develop practice compared to those that did not? In this study I discussed how multiple factors influenced the development of practice; however, it appeared that for the assessment and management of patients with burn injuries SLP's personality, psychological and emotional approach was a distinguishing and impactful factor between SLPs. Although these were not measured explicitly, the results from the interviews revealed that SLPs' personality traits such as their attitude towards challenges, risk-taking, fulfilment, growth mindset, confidence in their abilities and use of cognitive skills, and their resilience led them to decide whether they were suited to this field or not. The psychology, personal values, and personality of SLPs and potentially other healthcare practitioners have a significant impact on their development of clinical practice. According to a study by Willems and colleagues (2016), healthcare practitioners who possess traits such as empathy and open-mindedness are said to be more likely to provide high-

quality care and have better patient outcomes. In addition, healthcare practitioners who can maintain a positive outlook and manage stress are better equipped to handle the demand and challenges of clinical practice (Willems et al., 2016). SLPs who continue to enjoy working with patients with burn injuries expressed greater passion and advocacy for working in this setting and focused on learning from those in the MDT.

Personality traits appeared to influence SLPs' self-awareness and enjoyment when working with patients with burn injuries. SLPs' self-awareness also influenced their use of cognitive phenomena when exporting management choices and problem-solving treatment solutions. Some personalities seek exploration and challenge (Cervone & Pervin, 2022). All SLPs develop forms of clinical reasoning and understandings of patient conditions, but it appears from the findings of this study that, some have personalities that incline them to go beyond their lack of confidence and the unknown when treating patients with burn injuries.

Psychological maturity and self-awareness are strong predictors of being able to cope in new environments without previous knowledge or experience (Cloninger et al., 2012). Some SLPs appeared to cope well, whilst others felt it best to continue their work in other areas potentially because their personalities or psychological approach toward the patient condition did not align with the exploration of clinical practice in the field of burn injuries. The

findings explained that these SLPs were the ones that developed resources in their settings. These SLPs looked to the future of overall quality of life for their patients with burn injuries and not only towards short-term management.

The types of SLPs who appeared to cope well and continued to work with patients with burn injuries could be considered risk takers and the ones who want to be innovative, creative, do research, and develop clinical practice in an emerging area (Suter et al., 2009). Studies on surgeons show personality traits of conscientiousness, extraversion, and risk-taking behaviour, while also showing some surgeons having a greater commitment to patients, and a desire for perfection (Drosdeck et al., 2015; Mehmood et al., 2013). Similarly, to the surgeons, SLPs in this study took on the risks and admitted to wanting to get things right for themselves and for the patient. Research has shown that medical professionals face risk and uncertainty daily in the clinical work environment (Bogacheva et al., 2019). This too was a distinguishing characteristic among some of the SLP participants in this study.

These were the SLPs that appeared to have the ability to take on the complexity and challenge of the unknown burn injury condition and sought to develop, problem-solve and risk new management techniques. Then there were the other SLPs who had the psychological self-awareness to know their limits and wish to stay within the boundaries of safety without

risk-taking clinical practice. They realised the limitations of their experience and skills and acknowledged their lack of confidence to take risks and in working in this field. They potentially may not have had the benefits and support of MDT input. In such instances they may step away, choosing to leave the management of patients with burn injuries to other therapists. Those SLPs understood their limitations but took greater risks in their potential to grow as a clinician and develop a practice for burn injury patients in need. Healthcare practitioners who take on patients that are considered high-risk may be motivated by personal values and their individual beliefs (Saha, 2008). Some healthcare practitioners are highly motivated by a desire to help those who are most vulnerable and in need of care; it can be said that others may be motivated by a commitment to reducing health disparities and social justice (Saha, 2008).

Medical professionals who meet the adversity of the clinical setting, the complexity of the patients with enthusiasm and see it as an opportunity for growth, are those who research shows are more resilient, optimistic, and preserving (Eley et al., 2013; Cloninger et al., 2012). Those who understood the trauma associated with many of their patients compounded by the South African healthcare system limitations and their lack of explicit knowledge in the field continued in their efforts to pursue managing patients with burn injuries. Taking risks in a medical setting is based on personality and influenced by experience of risk intense or unpredictable situations and possible patient outcomes (Bogacheva et al., 2019). Healthcare

practitioners who work with patients who are considered high-risk may also be driven by a desire to develop their skills and expertise in a particular area of practice as a sense of fulfilment (Finnell, 2015). They may wish to inspire others and be motivated by a desire to contribute to the development of new knowledge and best practices in the field (Finnell, 2015).

Research shows that when one's job satisfaction and passion for work are strongly linked to their personality, this is associated with greater joy and reward within one's work (Brito-Marcelino et al., 2020). Healthcare practitioners are willing to go further and do more for their patients when they see a need, but also when their personality aligns with their day-to-day work (Gkliati & Saiti, 2022). Healthcare practitioners who work with patients who have an unpredictable medical state and extensive rehabilitation journeys much like those with burn injuries may experience a sense of fulfilment that comes from making a meaningful difference in the lives of their patients (Baker, 2001). Despite the challenges and managing the desensitization process, many of the SLPs in this study appeared to find the reward of working with patients with burn injuries outweighed the costs. All SLPs were motivated to do the best for the patients with burn injuries, yet only some found job satisfaction and were able to reconcile working with the challenge and overcome a lack of confidence to be fully aware that patient-centred care goes beyond just the hospital room.

There are limited studies that focus on the personality traits and lifelong learning approaches of SLPs; however, literature provides valuable insight into the psychology of other healthcare professions. Studies that have examined allied healthcare members' and nurses' approaches to life-long learning expressed that when met with the unknown and new challenges some professionals reflect a role of active learning for further development whilst others do not (Cambron & Cain, 2004; Lamont et al., 2009). Fundamentally, the role of active learning potentially stems from their attitudes and motivation towards further studies, research, CPDs, and life-long learning which showed high correlations between attitude, intrinsic motivation, professional values, and duty towards their patients (Mlambo et al., 2021; Qalehsari et al., 2017). Through the results of this study, it can be deduced that some SLPs' approaches to investigation, challenges, problem- solving and life-long learning helped them while working in the field. Some SLPs felt that burn injuries presented them with an opportunity to grow and explore new and creative ways of assessment and treatment for patients with burn injuries.

In addition, healthcare practitioners who possess a growth mindset are more likely to view challenges as opportunities for learning and improvement, rather than as barriers or obstacles to be avoided (Dweck, 2007). This can be particularly important in underdeveloped areas of clinical practice, where there may be significant gaps in knowledge and resources (Schwartz & Schön, 1987). New healthcare practitioners should be supported and encouraged in

undergraduate years to embrace a growth mindset so that healthcare practitioners can be more resilient and adaptable in the face of uncertainty and change especially in contexts where resources may be limited.

The psychology and personality of SLPs working with patients with burn injuries seem to play a role in promoting the development of clinical practice, in the absence of clinical guidelines and explicit training. In particular, healthcare practitioners who possess these certain personality traits are more likely to be self-directed learners and pursue the development of their practice in underdeveloped or under-researched areas (Murad & Varkey, 2008). For example, research suggests healthcare practitioners who possess qualities of open-mindedness, curiosity, creativity, and self-reflective awareness are more likely to seek out new information and approaches to patient care to enhance their clinical expertise (Murad & Varkey, 2008).

Finally, the development of clinical practice in the treatment of patients with burn injuries relies on the MDT, the context, the patient condition, and the critical skills of SLPs through the use of cognitive phenomena and evidently, appears to be influenced by the psychology and personality traits of the individuals. As the model presented in Figure 1 highlighted, these are the extrinsic and intrinsic influencing factors in the development of practice, whether that

be in underdeveloped areas of practice and explicit training or under-researched in terms of guidelines, EBP, and especially in the context of SLPs working with the South African population of patients with burn injuries. SLPs who pursued the development of practice for patients with burn injuries in the absence of clinical guidelines and explicit training appeared to possess and utilise cognitive phenomena skills, as well as showed what research suggests could be self-reflection and a growth mindset. SLPs can reconcile working with challenging and unknown conditions, manage desensitisation or trauma, and potentially take greater risks in their pursuit of comprehensive care for their patients. Thus, this research showed they may develop a greater sense of satisfaction and accomplishment. As the field of burn injuries and medicine as a whole continues to evolve, healthcare practitioners need to cultivate these traits and remain committed to ongoing learning and professional development, to provide the best possible care for their patients.

CHAPTER 7: CONCLUSION

The final section of this research will conclude with the overall findings of the study and include its' resulting potential implications and examine the limitations it faced through the research process.

Working with high-risk patients such as patients with burn injuries can be challenging, especially in the absence of explicit guidelines and training, but it can also provide opportunities for professional growth and development. Whether a SLP ended up feeling passionate and confident about working with patients with burn injuries, or instead chooses to step away seemed to be mediated by several different factors which include the particular context and experience concerning the hospital context, the availability of an MDT, the severity of the individual patient condition and the ability of the SLP to manage that, and personality and psychological factors in the individual SLP.

Limitations

Although sufficient participants were recruited and saturation of data was generally achieved in this study, including more participants from different areas and clinical settings across South Africa would have been beneficial as different perspectives and experiences could have been explored. Additionally, there is limited previous literature specifically relating to SLPs' personality types and how personality and character influence the development of practice;

importantly, this study did not actively measure these aspects which could have provided more insight into practice development (and provides an important avenue for further research).

As previously mentioned, the participants included in this study did work as part of a large SLP team or had a few other therapists working with them. These reported experiences of having an MDT or SLP team present a different scenario in comparison to an SLP who might be working alone with patients with burns injuries as the only therapist in a particular hospital, (again this presents as a possible avenue for further research).

POTENTIAL IMPLICATIONS AND FUTURE RESEARCH

This study provides insight into how knowledge and clinical practice are generated in resource-poor contexts. In South Africa, there is a high rate of burn injuries and a need for SLPs to become involved in the care of these patients. Fundamentally, there needs to be support and encouragement for these SLPs to be able to work in this field with confidence. Although personality factors and psychological factors cannot be mediated necessarily, other factors such as cognitive phenomena and MDT work and support can be strengthened.

Curriculum Development and Training Opportunities

This study provides insight into core and fundamental skills that could be strengthened, targeted, and addressed in the curriculum at an undergraduate level. Overall, there is limited training, availability of resources, further professional development, and education for students, community-service therapists, and qualified SLPs treating patients with burn injuries. As argued already working with patients with burn injuries required more than what was being taught at the undergraduate level and the complexities of the cases need greater SLP understanding, reflection, input, and confidence. Most of the SLP participants advocated for more training to be done for the treatment of burn injuries, especially in the acute care stage. A lack of foundational training and confidence seems to contribute in part to SLPs' pursuit of care for patients with burn injuries.

Thus a few SLPs stated how they strongly felt that an overview of burns as a condition and some basic management techniques should be taught at the undergraduate level to draw more SLPs into the field and have a greater scope for practice development. It is impossible to cover every patient population and clinical skills at an undergraduate level so educational institutions could potentially create a platform with basic online resources that can be accessed post-qualification to assist in these circumstances. Additionally, they could develop a program that strengthens and supports an SLPs ability to provide counselling for complex conditions – in particular motivational counselling.

The findings of this study, presented as a model in Figure 1 shows several intrinsic factors that could be strengthened during undergraduate training program to encourage graduates to face unfamiliar patient conditions with greater confidence and problem-solving abilities. SLP educators need to address ways in which they can support and teach students techniques for resilience when facing the unknown in clinical practice and patient conditions for their community service year and beyond. Educators should encourage those new healthcare practitioners to develop a mindset and culture for practice development through pursuing growth and life-long learning which will in term help underdeveloped areas of practice and research. This is crucial because with this mindset adopted SLPs will want to continue in their educational pursuit but also have a place to access information or potential resources.

This study encourages educational institutions of healthcare practitioners to help students identify and promote the utilisation and application of cognitive phenomena in clinical practice training. Institutions need to facilitate the development and maintenance of cognitive skills through ongoing training and education where SLPs and other healthcare practitioners are continuously challenged to critically problem-solve and use their clinical judgement and intuition to further refine their skills. Students should become familiar with these terms, and it should be a feature in their clinical rotations through explicit reflective practice on how these skills are utilised in clinical scenarios. In the absence of clinical guidelines and explicit training, educators need to teach healthcare practitioners to access intrinsic factors such as intuition and clinical expertise to develop practice in underdeveloped or under-researched areas. This means essentially make the 'hidden curriculum' more explicit (Mahood, 2011).

In essence, educational institutions for all medical professionals should support, encourage and promote the use of cognitive phenomena in undergraduate training. Practice development through the application of cognitive phenomena is long-lasting and these skills are transferable to any patient and context in which healthcare practitioners might find themselves. This research makes room for areas that could be used in creating a teaching-learning strategy for supporting undergraduate SLP students to develop and implement skills for patients with burn injuries and others which will in turn contribute to the quality of

healthcare in South Africa. SLP educators should identify SLP undergraduates with personality traits or characteristics that seek creativity and innovation for clinical practice development and identify ways in which they can encourage, support, and promote the use of these key traits to their full potential for improvement of service delivery.

Support for practice in this field

Burn injuries is a niche field with limited SLPs working with this population. It would be useful to form support groups or monitoring services for SLPs working in this field. This may help SLPs cope with the counselling, uncertainty, and potential trauma that was expressed in some interviews. The support group or monitoring service will allow them a space to reflect and have a shared belonging with other SLPs as they express their experiences. This study showed that there was a strong influence of mentoring from senior, more experienced colleagues. It highlighted the importance and benefit of understanding and applying the knowledge gained from their experiences as new SLPs learned to assess and manage patients with burns injuries.

Furthermore, the results of this study indicated that many SLPs working with patients with burn injuries lack confidence and are potentially insecure about their service delivery due to the lack of knowledge and explicit guidelines or training. Therefore, supporting services should not just include emotional support areas, but also special interest groups e.g., via the

South African Speech Language and Hearing Association (SASLHA) to develop shared knowledge and practices. These groups may be ideal for SLPs who work in the field to further evaluate, problem-solve and communicate with other SLP therapists who have more experience and expertise as a platform to share their knowledge, resources and mentor other SLPs.

Practice and Policy Development

This study further confirms that there are not enough resources, policies, and guidelines for SLPs working with the population of patients with burn injuries in South Africa. My findings show that SLPs are sometimes called upon to perform clinical skills in the management of burns patients which they are not qualified or trained to do. This research emphasises a need for policy developers to create a standardised scope of practice, guidelines, and protocol for SLPs working with patients with burn injuries in South Africa. This could potentially be done by building on the guidelines already developed by some of the participants working in this field. This need and want were urged by several participants during their interviews. This would be beneficial to all those working in this field in terms of advocacy for speech therapy as well as for the quality of care that is provided to patients. It will be especially beneficial for those working in community service year working in rural public healthcare facilities of which the literature mentioned is where SLPs potentially have the least experience in their community service years, lack of equipment, and where burn injuries occur more frequently.

Fundamentally this study contributes to a better understanding of current practices, thoughts, experiences, and beliefs of speech therapy for patients with burn injuries. The research and findings could assist policy developers in implementing MDT workshops for healthcare practitioners as they are encouraged to reap the benefits that have been confirmed by this study of working within an MDT. New practitioners should seize opportunities to work within a team for the development and growth of their clinical skills. Practice and policy development should look to including opportunities for MDT work at academic hospitals and in the healthcare setting as it highlights an incentive for new future healthcare practitioners to take an opportunity to work with an MDT in order to access a body of knowledge and grow their clinical expertise.

Policy and practice development areas need to also look toward supporting those SLPs who have been qualified for several years. As found in the literature, unfamiliar areas of practice without guidelines can be associated with new conditions, epidemics, and even with the AI boom; policy developers need to look toward assisting new and qualified professionals in the unknown through the use of potential models such as the one above that guide how to tackle the unfamiliar and underdeveloped fields of practice. This research calls for an opportunity for review and reinforcement of current and future practices and guidelines to be consistently

worked and updated with new and growing clinical guidelines, especially ones that are contextually reliable.

This research has highlighted the importance of personality types in practice exploration and development. Practice development needs to allow space for reflective practice, critical evaluation, and exploration of practice to promote critical and action-based learning and treatment of patients. Further research is needed into the personality and beliefs of SLPs and other healthcare practitioners and how these affect knowledge creation and clinical practice development. Where contextual dependent factors are at play practitioners can develop a mindset for critical problem-solving and cognitive phenomena that will assist them in any healthcare context, but further research needs to be done into how these cognitive phenomena are influenced by context and SLPs' personality.

In essence, the notion of supply and demand means that practice should be developed where the demand is higher. The private healthcare sector has access to greater resources and learning of techniques as mentioned by the participants whilst public healthcare facilities are representative of services to the majority of the population despite the facilities being exposed to greater healthcare barriers. Thus, public and private hospitals should implement strategies to ensure that learning and practice development for patients with burn injuries

occurs in both facilities as each has differences, but the knowledge created will be beneficial to all SLPs working in each sector.

Theory Development

Through this study and the limited other research on SLPs working with patients with burn injuries in South Africa, it is possible to conceptualise the current practices and experiences of SLPs working in this setting. SLPs have been given a voice to express their perspectives, practices, and some experiences which contribute to a small, but relevant and emerging body of knowledge that needs greater advocacy and extensive further research. To name a few avenues of investigation: experiences of caregivers with children with burn injuries who have incurred speech or swallowing difficulties, clinical practice and of SLPs in private and public healthcare for burn injuries, and research into counselling of patients for speech therapy for patients with burn injuries.

This research is transferrable to an array of healthcare practitioners and contexts as it examines how healthcare practitioners are more inclined to create knowledge and practice and achieve medical intervention for any condition or disease that may lack evidence-based practice or explicit guidelines and training surrounding. Finally, the expertise identified in this research has given answers to knowledge gaps and provided further information not only for SLPs, but for all healthcare practitioners.

Further research

- The reported experiences from this study of having an MDT or SLP team will be different in comparison to an SLP who might be working by themselves as the only therapist in a particular hospital, which is a possible avenue for further research.
- The reported experiences of participants from different areas and clinical settings across South Africa would have been beneficial as different perspectives and experiences can be explored.
- Research into SLPs' personality types and how personality and character influence the development of practice; importantly, this study did not actively measure these aspects which could have provided more insight into practice development and provides an important avenue for further research.
- Further research needs to be done into how cognitive phenomena are influenced by context and SLPs' personality and characteristics.
- When examining the model the responses of participants did not indicate that there was a reciprocal relationship with the arrows represented within the model; however, future research and considerations could be centred around what practice development impacts and influences in the healthcare context.

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APPENDICIES

Appendix A – Interview Questions and Rationale

Structure of Interview Questions and Rationale

Structure of Interview	Rationale
Introductions and general background questions.	The introductions and general background questions were asked in order to build rapport between myself and the participants. It was important that the participants felt comfortable throughout the interview process. It is an essential component in the interview process to obtain background information from the participants such as their demographical information (Grbich, 2003).
Comparative questions based on undergraduate curriculum teaching and use of it within burn injury management practice.	This section allowed me to better understand from the SLP participant's perspective what aspects (if any) from the undergraduate curriculum or postgraduate courses helped them in shaping their management and general clinical practice of patients with burn injuries.
SLPs' experiences of assessing and	This section allowed me to:

managing patients with burn injuries.	• Gain insight into current methods of burn injury assessment and management. • Investigate the process of knowledge creation and practice development through SLPs' experiences of assessing and managing patients with burn injuries. • Investigating what skills or resources are required for practice development. • Gain insight into SLPs' experiences of working with burn injury patients in the South African context
Opportunity for self-reflection.	This provided the participants an opportunity to express any additional information they felt may be pertinent to this research. It also provided an opportunity for them to reflect on the interview and ensure they had adequality conveyed their experiences which ultimately helped me to gain a greater understanding of current SLPs' experiences of burn injury management.

Questions for Interview and Rationale

Questions were answered in the following order with possible probing questions indented under the main question.

Questions	Rationale
Background Information	
How long have you been a qualified SLP? - How long have you worked with patients with burns injuries?	Experience within the unit will affect how much knowledge an SLP has on the burns condition and subsequently the management and assessment
Do you work in a rural or urban setting? - In what level primary, secondary or tertiary care do you work?	This is to understand the differences in experiences of SLP's working with burns patients while acknowledging the South African context and disparities between urban and rural.
What kind of patients with burns injuries have you encountered? - How many of these patients do you typically see in a given month or a year?	To get a better understanding of the types of patients that an SLP will see and what types of management they provide.
Have you treated patients with burns injuries that are part of the adult, paediatric or both populations? - *If participant answers both the follow-up question would then be*: In your experience what are the differences in practicing in both populations?	It is not only important to understand the type of patients and their aetiology in burns, but also to note the differences in types of patients experience for adult and paediatric populations. What kind of scenarios are more common to occur within the different settings to further understand how SLPs work and adapt in different environments.
Have you received any training in treating burns? - What was this training? - Who offered it ? - Were these trainings South African based ? - How much did this training influence your assessment and management strategies with treating burns?	This is to establish how much additional training has been completed in this area of work and whether this additional training if from another country has affect the SLP's intuitive expertise, clinical judgment, and knowledge creation.
Intuitive Expertise	
How has your knowledge of assessment and management grown in relation to patients with burns injuries? - What aspects of undergraduate study prepared you for work in this area and what aspects did not?	This question seeks to identify whether participants have a foundation of general knowledge on which to treat patients on or whether they are starting without a basis.
Was there ever an occasion where you knew what to do or that something should be	This question emphasises one of the main ideas of the study. This is considered a question of 'meaning, it allows participants

done, but not how to assess or manage the patient with burns injuries? - What resources did you draw on ? - Were there people you spoke to ? - Did you rely on your intuition ? - Did you rely on your experience with other disorders?	to be creative in their answer as it is less specific in nature as it is not rooted in content or context (Dahlberg& Dahlberg, 2019).
What if any other areas of speech therapy taught at undergraduate level helped prepare you/ or made you feel competent for the assessment and management of patients with burns injuries? *For example did your articulation therapy help with contracture management or dysphagia with feeding?* - Do you feel as though you gained greater insight in to any of these areas because you treated patients with burns injuries?	
Clinical Judgement in Assessment and Management of Patients	
Tell me about the first time you treated a burns patient vs how you treat such a patient now?	Experience based questions allow for both descriptive analysis and interpretive analysis (Dahlberg& Dahlberg, 2019). Asking questions based on experiences allows the participant to provide answers with greater emphasis on what they deem important this creates better reliability as the researcher is not making inferences about the answers. These are questions that go beyond surface level observations (Braun, Clarke, Hayfield & Terry, 2019). Acknowledging participants feelings in moments can provide additional insight and reveal critical open reflection components (Qu & Dumay, 2011).
Tell me about a burns case that was challenging to treat? - What did you base your management plan on ?	
Tell me a burns case in which you felt assessment and management went well or that you felt confident and competent in your treatment?	
Explain how you tailor your management to patients with burns injuries and how this is different to treating other disorders? - including inpatient as well as long term and outpatient management?	Clinical judgement is always considered to be line to the reasons behind why treatment methods or the management of patients is handled in a particular why (Williams et al., 2016). This question seeks to identify decision process of managing a patient long term.
Knowledge Creation at a Hospital Level	
Do you make use of forms or programs for assessment and management of burns cases? - Where are these from /did you create them?	This is a question of consequence. By understanding what is known or used in context it seeks to understand the outcome of that use (Dahlberg& Dahlberg, 2019). In this case does it allow for better treatment of patients.

Explain your experience with working in a team when treating patients with burns? - How are patients discussed and was knowledge gained in this process? - How did you communicate your expertise?	Asking questions based on experiences allows the participant to provide answers with greater detail of their reality. It is important to not provide results out of the context in which the knowledge was gathered (Qu & Dumay, 2011).
What, if any, discussions were held that lead to management solutions not previously considered or known for a patient with burns? Can you give an example? - Were these solutions transferable to other patients?	Considering literature review notes on how motivation and growth in knowledge creation occurs through discussion with those in a similar context.
Additional	
Is there anything else you'd like to share with me that has not been covered yet?	

The number of participants recruited through various sampling approaches.

Recruitment	**Number of Participants**
Social Media Professional Facebook Groups	5
Social Media Professional WhatsApp Groups	4
Snowball Sampling	2

Appendix B- University of the Witwatersrand Human Research Ethics Committee (Non-Medical). H22/07/10

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Research Office

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

CLEARANCE CERTIFICATE	**PROTOCOL NUMBER: H22/07/10**
PROJECT TITLE	The Development of Ways of Practicing of Speech and Language Pathologists (SLPs) involved in the Management of Patients with Burns Injuries in South Africa
INVESTIGATOR(S)	Miss A Iacovitti
SCHOOL/DEPARTMENT	Human and Community Development/
DATE CONSIDERED	22 July 2022
DECISION OF THE COMMITTEE	Approved Risk Level: Minimal
EXPIRY DATE	18 August 2025

DATE 19 August 2022 **CHAIRPERSON** J. Knight
(Professor J Knight)

cc: Supervisor : Prof J Watermeyer

DECLARATION OF INVESTIGATOR(S)

To be completed in duplicate and **ONE COPY** returned to the Secretary at Room 10004, 10th Floor, Senate House, University. 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 to be contemplated from the research procedure as approved I/we undertake to submit an amendment of the protocol to the Committee. **I agree to completion of a regular progress report. For Minimal and Low 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

19 / 08 / 2022
Date

PLEASE QUOTE THE PROTOCOL NUMBER ON ALL ENQUIRIES

Appendix C – Consent Form

WITS UNIVERSITY

PARTICIPANT CONSENT SHEET

The Development of Ways of Practicing of Speech and Language Pathologist's (SLP's) involved in the Management of Patients with Burns Injuries in South Africa

Researcher: Angelica Iacovitti

(Please Circle)

I _____ agree to participate in this research project. *I agree to the following (please circle the relevant options below):*

1. The research study was explained to me. I understand what this study is about. Yes/ No
2. I understand that my participation in this study is completely voluntary. Yes/No
3. I agree that the interview may be audio recoded. Yes/No
4. I agree that direct quotations from my interview may be used by the researcher in their research. Yes/No
5. I agree that my participation will remain anonymous (my name will not be used by the researcher in their research). Yes/ No
6. I agree that other researchers may use the information I provide in my interview (depending on their own ethics clearance being obtained) but my name and any personal information will not be used or passed on. Yes/ No

Name of Participant: _____

Date: _____

Signature or mark _____

Name of Researcher: _____

Signature: _____

Date: _____

Appendix D – Participation Information Sheet

Participant Information Sheet

Good Day

My name is Angelica Iacovitti, I am a Masters student in Speech Therapy and Audiology at the University of the Witwatersrand, Johannesburg. My supervisor is Prof Jennifer Watermeyer. I am conducting a research study about understanding how in the absence of evidenced based practice SLP's are meeting a need to treat patients with burns injuries holistically by developing clinical practice in resource poor contexts through knowledge creation and cognitive processes. The study title is "The Development of Ways of Practicing of Speech and Language Pathologists (SLPs) involved in the Management of Patients with Burns Injuries in South Africa."

I am inviting you to take part in an online interview. If you decide to take part, your participation in this research study will last approximately 30 minutes. The interview will take place online via Zoom or Google Meets at a time that is convenient for you.

With your permission, I would like to audio record the interview. If Zoom is used there is a function to record and download the audio only. Participants are asked to please turn their cameras off before recoding commences and should they wish to use a pseudo name when logging in to remain anonymous they can. This data will be stored in a password protected folder on a password protected laptop for two (2) years of the publication of the research findings, or six (6) years, if no publications arise from this research years and deleted after that period. Only I will have access to the data. The SLPs responses will not be shared with any hospitals or employers other than in a combined, anonymous format.

During the research activity, I will need to ask for some personal information about you, including your name, place of work, years of experience of work and some experiences you have had working with patients with burns injuries.

The interview will be confidential and anonymous, When I share the results of the research study, I will not include your name or anything else that could identify you. With your permission, other researchers may use the data collected from this research study, but your name and any personal information will not be used or passed on.

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 stop being in the study at any 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 services, benefits or rights you would normally have if you decide not to join. Taking part in the research study will not cost you anything, but your time. You will not be paid for being in this research study. Should there be concern with data costs to attend the interview a participants will be reimbursed the data used to a value of approximately R30.00.

The risks for this research study are no more than what happens in everyday life.

This research study will be written up as a research report. The report will be available on the university library website. If you would like to receive a summary of this report, 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

Angelica Iacovitti (Researcher Masters Student)

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Cell: 0714141916

Prof Jennifer Watermeyer (Supervisor)

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Tel: 0117174578

Appendix E- Advertisement to Recruit Participants

