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Burnout experienced by South African novice occupational therapists

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BURNOUT EXPERIENCED BY SOUTH AFRICAN NOVICE OCCUPATIONAL THERAPISTS.

Morgann Moira Bruce

A research report submitted to the Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, in partial fulfilment of the requirements for the degree of Master of Science in Occupational Therapy.

Johannesburg, 31 May 2021

Declaration

I, Morgann Moira Bruce, declare that this research report is my own work. It is being submitted for the degree of Master of Science in Occupational Therapy at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at this or any other University.



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Dedication

- To my parents, I would not be completing my MSc without all your ongoing support.
- To my partner Marco, thank you for all the love, patience, and support through this process.

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- To all participants who completed my research survey, I am forever grateful for your contribution.

Abstract

Background:

International studies have found that burnout exists among occupational therapists. While most South African research has focused on medical doctors, sparse research has focused on occupational therapists. There is anecdotal evidence that high levels of burnout exist especially now during the COVID-19 pandemic, but there is minimal research about the extent, nature and causative factors of burnout in novice occupational therapists within the South African context. Empirical evidence is needed to understand the South African occupational therapy population's burnout levels to put in place policies both at a university and work environment level to mitigate and manage burnout, particularly in novice professionals.

Aim:

This study aimed to explore the domains of burnout in novice South African occupational therapists and explore if work-life factors play a role in burnout.

Methods:

This study followed a descriptive quantitative, cross-sectional, survey design. In early 2020 (March to June), in the height of South Africa’s national lockdown due to the coronavirus pandemic, a single survey consisting of: a demographic questionnaire, Maslach Burnout Inventory – Human Services Survey, and Areas of Worklife Survey, was sent to South African occupational therapists electronically using REDcap. Using an exponential non-discriminative convenience snowballing sampling method, 261 participants completed all three questionnaires. The data obtained were then used for exploratory analysis.

Result:

High levels of emotional exhaustion and depersonalisation were found in 78.54% and 49.04% of participants, respectively. Simultaneously, 60.15% of participants indicated a high level of personal accomplishment with their workplace. Workload accounted for 25% of the variance in emotional exhaustion, and 36.78% of participants reported a high workload indicating a mismatch between themselves and their workplace.

Conclusion:

In this study, the novice South Africa occupational therapists were found to have a higher level of Emotional Exhaustion, Depersonalisation and Personal Accomplishment than the normative data found in the fourth edition of the MBI manual and international occupational therapy studies. Participant's workload was the only area from the Areas of Work-life Survey on the job-persons fit mismatch end of the scale. Therefore, human resource departments would be wise to implement workload balance strategies within their work environments to prevent burnout from occurring in their employees.

Key words:

Burnout, job satisfaction, occupational therapy, Maslach Burnout Inventory, and Areas of Worklife Survey.

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Nomenclature

Burnout: “A syndrome conceptualized as resulting from chronic workplace stress that has not been successfully managed. It is characterized by three dimensions: feelings of energy depletion or exhaustion; increased mental distance from one’s job, or feelings of negativism or cynicism related to one's job; and reduced professional efficacy. Burnout refers specifically to phenomena in the occupational context and should not be applied to describe experiences in other areas of life” (International Classification of Diseases 11th Revision, 2020, 1st paragraph).

Community: This describes the “quality of the social context in which you work, encompassing your relationships with managers, colleagues, subordinates, and recipients.” (Leiter & Maslach, 2011, pg 6)

Control: This describes the “opportunity to make choices and decisions, to solve problems, and to contribute to the fulfilment of responsibilities. Control is a persons’ participation in important decisions about their work as well as their range of professional autonomy.” (Leiter & Maslach, 2011, pg 5).

Depersonalisation: “…an unfeeling and impersonal response toward recipients of one's service, care, treatment, or instruction” (Maslach, Jackson & Leiter, 2018, pg 5).

Emotional exhaustion: “…feelings of being emotionally overextended and exhausted by one's work” (Maslach, Jackson & Leiter, 2018, pg 16).

Fairness: This describes “the extent to which the organization has consistent and equitable rules for everyone, or the quality of justice and respect at work.” (Leiter & Maslach, 2011, pg 7).

Occupational therapy: “Occupational therapy is a client-centred health profession concerned with promoting health and wellbeing through occupation. The primary goal of occupational therapy is to enable people to participate in the activities of everyday life. Occupational therapists achieve this outcome by working with people and communities to enhance their ability to engage in the occupations they want to, need to, or are expected to do, or by modifying the occupation or the environment

to better support their occupational engagement.” (World Federation of Occupational Therapists, 2012, first paragraph).

Personal accomplishment: “…feelings of competence and successful achievement in one's work with people” (Maslach, Jackson & Leiter, 2018, pg 16).

Rewards: “Financial and social recognition you receive for your contribution to the job. Reward includes praise, awards, perks, and salary.” (Leiter & Maslach, 2011, pg 6).

Values: This describes “what matters to you in your work. The focus is the consistency between the personal values you bring to your profession and the values inherent in the organization where you work.” (Leiter & Maslach, 2011, pg 8).

Workload: This factor describes the “amount of work to be done in a given time. Workload captures the extent to which work demands spill into personal life, the social pressures, and the physical and intellectual burden of job demands.” (Leiter & Maslach, 2011, pg 5).

List of acronyms

AWS:	Areas of Work-life Survey
CBI:	The Copenhagen Burnout Inventory
DP:	Depersonalisation
EE:	Emotional Exhaustion
HPCSA:	The Health Professions Council of South Africa
ICD:	International Classification of Diseases
MBI:	Maslach Burnout Inventory
MBI-HSS:	Maslach Burnout Inventory – Human Services Survey
NHI:	National Health Insurance
OLBI:	The Oldenburg Burnout Inventory
PA:	Personal Accomplishment
PPS:	Professional Provident Society
REDCap:	Research Electronic Data Capture
WHO:	World Health Organisation

CHAPTER 1: INTRODUCTION AND BACKGROUND TO RESEARCH

1.1 Introduction

This chapter provides an overview of this study. It starts by providing the reader with a contextual understanding of the research and follows with the problem statement. It later provides details on this study's research questions, aims and objectives, and the justification for this study. It concludes with a brief outline and explanation of the subsequent chapters.

1.2 Background to research

In 2019 The World Health Organisation (WHO) introduced the term "burnout" into the International Classification of Diseases (ICD) (International Classification of Diseases 11th Revision, 2020, The World Health Organization, 2019). According to ICD-11 burnout has not been classified as a medical condition but rather as an 'occupational phenomenon' that occurs in a work context and not in other areas of a person's life (The World Health Organization, 2019). The ICD-11 defines burnout as a syndrome related to chronic workplace stress, where a person has: no energy, is distant from their workplace and is experiencing negative feelings towards their job (International Classification of Diseases 11th Revision, 2020, The World Health Organization, 2019).

However, burnout is not a new phenomenon and has been the subject of research in 3 waves: 1970-1990, early 2000's and now again in the last decade. Work on burnout was first pioneered by Freudenberg in 1974 after which Maslach and Zimbardo in 1982 described burnout in health workers as an emotional strain or burden, due to exposure to a meagre working environment, or a strenuous physical and emotional interaction with clients when working with them in a healing manner (Maslach & Zimbardo, 1982). High work strain, unrelenting workload and inadequate professional support are factors reported to make health care workers vulnerable to burnout (Demerouti et al., 2001; Maslach, Schaufeli & Leiter, 2001; Kim, Shin & Swanger, 2009).

Various studies show that health care workers are at risk of experiencing burnout in their daily practice with authors estimating burnout rates of between 25-75%

(Dubale et al., 2019; Linzer et al., 2001; Shanafelt et al., 2002; Fahrenkopf et al., 2008). The current global pandemic of Covid-19 has placed health care workers at even more risk of experiencing burnout (Saleh, 2020; Morgantini et al., 2020). Covid-19 has exacerbated the pre-existing causes of burnout and introduced new stressors that may lead to burnout and/or long-term trauma (Ayanian, 2020; Saleh, 2020; Morgantini et al., 2020).

Burnout is associated with adverse health and work-related consequences, such as high levels of absenteeism, low work productivity, and poor physical and emotional health (Warren, Schafer, Crowley, & Olivardia, 2013). Thus, understanding job-related burnout in health care professionals is crucial to human resource management and the quality health service provision.

Burnout rates in human service workers have been steadily increasing over the last decade (Thomas et al., 2014). International researchers have found that 21% to 67% of mental health professionals experience a high level of burnout within developed countries with adequate health care resources (Morse et al., 2012). An investigation into burnout recently completed in South Africa, a middle-income country with a fragmented health care system (Mahlathi & Dlamini, 2015), conducted by the Professional Provident Society (PPS), surveyed 5837 professionals across significant job categories. The Professional Provident Society found that 22% of respondents felt overworked due to staff shortages and long working hours (Business Tech, 2019). Other research on South African nurses and medical physicians has found moderate to high burnout levels in their participants (Pelzer et al., 2003; Engelbrecht et al., 2008; Mason & Nel, 2012; Liedenberg et al., 2018; Rajan & Engelbrecht, 2018). Furthermore, the PPS Graduate professional index in 2019 noted that South African medical professionals' health is being negatively influenced by challenging work environments (long hours and poor working conditions) (PPS, 2019).

The South African public health care system is currently reported to be in crisis (Dhai & Mahomed, 2018; South Africa Department of Health, 2019). It is plagued by endless human resource challenges such as scarce funded posts; unevenly distributed posts; poor service delivery; overworked clinicians; unsafe working environments and a lack of financial resources (South Africa Department of Health, 2019). The provincial health departments have frozen posts due to human

resources inadequacies and financial problems (Dhai & Mahomed, 2018; Mhkize, 2018). This has led to high staff turnover rates and over-worked, over-stretched and stressed health care staff (Dhai & Mahomed, 2018; Mhkize, 2018).

The health service delivery system is also in transition with the introduction of universal health coverage funded by the National Health Insurance (NHI) (Arnold, 2017; South Africa National Department of Health, 2017). This universal coverage model aims to have 90% of South African citizens to be covered by 2030 (Mkhize, 2019). There are many uncertainties as to how the NHI Risk-Adjusted Capitation Funding model will influence public and private health workers and the health care delivery system (Arnold, 2017). This has led many healthcare practitioners to feel uncertain about their future role and job security within this system (Arnold, 2017). Furthermore, burnout has been reported to undermine organisations and a person's health and wellbeing (Nash, 2013; The World Health Organisation, 2019). This could lead to significant health economy costs (Nash, 2013; The World Health Organisation, 2019).

While most South African research on burnout has focused on medical doctors, sparse research has focused on occupational therapists. There is anecdotal evidence that novice occupational therapists experience high levels of burnout. Empirical evidence is needed to understand the South African occupational therapy population's burnout levels to put in place policies, both at a university and work environment level, to mitigate and manage burnout, particularly in novice professionals. Novice occupational therapists make up a high proportion of the South African occupational therapy workforce (De Witt, 2016). A 2018 study on burnout in the medical profession, found that novice doctors are reported to be very vulnerable to high work stress while establishing a professional identity (Baigent & Baigent, 2018).

1.3 Problem Statement

The WHO has predicted a burnout epidemic by 2030 (Nash, 2013). Currently, with the COVID-19 global pandemic, it is even more crucial to obtain empirical evidence of burnout characteristics in the South African occupational therapy population and burnout related workplace factors. The high risk of contracting COVID-19 has been reported to place high levels of stress on individuals, and the emotional and physical

effects of the COVID-19 pandemic has put a strain on healthcare workers (Kannampallil et al., 2020). Only once relevant information relating to burnout has been obtained can the effects of burnout be minimised or prevented in novice occupational therapists, to avert a potential crisis in this limited and critical workforce.

Occupational therapists are members of a caring profession, who work in various settings with a wide range of complex clients from challenging social contexts, most with temporary or permanently disabling conditions affecting their occupational performance and health and well-being (Lloyd & King, 2001). This places them at risk of experiencing burnout (Craik, 1998). International studies have also found that burnout exists among their occupational therapy professionals (Brown & Pranger, 1992; Pranger & Brown, 1992; Lloyd & King, 2001; Painter et al., 2003; Gupta et al., 2012). However, there is very little research on burnout rates among young South African occupational therapists (De Witt & de Luca, 1995).

1.4 Research questions

This study proposes to answer two research questions:

- To what extent do South African novice occupational therapists experience burnout?
- What work-life factors influence their work stress levels and contribute to burnout?

1.5 Research aim

This study aimed to explore and understand the domains of burnout in novice South African occupational therapists and explore if work-life factors play a role in burnout.

1.6 Research objectives

The following four objectives have guided this study:

- To identify and explore the domains of burnout in novice occupational therapists according to the Maslach Burnout Inventory.
- To explore the area of work-life factors in novice occupational therapists within the South African context according to Areas of Work-life survey.

- To explore the relationship between the demographic information and the domains of burnout and areas of work-life factors.
- To explore the relationship between the domains of burnout and the work-life factors.

1.7 Justification for the study

International studies have found that burnout exists among occupational therapists (Edwards & Dirette, 2010; Gupta et al., 2012; Escudero-Escudero, Segura-Fragoso & Cantero-Garlito, 2020). There is anecdotal evidence that high levels of burnout exist especially now during the COVID-19 pandemic, but there is minimal research about the extent, nature and causative factors of burnout in novice occupational therapists within the South African context. This study will help the occupational therapy profession understand the domains of burnout in early-career occupational therapists and identify negative work-life factors that may increase the risk of experiencing burnout. This information may allow the profession to put in place the necessary support measures within workplaces and universities to develop resilience to reduce the risk of burnout especially in the early stages of professional development (De Witt et al., 2019).

This information may create opportunities to enhance worker wellness programmes within human resource policies and educate novice occupational therapists about burnout and risk factors for experiencing burnout in this stage of early career development.

Burnout has been shown to affect a person's short-term and long-term health, but more research is needed (Maslach, Jackson & Leiter, 2018). If the proposed study's results indicate that novice occupational therapists experience burnout within the South African context, it can be a platform for further studies.

1.8 Chapter outline

This research report consists of five additional chapters. In **Chapter 2,** the literature to support this study is explored and critiqued. **Chapter 3** provides the reader with an insight into the research methodology, research population, sample, designs, methods, data collection and statistical analysis carried out on the collected data. **Chapter 4** describes this study's results using tables to summarise and highlight

significant results and findings. In **Chapter 5,** these results are interpreted and discussed relative to various other international and local studies. The limitations of the study will also be included. Finally, in **Chapter 6**, the researcher will describe the main findings, conclusions of the study, and further recommendations.

CHAPTER 2: LITERATURE REVIEW

2.1. Introduction

The purpose of this study was to explore whether novice South Africa occupational therapists experience burnout in a variety of work settings. To support this study, the researcher undertook a narrative literature review to gain a comprehensive overview of the international and national burnout literature, with specific reference to literature on the occupational therapy profession (Green, Johnson & Adams, 2006). This literature review assisted the researcher in highlighting significant areas of research on burnout.

The researcher's identification of the scientific burnout literature was based on the following criteria. The researcher used the term "burnout" and its related spellings to identify articles that included the term "burnout" in the title of English articles published online before the end of September 2020. Other key search words such as occupational therapy, job satisfaction, compassion fatigue and novice were used. Since the researcher was investigating burnout within the health profession, the researcher used the Google scholar, PubMed database, SAGE publications and Wiley Online Library to identify relevant research articles. Articles on burnout over the last 40 years were read and critically considered for the literature review, specifically those where articles' main focus was embedded within the health care professions.

This literature review has been organised first to describe burnout's theoretical foundation and its available measurement tools. This is followed by a discussion of the causes and consequences of burnout and international and local studies on health professionals and burnout in general and occupational therapists specifically. This chapter concludes with a summary to highlight the critical points of the chapter.

2.2. Burnout as a concept

The term 'burnout' was first coined in 1970 by Herbert Freudenberger (Freudenberger, 1974; Schaufeli, 2017). He used the term informally to describe the loss of motivation, emotional depletion, and a decrease in work commitment evident in unpaid workers at a free health clinic (Freudenberger, 1974; Schaufeli, Leiter & Maslach, 2009; Schaufeli, 2017).

Early research by Christina Maslach (1976) based on the work by Freudenberger developed a more comprehensive description of the phenomena (Schaufeli, 2017). Her qualitative study with human service workers found that most participants who experienced work-related stressors experienced negative feelings towards their clients. They were emotionally exhausted and doubted their professional competence due to internal emotional havoc (Maslach, 1976; Schaufeli, Leiter & Maslach, 2009). In 1996 Maslach defined burnout experienced by workers in the human service professions as: “a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who work with people in some capacity” (Maslach, Leiter & Jackson, 1996, p.4).

Over the last decade the term burnout, also known as compassion fatigue, has expanded and is now regarded as a common work-induced condition that negatively influences health and wellness and is experienced by workers in different professions, but especially within the helping professions (Schaufeli, Leiter & Maslach, 2009). Thus, all health care providers across the globe are reported to be at risk of burnout at some point in time due to their work nature (Schaufeli, Leiter & Maslach, 2009; Portoghese et al., 2014).

Several studies focusing on the health care sector found that health care workers are faced with many occupational stressors which may lead to physical and mental distress (McVicar, 2003; Marine et al., 2006; Portoghese et al., 2014). Studies on American nurses found that nurses experience burnout at a prevalence rate of 35-45%, due to a lack of leadership, inadequate patient care and high patient mortality rates due to a high number of patient-care related infections (Aiken et al., 2012; Cimiotti et al., 2012; Al Sabei, Ross & Lee, 2019). Literature estimates that nearly 50% of all doctors experience some level of burnout (Dyrbye, Burke, et al., 2018; Rotenstein et al., 2018a; Jha et al., 2019), with 76% of all American doctors, regardless if their speciality, reporting burnout in 2018 (Merritt Hawkins & The Physicians Foundation, 2018).

A systematic review on burnout in health care workers, conducted on 65 articles in Sub-Saharan Africa found, burnout amongst health care workers to be strongly associated with their poor work environment and lack of support (Dubale et al.,

2019). In this study, burnout was experienced by all health care professionals with nurses experiencing the highest levels of burnout (Dubale et al., 2019).

Burnout is regarded as a phenomenon that develops over time with emotional exhaustion(feeling emotionally worn-out and tired) being associated with the first phase of the condition due to high workloads, leading to depersonalisation (feeling a distant attitude towards clients) and feelings of minimal accomplishment in the later stage (Innstrand et al., 2002). The development of depersonalisation appears to be closely associated with the experience of emotional exhaustion, and these two components of burnout should, therefore, be correlated (Maslach et al., 1997). Depersonalisation is reported to lead to disinterest and poor patient care (Jeanneau & Armelius, 2000).

Research on burnout has shown that there are implicit reasons people experience burnout, which leads to detrimental outcomes for both the organisation and person (Maslach & Leiter, 2016). Identifying these causes are crucial, as burnout has also been described as contagious in the workplace (Bakker, Le Blanc & Schaufeli, 2005). Burnout affects the health care provider and can have lasting adverse effects on the work environment and client treatment (Balogun et al., 2002).

The literature review will now describe both personal and organisational factors that the literature suggests are related to burnout.

2.3. Risk factors for developing burnout.

Research suggests that there are a multitude of work-related factors that place a worker at risk of experiencing burnout, such as organisational (physical workload; environment, reward) and personal factors (financial, and personality) (Maslach et al., 2001; Bakker et al., 2006; Demerouti et al., 2001; Maslach, Schaufeli & Leiter, 2001; Kim, Shin & Swanger, 2009).

2.3.1. Individual characteristics:

Demographic information such as gender and age have been identified as factors associated with burnout. Maslach, Schaufeli and Leiter (2001), completed a literature review on 25 years of burnout research within most majority world countries and found that healthcare professionals below thirty were more likely to experience burnout, due to less work experience (Maslach, Schaufeli & Leiter,

2001). This was further found during a cross-sectional study conducted in 2003 on 423 of Sweden's health care professionals, who found that their younger healthcare workers were more likely to experience burnout (Glasberg, Eriksson & Norberg, 2007). Gender has been debated in burnout studies with mixed reporting on whether males or females are more likely to experience burnout, mainly due to skewed reporting and low sample representation (Maslach, Schaufeli & Leiter, 2001). In Maslach, Schaugeli and Leiter's (2001), literature review on burnout research it was generally found that men score higher in depersonalization while females seem to experience higher levels of emotional exhaustion (Maslach, Schaufeli & Leiter, 2001). This has been attributed to societal gender roles (Maslach, Schaufeli & Leiter, 2001). Persons with a higher level of education have been found to have a higher risk of experiencing burnout than their less-educated co-workers (Maslach, Schaufeli & Leiter, 2001). The authors suggest this can be attributed to more responsibility, greater stress, and higher workplace expectations (Maslach, Schaufeli & Leiter, 2001). The authors did not comment on their literature review methodology and have been critiqued for omitting important information from the study. Therefore it is difficult to comment on the quality of this review. However, these three authors are renowned for their burnout expertise.

Both international and local research on burnout has been strongly linked the Big Five Personality Traits (openness, agreeableness, extraversion, conscientiousness and neuroticism) to a person's experience of burnout (Bakker et al., 2006; Kim, Shin & Swanger, 2009; Morgan & De Bruin, 2010). Individuals with personality characteristics such as neuroticism are more likely to be predisposed to experiencing burnout (Bakker et al., 2006; Kokkinos, 2007; Miner, 2007; Morgan & De Bruin, 2010). Simultaneously, individuals who display traits such as openness, extraversion, agreeableness and conscientious are less likely to experience burnout due to their ability to manage stress and seek assistance (Zellars et al., 2000; Storm & Rothmann, 2003; Morgan & De Bruin, 2010). However, results from these studies should be interpreted with caution due to their small sample sizes. Further to this, the researchers did not take into consideration of extrinsic job characteristics such as workload, because the researchers were analysing individual characteristics such as personality against burnout (Bakker et al., 2006; Kokkinos, 2007; Miner, 2007; Kim, Shin & Swanger, 2009; Morgan & De Bruin, 2010). Furthermore, the

above studies used self-reported questionnaires and therefore, method variance could have occurred (Salkind, 2010).

Burnout is closely related to high work stress (Gandi et al., 2011). However, work stress does not always lead to burnout (Gandi et al., 2011). Furthermore, burnout is most commonly experienced when a person is exposed to prolonged chronic work-related stressors; this chronic work stress is usually followed by severe fatigue, low emotional tolerance, unexplained physiological symptoms (headaches and fever) and decreased immunity to illness (Gandi et al., 2011).

Individuals with a stress-prone profile are reported to display poor coping strategies, low self-esteem, external locus of control, and a low level of hardiness are more prone to stress in general and work stress in particular (Semmer, 1996). The stress-prone profile influences how individuals view themselves and the opportunities or challenges presented in life, which influences their "locus of control" (Engelbrecht, Bester, Van den Berg & Van Rensburg, 2008). Kalbers & Fogarty (2005), studied auditors in America and concluded that a person with an internal locus of control which is driven from inside themselves, is reported to be less likely to experience burnout as they perceive themselves to be in control of their own situation (Kalbers & Fogarty, 2005). However, this study had a small sample size (Kalbers & Fogarty, 2005). Health care workers in Glasberg, Eriksson & Norberg's (2007) study who reported having lower resilience and poor coping strategies were also at greater risk of experiencing burnout (Glasberg, Eriksson & Norberg, 2007). However, this study relied on self-reported measures, therefore, results reflect their perceived burnout levels.

2.3.2. Organisational Factors

Work-related stress has been recognized as a factor, which has a negative impact on both an individual's health and work performance and thus has a causative relationship to burnout (Sauter & Murphy, 1995). Many organisational factors have been explored in the literature relating to burnout (Demerouti et al., 2001; Maslach et al., 2001; Bakker, Demerouti & Euwema, 2005).

Early research by Maslach and Leiter (1997) identified six areas of a person's work-life as important influences in the development of burnout: (1) control over one's job, (2) a manageable workload, (3) a workplace community, (4) workplace reward, (5)

values and (6) fairness. The authors postulated that a person who experienced a mismatch between their personal expectations and values with a workplace structure and environment are more likely to experience burnout (Maslach & Leiter, 1997). These areas will be discussed later in this chapter in greater detail (See 2.5.5).

Over the last decade, there has been a large amount of research on job burnout (Leiter, Bakker & Maslach, 2014). However, currently in the 21st-century burnout remains a work-related crisis (Leiter, Bakker & Maslach, 2014). Currently, the general work environment is profit or outcome-driven. It views productivity as the volume of work a person can attend to irrespective of an individual's energy and effort demands (Maslach & Leiter, 1997). This do-more-with-less-syndrome', has led to individual's work becoming more complex with employees taking on multi-tasking roles and larger workloads, which require a more significant amount of time and energy to complete (Maslach & Leiter, 1997; Pfeiffer, 2018). Globally within the healthcare system, this do-more-with-less-syndrome is seen by the shortage of health care workers and resources, due to an increase in the worldwide population and burden of disease (WHO, 2013; Mbunge, 2020).

A study by Glasberg et al. (2007) explored organisational factors that contribute to burnout in health care workers, found that factors such as inadequate social support, high workload, unclear work role, not enough time to provide quality care, inability to live up to other expectations, as well as having such high work demands that it affects a health care providers home life, accounted for 48% of emotional exhaustion in health care workers (Glasberg, Eriksson & Norberg, 2007). This concurs with an early study completed in the Netherlands on nurses that found poor social support, high workloads and insufficient time to complete their job demands to be associated with high levels of emotional exhaustion (Janssen et al. 1999). However, both Janssen et al. (1999) and Glasberg et al. (2007) studies made use of only one health care facility and therefore cannot be generalised and used self-report measure. Furthermore, both studies used a cross-sectional design, meaning no conclusion on the causation could be deduced.

Later a study by Van Bogaert et al. (2013) found similar results as Glasberg et al. (2007) and Janssen et al. (1999). The research found that healthcare system difficulties such as high expectations, decreased support, inadequate skills and time

constraints influenced the global healthcare system (Van Bogaert et al., 2013). These organisational factors led to health care workers feeling immense stress which negatively impacts their performance, patient outcomes, wellness, and job satisfaction (Van Bogaert et al., 2013).

Health-related organisations are multifaceted and often involve a hierarchy with different management levels contributing to policies, rules, procedures and cost-related targets (Maslach & Leiter, 1997). Health professionals value setting daily priorities, choosing appropriate approaches, resources needed to complete their work and having the autonomy to make their own decisions (Maslach & Leiter, 1997). However, health care delivery structures and policies that interfere with this autonomy and responsibility have been reported to cause individuals to lose interest and feel the organisation has no trust in their abilities and judgments (Maslach & Leiter, 1997).

South Africa's health care policies have been shaped by the dynamic period of 1994 (Katuu, 2018). South Africa's health care system has been influenced by its diverse culture, economic, and political capabilities (Van Rensburg, 2004). South Africa's health care system consists of a private and public system. The former has access to abundant human and physical resources and sees fewer patients (15.8% of the population) than the latter (Council of Medical Schemes, 2020; Schneider et al., 2007). Furthermore, according to the National Department of Health (2010), South Africa's' public general practitioners attend to an average 4200 patients versus a private sector general practitioner who attend to 243 patients a year (Department of Health, 2010).

Further to the above, South Africa has always focused on a more medical model (curative) and a recent shift from this model to primary health care (preventative) in the form of universal health care funded by National Health Insurance (NHI) is being implemented. The full effect of the NHI changes is still to be observed (Katuu, 2018). These and other organizational challenges include insufficient funding and budget management, poor distribution of physical and human resources among rural and urban areas, slow introduction of universal health coverage, inadequate management and leadership and insufficient goal setting within facilities (Mbunge, 2020). Therefore, COVID-19 and South Africa's health care system's current state

makes health care workers even more at risk of experiencing burnout by placing immense stress on South African health care professionals (Robertson et al., 2020).

Before COVID-19, the WHO (2013), reported a global shortage of health care workers, especially in developing countries where health care workers and resources are unfairly distributed (WHO, 2013). Factors such as poor remuneration and inadequate working conditions exacerbate the shortage of skilled health care professionals even more (Aluttis, Bishaw & Frank, 2014; Miseda et al., 2017). This healthcare workforce crisis has become even more crucial now amid the COVID-19 pandemic (Mbunge, 2020). The current global crisis of COVID-19 has made work-life more uncertain (Mbunge, 2020). Particularly in South Africa, where the current job loss is sitting at 40% (Jain et al., 2020), and has an unemployment rate of 28.18% (Plecher, 2020). This has placed health care workers at even more risk of experiencing burnout due to uncertainty and high workplace demands. Further to the above, the current social distancing and hygiene policies of COVID-19 has impacted how healthcare workers engage in their respective fields, causing more uncertainty (Courtemanche et al., 2020).

COVID-19 has caused people to adapt to how we communicate and engage with each other (Liu et al., 2020). Health care workers needed to adapt to establish trust with their patients, and further to this department policies were changing rapidly to keep up with new COVID related policies added to the stress (Liu et al., 2020). These and other factors led to higher stress levels in health care workers across the globe (Liu et al., 2020). Burnout has been closely associated with stress and poor working environments (Malsach & Leiter, 1997). A breakdown in the AWS area of community is reported to lead to decreased teamwork, undesirable workplace relationships and an overall poor workplace environment (Maslach & Leiter, 1997). Conflict in the workplace demands time and energy from an individual worker and leads to dissatisfaction and decreased productivity (Maslach & Leiter, 1997).

Conversely, a fair workplace leads to trust, respect and openness between the organisation and service providers. Individuals are reported to be more productive if they share responsibility and collaborate to achieve fair and equitable organisation outcomes (Maslach & Leiter, 1997). Poor communication leads to unilateral decision making and distrust in an organisation, contributing to burnout (Maslach & Leiter, 1997).

Ideally, personal values (a person's ideals and motivations) draw them into their specific health profession initially. However, due to the high competition for medically related education programmes, sometimes individuals end up in medical education programmes that are not necessarily their first choice (Morse, 2014). When a profession's mission contributes to an individual's personal goal, it allows for meaningful engagement. However, when an individual's and profession's values are in conflict or misaligned, it leads to individuals having to sacrifice their needs and wants to satisfy the profession's or organisation's philosophy (Maslach & Leiter, 1997).

The adverse effects of burnout extend into every area of a person's life. The following sections explore how burnout affects both a person and an organisation.

2.4. Consequences of burnout

Burnout has been found to have a negative impact on both a person's work performance and their health (Maslach, Schaufeli & Leiter, 2001). The literature has mainly identified burnout outcomes relating to job performance which further impacts workplace effectiveness (Maslach, Schaufeli & Leiter, 2001).

Maslach, Schaufeli & Leiter (2001) found when reviewing burnout literature of people who experience burnout and do not take vacation leave, have lower productivity levels. Leading to the workers experiencing reduced job satisfaction and resulting in these workers slowly losing their commitment to the organisation (Maslach, Schaufeli & Leiter, 2001). Reduced job satisfaction has also been reported to lead to poor work relationships, creating conflict (Burke & Greenglass 2001; Maslach, Schaufeli & Leiter, 2001). Burnout can further negatively impact work productivity by higher absenteeism, high workforce turnover and a stated intention to leave the job (Bothma & Roodt, 2012; Maslach, Schaufeli & Leiter, 2001). Therefore, it is essential to minimise burnout and its effects, especially within the healthcare systems with the already strained workforce (Shin et al., 2014). South Africa has fair labour laws that enforce employees to take 15 days of leave in an annual cycle (Republic of South Africa, 2020), potentially reducing the risk of burnout.

A study by Maslach and Leiter (2001), found that burnout is also associated with hypertension, difficulty sleeping and gastrointestinal problems (Maslach, Schaufeli

& Leiter, 2001). Burnout has also been found to be strongly linked to substance use and abuse as a coping strategy (Maslach, Schaufeli & Leiter, 2001). Therefore, it has been hypothesized that individuals in a stressful working environment with high work demands are most at risk for engaging in substance abuse in some form (McCann et al., 2011). A review of South African literature by Smook et al. (2014) found that the South African workforce is greatly affected by substance abuse resulting in decreased productivity, absenteeism, low quality of work, work accidents and wasted material (Eberlein, 2010; Grobler et al.,2006; Smook et al., 2014).

Studies have identified a consistent and robust relationship between a high level of emotional exhaustion and poor health (somatic symptoms and general physical illness) (Honkonen et al., 2006; Kim et al., 2011; Maslach, Jackson & Leiter, 2018). However, more research is needed on how burnout affects both the short- and long-term health of people (Danhof-Pont et al., 2011; Maslach, Jackson & Leiter, 2018).

A literature review by Sinclair et al. (2017), conducted on burnout in healthcare workers found that all authors within the review reported that health care professionals who were experiencing compassion fatigue were unable to deliver effective quality patient treatment (Alkema et al., 2008; Canadian Nursing Association, 2010; Sinclair et al., 2017). This review was conducted using a meta-narrative approach according to the Realist and Meta-narrative Evidence Syntheses: Evolving Standards was used, making the review scientifically robust (Wong et al., 2013).

In addition to the impact of burnout on work performance, there has been some research into how the work stress impacted burnout and the adverse health outcomes that follow (Maslach, Schaufeli & Leiter, 2001). High levels of burnout are associated with depression, low self-esteem, anxiety, poor concentration, nervousness and headaches (Balogun et al., 2002; Maslach, Schaufeli & Leiter, 2001). Morse et al. (2012) investigated mental health workers' relationship between perceived burnout and depression. The study participants included 3,276 mental health workers and found that mental health workers experiencing high burnout levels were fifteen times more likely to have a major depressive disorder (Morse et al., 2012).

To prevent secondary complications relating to burnout, it is essential to be able to measure the extent of burnout experienced in our populations. The following sections explore commonly used burnout questionnaires in literature.

2.5. Measurements of burnout

2.5.1. Introduction:

Several burnout questionnaires were found within the literature: Oldenburg Burnout Inventory (OLBI) (Demerouti et a, 2002; Demerouti & Bakker, 2007), the Burnout Inventory (Warley, 1992), the Burnout Measure of Pines and Aronson (Schaufeli et al., 2001), the Copenhagen Burnout Inventory (CBI) (Kristensen et al., 2005), and the Maslach Burnout Inventory (MBI) (Maslach & Jackson, 1981).

Three burnout assessments were explored for this study, namely the Oldenburg Burnout Inventory, the Maslach Burnout Inventory, and the Copenhagen Burnout Inventory. These three measurement tools were explored due to their research population being associated with health care professionals (Dyrbye et al., 2018).

2.5.2. The Oldenburg Burnout Inventory (OLBI)

This measurement tool was developed in 2002 by Demerouti and co-authors. This tool was developed because the authors believed that the Maslach Burnout Inventory (MBI) had psychometric limitations and that a burnout inventory needed to be based on a job demands-resources model (Halbesleben & Demerouti, 2005; Dyrbye et al., 2018). Some of the perceived limitations included the MBI not possessing negatively worded items and the notion that burnout only related to people working in the helping profession (Demerouti, 2008; Dyrbye et al., 2018). The OLBI has 16 items in the self-report survey which assesses two areas: exhaustion which includes cognitive, physical aspects, and disengagement from work using a 4-point Likert scale, which measured people's level of agreement towards statements (Dyrbye et al., 2018). The OLBI was developed in German and has now been translated into English. However, the English version has not been standardized. The OLBI also has mixed evidence of internal structure. The two-factor structure (exhaustion and disengagement) was recognised in a sample of Dutch medical doctors (Demerouti, 2008). In contrast, the four-factor model

(exhaustion, energy, disengagement, and engagement) was supported in a Chinese nurses' study (Dyrbye et al., 2018).

The OLBI has been used in a single South African study on burnout within the construction industry. The 528 construction workers' responses on the MBI were compared to the OLBI and Utrecht work engagement scale. It was found that the OLBI is a realistic substitute for the MBI to assess burnout and work engagement simultaneously (Demerouti, Mostert & Bakker, 2010).

While the OLBI has not been used to study health workers in South Africa it has been used to study this population in Germany, Portugal, China and Sweden (Demerouti et al., 2003; Peterson et al., 2008; Qiao & Schaufeli, 2011; National Academy of Medicine, 2020). However, all studies using the OLBI had small sample sizes, so the results were not conclusive (Dyrbye et al., 2018).

2.5.3. The Copenhagen Burnout Inventory (CBI)

The CBI was developed by Krinstensen et al. (1997) in response to the criticism that MBI subscales of depersonalisation and personal accomplishment were seen as a strategy and a consequence of coping, rather than two of the three factors that measured burnout (Sestili et al., 2018). The purpose of the CBI was to measure burnout in various occupational groups (Kristensen et al., 2005). The self–report questionnaire consists of 19 items which consider the following two areas of burnout: personal-related and work-related burnout. The personal-related measures the physical, emotional and mental fatigue, and exhaustion experienced by a person regardless of if they are working or not. The work-related burnout assesses fatigue and exhaustion that a person experiences at work due to their relationship with clients (Kristensen et al., 2005; National Academy of Medicine, 2020; Sestili et al., 2018). Each section is treated as a separate continuous variable (Sestili et al., 2018).

The CBI was developed in Denmark and has been translated into several languages, including English (Kristensen et al., 2005). However, the CBI's validity in different cultures and languages needs to be validated with further research (Kristensen et al., 2005). Within each section of the CBI, high scores indicate a high level of burnout. However, the cut-off scores have not been established based on

evidence (Dyrbye et al., 2018). This has led to studies using different cut off scores to indicate high burnout levels their populations (Dyrbye et al., 2018).

On the other hand, there is limited research using the CBI on a health care worker population, and only small sample groups have been used (Dyrbye et al., 2018). While on the other hand, some studies on health professionals found that high level of burnout was related to decreased subjective perceptions on the quality of patient care (Klein et al., 2010), high staff turnover (Shoorideh et al., 2015), absenteeism (Borritz et al., 2006) and high intentions on leaving work (Borritz et al., 2006).

The CBI has been used to measure burnout among paramedics within the South African context. This study found that Johannesburg-based paramedics had a greater prevalence of burnout than their international counterparts (Stassen, Van Nugteren & Stein, 2009). A study in 2011 to validate the CBI within the South African context, with a sample size of 215, concluded that the CBI is not valid in a South African context, as the personal burnout scale was shown to be an invalid and needed to be merged with work-related scale (Smit, 2011).

2.5.4. The Maslach Burnout Inventory (MBI)

The MBI developed by Maslach and Jackson (1981) is the most frequently reported measure of burnout in the international literature (Evans & Fischer, 1993; Maslach, Schaufeli & Leiter, 2001; Worley et al., 2008).

Maslach and co-authors define burnout as a feeling and response to aspects of an individual's daily experiences (Maslach, Jackson & Leiter, 2018). Burnout cannot be described as a feeling that is absent or present but rather a phenomenon with varying degrees (low, moderate and high) (Maslach, Jackson & Leiter, 2018).

Initially, the MBI consisted of 47 items in a self-report questionnaire, designed to be administered to various health and service workers (police, counsellors, teachers, nurses, social workers, psychiatrists, psychologists, attorneys, physicians, and agency administrators) (N=605). In the factor analysis, only ten burnout factors emerged for their frequency and the intensity, which reduced the number of items from 47 to 25 items (Maslach and Jackson, 1981). There are currently three versions of the MBI, the first assessed burnout for human services workers (MBI-HSS), the second MBI was developed for educators (MBI-Educator Survey), and the third was a general survey (MBI-General Survey).

This study used MBI-HSS, consisting of three subscales: emotional exhaustion, depersonalisation, and personal accomplishment. Furthermore, the MBI-HSS focuses on occupations, where workers interact extensively with other people (clients, patients) (Maslach, Schaufeli & Leiter, 2001). The psychometric properties of this instrument will be discussed in Chapter 3 (3.7.2).

2.5.4.1. Emotional exhaustion (EE):

This subscale consists of nine statements that describe “feelings of emotional overextension and exhaustion as a result of one’s work” (Maslach, Jackson & Leiter, 2018, pg 16). Higher mean scores indicate a high level of burnout experienced (Maslach and Jackson, 1981).

2.5.4.2. Depersonalisation (DP):

This subscale consists of five items which indicate a person’s attitude of “unfeeling and impersonal responses toward recipients of one’s service, care, or treatment.” (Maslach, Jackson & Leiter, 2018, pg 5). Higher mean scores in this subscale correspond to a high burnout level (Maslach and Jackson, 1981).

2.5.4.3. Personal accomplishment (PA):

This subscale includes eight items that describe “feelings of competence and achievement in one’s work.” (Maslach, Jackson & Leiter, 2018, pg 16). Higher mean scores in this subscale indicate a lower burnout level (Maslach and Jackson, 1981).

The MBI-HSS has been used for various purposes (Maslach, Jackson & Leiter, 2018). Researchers can use the MBI-HSS to identify burnout rates, causes and consequences among health care workers (Maslach, Jackson & Leiter, 2018). Organisations can use the MBI-HSS to identify the level of burnout rates experienced by their employees and possibly baseline for human resource interventions (Maslach, Jackson & Leiter, 2018).

Several methods exist when scoring and interpreting the MBI-HSS scores in literature. In the earlier MBI-HSS manuals (Edition 1-3) there were recommended cut off subscale scores to categorise a population into burnout levels (Maslach & Jackson, 1986). Table 2.1 below showed these normative data figures used to categorise levels of burnout experienced by a population.

Table 2.1: Sub-scaled scores needed to categorise the domains of burnout (Maslach & Jackson, 1986)

Burnout is found in a population if either the EE or DP domain was of a high severity			
	Low	Moderate	High
Emotional exhaustion	<16	17-26	>27
Depersonalisation	<6	7-12	>13
Personal accomplishment	>38	33-37	<32

The authors removed the cut off scores from the MBI Manual (4th edition) in the latest manual. It recommended comparing the participants of a large sample group to the population's normative data (Maslach, Jackson & Leiter, 2018). Table 2.2 below includes normative data found in the current 4th edition of the manual, that this study sample could be compared to.

Table 2.2: Normative data means and standard deviations for the Maslach Burnout Inventory-Human Services Survey (Maslach, Jackson & Leiter, 2018)

Occupational subgroups	Emotional exhaustion Mean (Standard Deviation)	Depersonalisation Mean (Standard Deviation)	Personal accomplishments Mean (Standard Deviation)
Social Services (n=1,538)	21.35 (10.51)	7.46 (5.11)	32.75 (7.71)
Medicine (n=1,104)	22.19 (9.53)	7.12 (5.22)	36.53 (7.34)
Mental Health (n=730)	16.89 (8.90)	5.72 (4.62)	30.87 (6.37)
Other (n=2,897)	21.42 (11.5)	8.11 (6.15)	36.43 (7.00)

Within literature, defining burnout in health care professionals has been varied (Doulougeri et al., 2016). This makes interpreting results difficult, as some studies can either overestimate or underplay the level of burnout their participants are experiencing (Doulougeri et al., 2016). Maslach & Leiter (2001) suggests that a high degree of burnout is displayed when there are high DP and EE subscale scores, with low PA subscale scores (Maslach & Leiter, 2001). However, Schaufeli (2001) and other researchers suggest high levels of burnout can be found in participants who report high scores of EE and/or DP (Dyrbye, West, & Shanafelt, 2009; Schaufeli et al., 2001; Thomas, 2004). Other researchers further categorised participants according to the “Emotional Exhaustion+1” rule: for a participant to be feeling burnt-out clinically they must have a high score for EE, plus either a high depersonalisation

score or a low personal accomplishment score (Cartwright et al., 2009.; Schaufeli, Leiter & Maslach, 2008; Rotenstein et al., 2018b).

The authors of the MBI-HSS also suggest using five profiles to describe participants burnout-engagement continuum, namely: engaged, ineffective, overextended, disengaged and burnout (Leiter & Maslach, 2016). The authors have found in research that people with different scores in all three burnout subscales have different work experiences (Leiter & Maslach, 2016). By placing participants into these five different profiles, researchers can better understand both the causes and consequences of their level of burnout (Leiter & Maslach, 2016). In table 2.3 below, the five burnout profiles are described in detail.

Table 2.3: The five burnout profiles

Profile	Definition	Emotional Exhaustion	Depersonalisation	Personal Accomplishment
Engaged	Persons displays a positive experience with work	Low	Low	High
Ineffective	The person loses confidence in their own ability	Low to Moderate	Low to Moderate	Low
Overextended	Persons are fulfilled yet tired	High	Low to Moderate	Low to Moderate
Disengaged	The person does not have a high workload but is not able to connect with the organisation	Low to Moderate	High	Low to Moderate
Burnout	Persons are chronically tired, disengaged, and discouraged	High	High	Low

For this study, results will be compared to the normative data (Table 2.2) to determine burnout rates. However, the cut off scores will be used to compare results from earlier studies where applicable.

Dubale et al. (2019) conducted a systematic review of burnout on various healthcare workers within Sub-Saharan Africa. This study consists of 65 research papers, of which 25 were from South Africa. The researchers found that of 67% of studies used a form of the MBI to measure burnout rates, 76% of the South African research papers made use of the MBI (Dubale et al., 2019). The MBI-HSS has been validated

with service workers within the South African context (Fourie 2004; Jordaan, Spangenberg, Watson & Fouché 2007; Naudé & Rothmann 2004; Van der Colff & Rothmann 2009).

The MBI-HSS is frequently used together with the Areas of Work-life survey (AWS), in order to measure both the extent and possible cause of burnout (Maslach, Jackson & Leiter, 2018).

2.5.5. The Areas of Work-Life Survey (AWS)

The AWS was developed in 2000 as a companion tool to the MBI, specifically to measure burnout in a work-life context (Leiter & Maslach, 2011), notably the factors in the work environment which could be contributing to burnout (Leiter & Maslach, 1999). The AWS includes the following six areas: workload, fairness, community, reward, values and control. The psychometric properties of the AWS will be discussed in chapter 3 (3.7.3)

2.5.5.1. Workload:

This area describes the amount or volume of work to be done in each day (Leiter & Maslach, 2011). When analysing workload, factors such as how much work interferes with an individual's personal life and the job's physical and emotional demands are essential (Leiter & Maslach, 2011).

2.5.5.2. Fairness:

This area describes an organisation's rules regarding fairness and equality and the practice of justice and equal respect within the workplace (Leiter & Maslach, 2011).

2.5.5.3. Community:

This area describes the social context's quality, emphasising relationships within a workplace (Leiter & Maslach, 2011).

2.5.5.4. Reward:

This encompasses the extrinsic rewards received for contribution in the workplace such as financial (salary and commission) and social recognition (praise and awards) (Leiter & Maslach, 2011).

2.5.5.5. Values:

This describes the factors people believe matter to them in a workplace (Leiter & Maslach, 2011). The focus is on whether a persons' value that they bring to their profession is in line with the organisation's inherent values for which they work (Leiter & Maslach, 2011).

2.5.5.6. Control:

This examines whether a person has autonomy over their decision, choices, and contributions to their work responsibilities (Leiter & Maslach, 2011).

Coetzee and Kluyts (2020) used the AWS in a South African study on anaesthesiologists. In this study, the authors found that workload strongly correlated to all three burnout domains and that public sector anaesthesiologists experience less favourable AWS than private-sector practitioners (Coetzee & Kluyts, 2020). However, no research to date attempts to validate the AWS within the South African context. Both the MBI-HSS and AWS are copyrighted and had been purchased for use in this study.

A significant amount of research supports the relationship between burnout as measured using the MBI-HSS, healthcare-related outcomes, and personal health consequences (Dyrbye et al., 2018). Burnout has also been strongly linked to challenges and shortcomings in a health system (Dyrbye et al., 2018). The following section explores burnout rates among health care professionals.

2.6. Burnout in Health Care Workers

Burnout has been the focus of research over the past three decades (deNovo Medica, 2019). Studying the prevalence of healthcare provider burnout and the risk factors, the social and individual consequences of burnout will help reduce the global and national economic burden on healthcare systems (deNovo Medica, 2019).

2.6.1. International perspective

Health care professionals have played a central role in developing and understanding burnout as a concept (Maslach & Leiter, 2001). Some of the earliest studies on burnout were on health care providers in the USA and Europe (Maslach & Leiter, 2001).

2.6.1.1. Physicians:

A continually changing healthcare system has placed high demands on international physicians from both government healthcare institutions and in private practice (Dimou, Eckelbarger & Riall, 2016). Research on the prevalence of burnout among physicians has reported varying figures between countries, specialities and working sectors (Kumar, 2016). This variation is because stressors within a work environment differ although they play a critical role in healthcare workers' burnout (Kumar, 2016).

A systematic review of 39 burnout articles on American surgeons using the MBI found that 40% of the sampled surgeons experienced high perceived burnout levels (Dimou, Eckelbarger & Riall, 2016). When analysed 12.8% of surgeons reported having a low sense of personal accomplishment (PA), 31.7% of respondents reported high in emotional exhaustion (EE), and 26% of surgeons scored high in the area of depersonalization (DP) (Dimou, Eckelbarger & Riall, 2016). This systematic review found that having a low work-life balance and being younger with less experience placed a surgeon at greater risk of burnout (Dimou, Eckelbarger & Riall, 2016).

A study conducted by the “European General Practice Research Network Burnout Study Group” has reported that between 2.4% and 72% of doctors experience some form of burnout in Europe (Roth et al. 2011). Using the MBI-HSS, only 12% of their respondents experienced burnout in all three dimensions (high levels of EE= 43%, high levels of DP= 35% and low PA= 32%) (Soler et al., 2008).

A systematic review conducted in 2018, using data from 45 different countries, was unable to conclude burnout rates among physicians (Rotenstein et al., 2018). It found that overall burnout prevalence ranged from between “0% to 80.5%” (Rotenstein et al., 2018). When analysing the MBI data, it was found that between “0%-86.2%” doctors reported experiencing high EE levels (Rotenstein et al., 2018). While “0%-89.9%” doctors reported experiencing high levels of DP, and between “0%-87.1%” doctors reported a low PA (Rotenstein et al., 2018). Across all studies, a total of 142 different definitions of burnout were used, which highlight essential inconsistencies in the definition and assessment methods of burnout research (Rotenstein et al., 2018).

Several studies on physicians have been conducted on burnout during the COVID-19 pandemic. A study by Barello, Palamenghi & Graffigna (2020) on Italian health care workers, reported that 37% experienced high EE levels, 22% reported moderated levels of EE and 33.5% experienced low levels of EE (Barello, Palamenghi & Graffigna, 2020). However, this study results must be interpreted with caution as 14% of their EE data was missing. Due to the limited sample size, the results could not be compared to the normative data or generalised to the Italian population. A further study by Dinibutin (2020), on doctors in Turkey during the COVID-19 pandemic found that the participants in their study' median EE score were 3.00.

2.6.1.2. Physiotherapists:

Burnout rates in American and Australian physiotherapists have been documented in literature during the 1900s (Deckard & Ron, 1989; Donohoe et al., 1993; Goold, 1995; Schuster, Nelson & Quisling, 1984; Wolfe, 1981). Schuster et al. (1984), surveyed 176 physiotherapists in the United States America (USA) and found that 53% of participants experienced low to moderate burnout levels. In a similar sample of Australian physiotherapists with five or more years' experience, Goold (1995), found that 35% of respondents experienced a high EE level.

In comparison, a study was done by Donohoe et al. (1993), in the USA on physiotherapists with three or fewer years' experience, was found that 72% of their respondents experienced moderate to high levels of EE, 20% reported a high level of DP and 60% reported experience low level of PA. These results were similar to those found by Balogun et al. (1995), these researchers found that 60% of physiotherapists with less than five years' work experience, reported moderate to high levels of EE, 44% reported moderate to a high level of DP, while only 6% were experiencing a low level of PA.

In 2002 researchers studied burnout prevalence and determinants in occupational therapists and physiotherapists in New York City (Balogun et al., 2002). This study found therapists were experiencing high levels of burnout, which contradicted the earlier 1900's studies where lower burnout rates among their therapists were found (Balogun et al., 2002; Schlenz, Guthrie & Dudgeon, 1995; Schuster, Nelson & Quisling, 1984). In this 2002 study, 58% reported high EE levels, with 94% reporting DP and 97% experiencing a low level of PA (Balogun et al., 2002). This study also

found that the many demographic and work environment factors recorded in literature did not contribute to MBI three subscale scores (Pranger & Brown, 1992; Balogun et al., 2002). However, this study's significant limitation is the small sample size, and therefore, the results cannot be generalised (Balogun et al., 2002).

A later study conducted on Polish physiotherapists using the MBI concluded that physiotherapists similarly to other health service employees might be exposed to professional burnout (Pustułka-Piwnik et al., 2014). This study's results differed from previous research in the fact that younger therapists (working less than five years) reported experiencing the least amount of burnout (Pustułka-Piwnik et al., 2014). However, this could be because the inclusion criteria were physiotherapists with three or more years' experience and that physiotherapists with less than five years' experience could have left the profession due to poor coping strategies and decrease in social support (Balogun et al., 2002; Pustułka-Piwnik et al., 2014).

2.6.2. South African perspective

While several studies examined the prevalence and determinants of burnout in healthcare workers in developed countries (Lloyd & King, 2001; Khamisa, Peltzer & Oldenburg, 2013; Dewa et al., 2014), a few have focused on burnout in developing countries like South Africa (Cohen & Gagin, 2005; DuPlessis, Visagie & Mji, 2014).

A study by Tollman and Kautzky (2008) indicated that South African health care workers are at risk of burnout due to staff shortages, complicated cases, an overworked and demoralised health care workforce, a complicated health transition process and a lack of leadership (Tollman & Kautzky, 2008). Furthermore, evidence has been found on how South Africa's health care service quality has been negatively affected by various contextual challenges (Maphumulo & Bhengu, 2019).

2.6.2.1. Physicians:

An early study on South African novice doctors who had previously graduated from two English medium medical schools found a burnout rate of 77.8% among their 126 participants (Schweitzer, 1994). However, this study's response rate was low (36.8%), making the sample size too small to generalise.

A recent study by Liebenberg et al. (2018), used the MBI-HSS to survey a small sample of 42 doctors within the Western Cape province. The result reported that

81% of respondents had high burnout levels, and 31% of respondents scored within the high range of all three categories (EE, DP and PA) (Liebenberg et al., 2018). However, due to the small sample size, these results cannot be generalised to the Western Cape or South African doctor population.

Liebenberg at al. (2018), compared their results to those of Stodel & Stewart-Smith (2011). They reported a 100% burnout rate among their respondents from the Red Cross Memorial Children's hospital in the Western Cape. Participants in these two studies scored similarly in the EE and PA categories (high risk of burnout in the EE and PA domains) (Stodel & Stewart-Smith, 2011; Liebenberg et al., 2018). However, in both cases the study sample was small, and the results could not be generalised to represent the whole Western Cape population of physicians (Stodel & Stewart-Smith, 2011; Liebenberg et al., 2018).

When the results of Liebenberg et al. (2018) were compared to Peltzer, Mashego & Mabeba (2003) study on physicians nationally, the results reported higher burnout figures for the EE and PA domains of the questionnaire (Liebenberg et al., 2018).

Peltzer, Mashego & Mabeba (2003) found that the physicians they surveyed across South Africa had more significant work stress but similar high levels of burnout than the USA's normative data (Peltzer, Mashego & Mabeba, 2003). They found that physicians are experiencing high levels of stress due to lack of organizational support, low salary (this study was before the professional salary dispensation), inadequate critical on-the-spot decision making, dealing with crises and working overtime (Peltzer, Mashego & Mabeba, 2003). However, this study had an inadequate response rate of 33.5%, and therefore these results cannot be generalised to the South African physician population (Peltzer, Mashego & Mabeba, 2003).

2.6.2.2. Physiotherapists and speech therapists:

Minimal research exists on burnout in physiotherapy within South Africa. A study by Amosun and Dantile (1996), studied burnout among physiotherapy students using the MBI. The researchers found that 80% of students scored moderate to high in the EE category. At the same time, 72.4% of students reported high satisfaction in the area of PA (Amosun & Dantile, 1996). The study concluded that because EE

has been identified as the critical aspect of burnout, participants in this study experience some level of burnout (Amosun & Dantile, 1996).

Swidler and Ross (1993), found that South African speech therapists and/or audiologists working in both private and public hospital settings to be the most susceptible to burnout from increased work pressure, due to high workloads and extensive paperwork. The study found that their participants had moderate EE levels and low levels of DP, but a high PA sense (Swidler & Ross, 1993).

2.6.2.3. Summary

Burnout can be seen as a topic of concern in international and local healthcare organisations due to problems related to the working environment and health system culture (deNovo Medica, 2019). Healthcare workers based in different settings and with varying clinical experience face unique challenges with diverse needs, and varying burnout rates experienced (deNovo Medica, 2019).

Minimal recent research exists on South African health care workers and burnout experience; most studies had small sample sizes and could not be generalised. However, within the two South African allied professional studies, moderate burnout levels were found (Swidler & Ross, 1993; Amosun & Dantile, 1996). The international research on allied health professions explored in the above section found that more recent research found higher levels of burnout (Balogun et al., 2002; Pustułka-Piwnik et al., 2014) than earlier international studies (Schuster et al. (1984; Goold 1995). There were also indications that South Africa's earlier burnout research produced higher results than international counterparts. Table 2.4 below describes the MBI mean scores for health care professionals in South Africa.

Table 2.4: MBI scores in different studies on health professionals in South Africa

Study	Sample size	Health profession	Emotional exhaustion (EE)	Depersonalisation (DP)	Personal Accomplishments (PA)
Liebenberg et al. (2018)	N = 36	Doctors	30.5	14.6	34.1
Du Plessis, Visagie & Mji. (2014)	N=49	Physiotherapist, occupational therapists, and speech therapists	27.88	6.31	37.24
van der Colff & Rothmann, (2014)	N = 818	Nurses	22.15	7.22	34.54
Stodel & Stewart-Smith, (2011)	N = 22	Doctors	37.70	12.60	32.10
Peltzer, Mashego & Mabeba, (2003)	N=402	Doctors	24.20	11.40	17.40
Amosun & Dantile, (1996)	N= 76	Physiotherapy students	24.00	3.99	31.54

Maslach et al. (1996) and Laschinger, Wong & Grau (2012) reported that people experiencing high burnout levels expressed intention to leave one's job. With only 550,000 occupational therapists to a global population of 7.8 billion people, it is imperative to determine burnout rates within the occupational therapy profession and explore possible causes. The next section explores burnout among occupational therapists.

2.7. Burnout in occupational therapists

Early research has identified several factors that place occupational therapists at risk of experiencing burnout (Craik et al., 1998; Jenkins, 1991; Lloyd-Smith, 1994; Price, 1993; Sweeney, Nichols and Kline, 1993). Young and inexperienced therapists are particularly vulnerable when they are still consolidating their professional identity and are unclear of their unique contribution and role within the multidisciplinary team. Staff shortages, unbalanced caseloads with unrewarding client contact, lack of recognition, and debates concerning the profession's role and function, add to their vulnerability (Lloyd & King, 2001).

2.7.1. International perspective

Several international studies, using both quantitative and qualitative methodologies have been conducted to examine burnout in occupational therapists (Brown & Pranger, 1992; Pranger & Brown, 1992a; Painter et al., 2003; Gupta et al., 2012).

Early international studies using the MBI found that occupational therapists were only at risk of burnout in the domain of PA (Sturgess & Poulsen, 1983; Rogers & Dodson, 1988). A decade later, Pranger and Brown found high EE and DP levels among occupational therapists compared to the earlier studies (Brown & Pranger, 1992; Pranger & Brown, 1992b).

Painter et al. (2003) used the MBI to compare American occupational therapists' burnout rates to other health care professionals. These researchers found that occupational therapists experienced higher levels of EE than other health care professions. However, occupational therapists reported lower than the norm scores in the DP category, which correlated with Rogers & Dodson (1988) earlier study (Rogers & Dodson, 1988; Painter et al., 2003). Painter et al. (2003) proposed that one of the reasons for the high levels of EE was because of occupational therapists' unique attribute of caring, which means that occupational therapist generally takes their work home with them and go beyond the line of duty for their client, which causes high levels of EE but also acts as a shield against high DP (Painter et al., 2003). However, the results of a study by Edward and Dirette (2010), found that their Canadian occupational therapy sample experienced high levels of burnout in all three categories of the MBI (Edwards & Dirette, 2010).

A 2004, comparative study by Lloyd and King found that Australian occupational therapists and social workers, working in mental health, experienced burnout. Results indicated high levels (40%) of EE and PA, but a low level in DP (75%) (Lloyd & King, 2004). These results concurred with the results of the 1992 study by Pranger and Brown.

Gupta et al. (2012) used both the MBI and AWS to study burnout in Canadian occupational therapists. They found that overall most participants experienced a high level of burnout. A further analysis reported that the sample fell into the average category for EE and professional efficacy, with a high risk of burnout within the cynicism category (Gupta et al., 2012). Furthermore, when the researchers used

stepwise regression to analyse the data from the AWS and MBI, it was found that high levels of EE were linked to high workload (Gupta et al., 2012). This study differed from earlier burnout research in Spanish occupational therapists where high levels of emotional EE were most frequently reported (González-Gutiérrez et al. 2004).

Brown & Pashniak (2018) studied the association between the level of burnout and work engagement in Canadian occupational therapists. The participants in this study reported a lower EE, higher DP, and high PA than other studies that they reviewed (Brown & Pashniak, 2018). These researchers postulated that the low EE score could be attributed to a large proportion of their study sample having workplace flexibility and autonomy but also being older therapists with more coping strategies (Brown & Pashniak, 2018). They further explained that as only 22% of their participants worked in acute care facilitates where the workload and patient turnover were high, therefore, this group of occupational therapists was underrepresented in their sample profile (Brown & Pashniak, 2018).

Several international studies have examined the risk factors associated with burnout in the occupational therapy profession. Moreno Rodríguez et al. (2004) found the psychological consequences of factors such as a lack of independence and an unclear working role in occupational therapists to be strongly associated with high EE and DP levels and low PA levels. Simultaneously, organisational consequences were more strongly related to the high experience of EE and DP (Moreno Rodríguez et al., 2004).

International studies collectively identified the main work-life factors that contribute to burnout in Canadian and Australian occupational therapists as work overload, demands on time and working after hours, conflict within the work environment, lack of respect, and having less than ten years' experience (Gupta et al., 2012; Poulsen et al., 2014).

2.7.1.1. Work-related factors

Early literature by Sweeney, Nichols & Kline (1993), found that British occupational therapists reported three reasons for high work stress: role within a multidisciplinary team, high work demand with limited resources and time, and lack of reward and recognition. Similar results were found in a study by Wressle and Oberg (1998).

They reported that Swedish occupational therapists reported a lack of resources and time, as the main factors contributing to high-stress levels (Wressle and Oberg, 1998).

Later Rees and Smith (1991) studied the United Kingdom health care workers, including occupational therapists, and their perceptions on their workplace pressure. This study reported that occupational therapists experienced higher workplace pressure levels, relating to their relationship with other health professionals than any other professionals (Rees and Smith, 1991). However, this study had a low number of participants; thus, the results must be used cautiously (Rees and Smith, 1991).

A 2014 study on Queensland occupational therapists examined the association between burnout and work satisfaction (Poulsen et al., 2014). This study reported an inverse relationship between burnout and work engagement, thus where occupational therapists were highly engaged in their work, they reported the lowest level of burnout (Poulsen et al., 2014). The results of the Poulsen et al. (2014) study directly correlated with a study by Brown & Pashniak (2018) who found that occupational therapy participants who scored high in the Utrecht Work Engagement Scale scored high in the work engagement criteria were less likely to experience burnout according to the MBI. This suggested that participants who were energised, dedicated, felt valued and displayed enthusiasm for their work, were at less risk of experiencing burnout (Brown & Pashniak, 2018).

A study by Delos Reyes (2018) examined the association between occupational therapists' MBI scores and employment type. This study found that participants who worked part-time had higher EE levels, but similar DP and PA scores to full-time employees. When the part-time participants were asked about their EE scores, they reported travelling issues and adjusting to multiple work environments as stress indicators (Delos Reyes, 2018). This study further found that therapists who had seven or more contact hours with patients had a high EE and PA level. The stress was not believed to be linked to the number of clients seen, but rather the number of hours worked (Delos Reyes, 2018).

2.7.1.2. Health care settings:

A few international studies have examined burnout prevalence in the occupational therapy population to the field of practice. Sturgess and Poulsen (1983) conducted

one of the earliest Australian burnout studies within occupational therapy and correlated burnout rates to practice fields. These researchers found that occupational therapists working in mental health experienced higher burnout levels than therapists working in paediatrics and physical rehabilitation (Sturgess and Poulsen, 1983). Mental health occupational therapists were also found to have higher caseloads and poor work-rest balance (Sturgess and Poulsen, 1983). However, this study had limitations as its sampling method was not documented. During a similar timeframe, Brollier et al. (1986) reported contradictory results with no difference in burnout rates between American occupational therapists employed in the physical, paediatric, mental health and community field of practice (Brollier et al., 1986). However, a later study by Painter et al. (2003) found that American occupational therapists working in chronic health care settings were more prone to experiencing burnout than therapists working in other health care settings (Painter et al., 2003). Similar results were found in other burnout studies, where healthcare practitioners working in chronic healthcare settings were reported to be experiencing higher levels of burnout (Bailey, 1990b; Brown & Pranger, 1992; Maslach, 1978, 1982; Sortet & Banks, 1996; Wandling & Smith, 1997).

Delos Reyes (2018) studied Filipino occupational therapists working in the paediatric field. Participants in this study scored high in the EE category and further reported that their field of practice demanded more contact hours with a higher number of patients. However, participants in this field of practice also reported a high score in the PA category, which participants reported was due to having the most productive time use (Delos Reyes, 2018).

A 2018 study on burnout on Portuguese occupational therapists in various fields found that the participant's working with children to be the most at risk for experiencing personal burnout (Reis et al., 2018). This study further found that occupational therapists working with children had the highest physical and psychological exhaustion (Reis et al., 2018). However, this study made use of the CBI and in this personal tool burnout is not always related to a workplace environment, and is mostly associated with the participant's mental and physical symptoms ("how often are you tired?") (Reis et al., 2018).

2.7.1.3. Professional factors

Allan and Ledwith (1998), who studied occupational therapists' satisfaction with workplace supervision found that therapists in a workplace with little/no place for reflective practice, debriefing, and opportunities to gain professional development and knowledge experienced the most stress, placing them at risk for experiencing burnout. A later study by Balogun et al. (2002) found similar results that high levels of burnout and lack of support from supervisor were closely related (Balogun et al., 2002).

A systematic review by Lloyd & King (2001), found that empirical evidence on occupational therapist profession and burnout to be weak. The systematic review found the profession's unique characteristics that put occupational therapists at risk, including the profession's nature, staffing issues, and professional status (Lloyd & King, 2001). However, the researchers also found some common risk factors that have been associated with burnout within other health care professionals (Lloyd & King, 2001). These risk factors included lengthy interventions, frequent and reoccurring exposure to stressful situations, and uncertain patient progress (Lloyd & King, 2001).

2.7.1.4. Caseload:

Occupational therapists with high caseloads are reported to have little time to attend to client administration, team meetings and discharge planning, which leads to increased stress and constraints (Brown & Pranger, 1992). Several other studies have also found a positive relationship between high client loads and burnout (Brown & Pranger, 1992; Cherniss & Egnatios, 1978). Brown and Pranger (1992), studied mental health occupational therapists and found three factors to be significant predictors of burnout namely: older age due to lacking up to date techniques; larger caseload size as well as having schizophrenic patients within their caseload, and a larger amount of overtime worked. Earlier research by Pines & Malsach (1978) and Lamb (1979) also found more extensive caseloads and working overtime to be factors contributing to burnout in their studies, respectively. Brown and Pranger (1992) further stated that high caseloads lead to occupational therapists needing to work overtime (often unpaid) to complete all required job demands, which could leave therapists feeling powerless, demotivated and

resentful. A more recent study by Gupta et al. (2012) on burnout in occupational therapist found a close correlation between job-specific workload and burnout.

2.7.1.5. Multidisciplinary role:

Research shows that unclear professional roles and role conflicts within multidisciplinary teams contribute to stress and burnout in a work environment (Edwards et al., 2000; Lloyd, King, & Chenoweth, 2002). Multiple studies have identified the lack of a strong professional identity and low professional status as factors contributing to high levels of stress in occupational therapists (Greensmith & Bloomfield, 1989; Bailey, 1990; Jenkins, 1991; Leonard and Corr, 1999). The literature further suggests that the profession of occupational therapy has difficulty defining its role in teams and patient care, contributing to their experiencing a high level of burnout (Edwards & Dirette, 2010). Edward & Dirette (2010), concur with the finding that the occupational therapists were more at risk for experiencing burnout when they lacked a strong professional identity. This also supports Lloyd and King (2001) findings and Lloyd and King (2005) where lack of professional status and insufficient recognition contributed to burnout in occupational therapists.

2.7.1.6. Staffing challenges:

Early literature suggests that shortages and low staff retention contributed to high burnout rates among occupational therapists (Jenkins, 1991; Price, 1993; Sweeney, Nichols and Kline, 1993; Lloyd-Smith, 1994; and Craik et al., 1998). This was due to high work demands and limited staff members (Lloyd & King, 2001). Craik (1988) put forward the notion that high staff shortages have put increased pressure on the profession to justify their role and function within health care teams.

Greensmith and Blumfield (1989) examined the retention of occupational therapists within the British National Health Service. They found that high caseloads and inadequate resources within facilities were the most mentioned reasons for staff loss (Greensmith & Blumfield, 1989). This study identified a lack of professional status; with 42% of participants citing “career expectations not met”, as contributing to therapists leaving their posts and a further 52% cited the same reason for leaving the profession permanently (Greensmith & Blumfield, 1989). A study conducted by Jenkins (1991), supported the above results and found that occupational therapists left posts and the profession due to poor career prospects, high workload, and a

lack of professional status in a multidisciplinary team (Jenkins 1991). The study further found that 40% of the occupational therapists who left the profession, stated shortage of staff for the main reason (Jenkins, 1991).

2.7.1.7. Clinical experience:

More recent studies results on clinical experience and burnout (Delos Reyes, 2018; Du Plessis, Visagie & Mji, 2014; Kamal et al., 2016) contrast the earlier studies which suggested that older more experienced therapists with supervisor roles experienced high levels of burnout (Brollier et al., 1986, 1987; Yuen, 1990).

The nature of the position held within an organisation has been shown to contribute to an occupational therapist's stress and related burnout levels. A study by Sweeden, Nicholas and Comik (1993), found that therapists working at lower grades reported a high caseload as their main contributor of stress, as they have limited opportunities for administrative tasks and control over balancing and allocating their caseloads (Sweeden, Nicholas & Comik, 1993).

In one of the first burnout studies by Lamb (1979), there was a general agreement in the burnout literature, that burnout usually occurs after the first-year working. Poulsen et al. (2014) reported that burnout had the highest prevalence in young therapists with less than ten years' experience. A later study by Brown & Pashniak (2018) reported their study participants, with less than ten years' experience had lower levels of EE, higher levels of PA but also reported high levels of DP than the rest of the participants, which contradicts Poulsen et al's. (2014) earlier study. However, a study in the Philippines by Delos Reyes (2018) found that therapists with less than ten years' experience had higher EE and DP levels and lower PA scores than therapists with 16 or more years' experience. Nevertheless, this study had a small sample size, and cultural bias because it was a self-reported methodology on one area within the Philippines. More research is needed on culture and burnout within the Philippines to be generalised (Delos Reyes, 2018). Despite these limitations, similar results were found in studies by Du Plessis, Visagie & Mji (2014) and Kamal et al. (2016), in which younger health care professionals experienced higher EE scores.

Delos Reyes (2018) suggested that more experienced therapists are less likely to experience burnout due to having better coping strategies and skills (Delos Reyes,

2018). Furthermore, the researcher suggests that burnout has the highest prevalence in novice therapists as they navigate the transition between being a student and becoming a professional (Delos Reyes, 2018). This proposition is supported by Maslach et al. (2001) who believed younger employees are placed at higher risk of burnout due to their limited work exposure and experience.

2.7.1.8. Summary:

Early research on burnout in occupational therapists emerged shortly after the publication of the MBI (Sturgess & Poulsen 1983, Rogers & Dodson 1988). This early research focused on factors that were inherent to the occupational therapy profession, that could place them at risk for experiencing burnout (Sturgess & Poulsen 1983, Rogers & Dodson 1988). This early research indicated that burnout was not prevalent in occupational therapists. Later research on burnout and occupational therapy found that occupational therapists had significantly high reported levels of EE (Brown and Pranger 1992, Pranger and Brown 1992).

Lloyd & King (2004) indicated that occupational therapists experienced high levels of burnout in the EE category, moderate levels in the DP category, and reported high levels in the PA category. Later studies support Lloyd and Kings (2004) findings reporting occupational therapists to be at risk of experiencing high EE levels, DP and low scores in PA category (Gupta et al., 2012; Poulsen et al., 2014; Delos Reyes, 2018).

Many international stress and burnout studies involving occupational therapists have seen a large proportion of their sample coming from the mental health field (Sturgess and Poulsen 1983, Brollier et al. 1986, Rogers and Dodson 1988, Sweeney et al. 1991, 1993a).

Various studies have found that work-life factors such as high workload, lack of control, low income earning prospects, poor work environment (under resources and conflict) and working after hours to be associated with high levels of burnout (Gupta et al., 2012; Poulsen et al., 2014 Scanlan & Still, 2013). Personal attributes such as less than ten years' experience and being younger than thirty contributed to placing a person at risk of experiencing burnout (Delos Reyes, 2018; Gupta et al., 2012; Poulsen et al., 2014).

2.7.2. South African perspective

A study by Du Plessis, Visagie & Mji (2014), with a sample size of 49 multi-disciplinary therapists, 14 of which were occupational therapists, indicated that the prevalence of burnout was high in South African private physical rehabilitation centres. The prevalence of burnout was established using the MBI with the following outcome: 57.14% suffered from EE, 20.40% from DP and 38.77% from a low PA level (Du Plessis, Visagie & Mji, 2014). The bullets below describe the three demographic and employment trends that Du Plessis, Visagie & Mji (2014) found in their study:

- Not having children, poor coping skills, increased workload, and poor work environment were found to have a significant relationship with EE (Du Plessis, Visagie & Mji, 2014).
- While factors such as being male, not having children, low income earning, large administration load, and postponing contact with patients had a statistically significant relationship with PA (Du Plessis, Visagie & Mji, 2014).
- Lastly having a large patient load, tight and unachievable deadlines, postponing contact with patients and poor work environment had a statistically significant relationship with DP (Du Plessis, Visagie & Mji, 2014).

These results correlate with international studies. A study performed in a similar setting internationally yielded a high EE score in 42.5% (Schlenz et al., 1995) and 46% of their participants (Donohoe et al., 1993), Du Plessis Visagie & Mji (2014) study yielded higher EE rate. However, these studies were conducted ten years before. The DP was consistent with that found in international studies (Du Plessis, Visagie & Mji, 2014). No variables which impacted DP were found to be the same within this study and other studies. Therefore, no conclusion was drawn on factors influencing DP (Du Plessis, Visagie & Mji, 2014). Low income earning significantly impacted PA, which was also found by Pavlakis (2010), who studied burnout in physiotherapists (Du Plessis, Visagie & Mji, 2014).

Du Plessis Visagie & Mji (2014) stated that rehabilitation professionals, including occupational therapists, experience burnout due to the following factors: increased working hours, increased patient load, poor therapist coping skills, high patient loads with increased administrative tasks, poor work environment, challenging to reach

deadlines and lack of support from management within the centres (Du Plessis, Visagie & Mji, 2014).

A 2016 study sought to determine the level of job satisfaction in a cohort of 95 occupational therapists within one district of KwaZulu-Natal using Spector's Job Satisfaction Questionnaire (Spector, 1997; Sewpersadh, Lingah & Govender, 2016). They looked at nine work-life factors namely: salary, promotion, supervision, fringe benefits, contingent rewards, operation procedures, co-workers, nature of work and communication (Sewpersadh, Lingah & Govender, 2016). Many of these nine factors are linked to burnout causes. The study found that overall occupational therapists were not sure about their job satisfaction. Pay and promotional opportunities were two factors that lead to dissatisfaction, while the nature of their work and positive, supportive working environment leads to the most job satisfaction (Sewpersadh, Lingah & Govender, 2016).

Govender et al. (2015) and a more recent study by de Witt et al., (2019) looked at stress, resilience and coping strategies in occupational therapy students. Both studies found that occupational therapy students experience high-stress levels (de Witt et al., 2019; Govender et al., 2015).

Struwig (2020) also conducted a current study on coping strategies and burnout in South African community service occupational therapists. In this study, 55% of participants experience a high level of experienced EE with the majority of participants reported feeling EE a few times a month (mean scale score of 3.20). In comparison, 23% reported a high level of experience DP. In contrast, most participants felt a high PA level at least once a week (mean scaled score of 4.16), 33% reported feeling a low sense of PA (Struwig, 2020). However, because of this study's sample size, the research could not generalise the findings to South African community service population or novice occupational therapists in South Africa (Struwig, 2020).

2.8. Conclusion

It has been reported that Sub-Saharan Africa has 25% of the global disease burden, with only 3% of the world's healthcare workers (deNovo Medica, 2019). Sub-Saharan health facilities are underequipped and overcrowded, creating a stressed and overworked workforce (deNovo Medica, 2019). Studies suggest that South

African healthcare workers have a higher prevalence of burnout and stress-related mental disorders than the general global population (Colby et al., 2018; Rajan & Engelbrecht, 2018).

International burnout studies on occupational therapists have had most participants being female, with the method of reporting participants ages differing. Table 2.5 below shows a comparison of gender and age representativeness in burnout studies.These International and national studies have found that burnout exists among their occupational therapists using the MBI. Table 2.6 below summarises the MBI scores for various burnout studies on occupational therapists. However, there is minimal research about the extent and causative factors of burnout in occupational therapists within the South African context. Novice health professionals are reported to be very vulnerable to high work stress and establishing professional identity (Baigent & Baigent, 2018). At the time of completing this research report, recent studies describing burnout in South African occupational therapist could not be found, baring a current study on occupational therapists during their community service year on burnout and coping strategies (Struwig, 2020). However, there is no research on South African occupational therapists' burnout experiences with between 2 and 5 years of experience, who make up a high proportion of the occupational therapy workforce (DeWitt, 2016). This study on burnout in novice (2-5 years) occupational therapists will be one of the first studies done on novice occupational therapist in South Africa. Therefore this research study is uniquely positioned for this gap by exploring burnout in novice occupational therapist and describing if work-life factor influence burnout in these therapists.

Table 2.5: Comparison of gender and age representation in burnout studies

Study	Location	Sample size	Age (years)	Gender (%)
Painter et al. (2003)	USA	N=521	Mean of 36.3	Female:92 Male:8
Balogun et al. (2002)	USA	N=138	Mean of 32	Female:79 Male:21
Delos Reyes (2018)	Phillipines	N=57	24-29 (63%)	Female:75 Male:25
Brown & Pashniak (2018)	Canda	N=143	Younger than 40 (54.5%)	Female:95.7 Male:4.3
Lloyd & King (2004)	Australia	N=304	Range of 20-30	Female: 91 Male:9
Rogers & Dodson (1988)	USA	N=99	Mean of 33.3	Female:97 Male:3
Gupta et al. (2012)	Canada	N=63	Range of 26-67	Female: 92.1 Male:7.9

Table 2.6: MBI Mean scores in different burnout studies on occupational therapists.

Study	Sample size	Location	Emotional exhaustion	Depersonalisation	Personal accomplishments
Struwig (2020)	N= 78	South Africa	Mean scaled score 3.20	Mean scaled score 1.78	Mean scaled score 4.16
Delos Reyes (2018)	N= 57	Philippines	23.56	6.44	38.18
Brown & Pashniak (2018)	N = 143	Canada	16.78	9.00	38.30
Lloyd & King (2004)	N = 304	Australia	22.50	5.90	36.20
Painter et al. (2003)	N = 521	USA	23.30	4.20	37.40
Balogun et al. (2002)	N = 138	USA	29.00	18.10	18.00
Schlenz, Guthrie & Dudgeon, (1995)	N = 40	USA	25.40	6.40	39.40
Rogers & Dodson (1988)	N = 99	USA	27.40	7.7	39.6

The following chapter will discuss the research methodology; this study undertook when conducting the research.

CHAPTER 3: METHODOLOGY

3.1. Introduction

This chapter presents a detailed description of the research methods that were followed to meet the study's four objectives described in Chapter 1 (1.6) and a justification of the research design selected to achieve these objectives. Furthermore, the chapter will describe the study population and the sampling methods used. The researcher will then describe the data collection procedures, the choice, reliability and validity of data collection tools, and the ethical considerations that were followed. Finally, the methods used to analyse the data are explained.

The research study aimed to explore burnout and its contributing work-life factors, in order to gain a greater understanding of the extent of burnout and its causative factors in novice South African occupational therapists. The research method used to achieve this aim will now be described.

3.2. Study design

A descriptive quantitative, cross-sectional, survey design was used (Kielhofner, 2006).

The research's descriptive nature allowed the researcher to take advantage of a naturally occurring event, in this case, burnout, to generate insights through a deductive process (Kielhofner, 2006). Gaining descriptive information on novice occupational therapists allowed the researcher to acquire information on burnout trends, norms and needs that may inform human management practice and support novice occupational therapists (Kielhofner, 2006).

The quantitative method was used as the data gathered about burnout was numerical in nature. This data was used to determine burnout within a sample of South African novice occupational therapists and used the burnout data to explore the domains of burnout and work-life factors contributing to burnout (Leedy & Ormrod, 2005; Struwig & Stead, 2001). One of the positive characteristics of quantitative research is that it can be replicated (Bryman, 1984; Leedy & Ormrod, 2005). This study’s objectives, research method and measurement tools were defined before commencing the research and remained consistent throughout the study (Leedy & Ormrod, 2005). These previously demarcated and consistent

methods make this study replicable, which will allow other researchers to repeat the study if they wish (Struwig & Stead, 2001). The quantitative method also allowed the researcher to collect numerical data on two sets of variables: burnout domains and work-life factors. This meant that the enquiry took place using two reliable and valid measurement tools which enabled rigorous examination of these variables. The data obtained from these measurement tools were transformed into quantifiable numerical indices (Leedy & Ormrod, 2005). By using a quantitative research method allowed this study to transform individual results into general summarising statistics such as mean, median, modes and correlations (Struwig & Stead, 2001; Leedy & Ormrod, 2005). Generalising and summarising findings from individuals to a sample population allowed this study's reporting to be formal and objective in nature (Struwig & Stead, 2001; Leedy & Ormrod, 2005).

This study was cross-sectional as participants responses to the two variables (burnout domains and work-life factors) being examined were obtained at a single point in time (Babbie & Mouton, 2001; Saunders et al., 2007 Kielhofner, 2006).

The survey design allowed the researcher not to be limited by geographical location because the survey was administered electronically, which allowed the researcher to reach occupational therapists across South Africa (Kielhofner, 2006). However, it was noted that a survey design had some limitations as the measurement tools were fixed and in a strict format, which eliminated the possibility for more in-depth or abstract observation (Bell, 2005; Sarantakos, 2013). A further limitation to a survey design is the generally low response rate influenced by factors such as the participants' interest in a topic and the length of the survey contributing to this (Shannon & Bradshaw, 2002; Dillman, 2007; Liu & Wronski, 2017).

Using a descriptive and quantitative design allowed the researcher to examine the relationships between the variables (burnout domains and work-life factors) using correlations (Kielhofner, 2006).

As this study also used no hypothesis, and no variables were manipulated, a descriptive quantitative cross-sectional survey design was appropriate for this study (Kielhofner, 2006).

3.3. Population

This study's population consisted of all South African occupational therapists with 2-5 years of working experience, irrespective of place, sector, and field of practice. The estimated population of novice occupational therapists was 885. This number was estimated from the Health Professions Council of South Africa report on the number of occupational therapists registered per year. A survey table was used to calculate the sample size. Please see Appendix A for the table of calculations.

3.4. Variables

3.4.1. Independent variable

Work-life factors that influenced burnout in occupational therapists with two to five years of working experience.

3.4.2. Dependent variable

The level and domains of burnout experienced by occupational therapists with two to five years of working experience.

3.5. Sampling method

This study used an exponential non-discriminative convenience snowballing sampling method (Kielhofner, 2006; Dudovskiy, 2016). Snowballing allowed the participants to forward the research survey to other occupational therapists who met the inclusion criteria (Kielhofner, 2006; Dudovskiy, 2016). The intended participants were likely to know other novice occupational therapists. This method of sampling is a nonprobability sampling method (Kielhofner, 2006; Dudovskiy, 2016). Participants were able to complete the research survey, provided they met the inclusion criteria of employed independent practitioners with 2-5 years' work experience.

The researcher asked participants to forward the study onto other occupational therapists who met the inclusion criteria. The advantage of snowball sampling is the possibility of including members of groups which otherwise, were not identifiable (Kielhofner, 2006; Dudovskiy, 2016). A limitation of this sampling method is that the researcher had no control over who was nominated for this study, and therefore, this study could become biased (Kielhofner, 2006; Kirchherr & Charles, 2018). Bias

can occur from participants, for example, having a private practice background and therefore will have a robust private practice contact list. Therefore, this sector of practice is mostly represented. The same can be said by the type of field of practice a practitioner practices' within. This type of bias can be identified by matching the number of respondents in each category to the national data. For example, does the percentage of private practitioners who answer this survey match practitioners' percentage working in private practice nationally.

3.6. Sampling size

The study was dependent on the survey return rate. Since this study consisted of categorical data, with discrete variables and an ordinal scale, a sample size of 260-270 people was needed to be valid. This was determined using a survey table with a 0.05 margin of error, a p-value of 0.50 and a t-value of 1.96 (Bartlett, Kotrlik & Higgins, 2001). This sample size allowed the researcher to have accurate and reliable results in a limited time frame.

3.7. Data collection tools

Three data collection tools were used for this study: a demographic questionnaire as well as the Maslach Burnout Inventory-Human Services Survey (MBI-HSS) and Areas Work Survey (AWS). The MBI-HSS is seen as a gold standard assessment tool for burnout research, and the AWS was designed to be used in conjunction with the MBI-HSS (Schaufeli & Taris, 2005). In addition, they were selected because they were a reliable and efficient method to collect information from a large population group on an on-line platform (Bell, 2005; Greenfield, 2002; Silverman, 2004). A description of the purpose and nature of both the MBI-HSS and AWS is also provided below, and supplements that which is in Chapter 2 (2.5).

In this study, the researcher used primary data since participants were asked to complete the three measurement tools (demographic questionnaire, MBI-HSS and AWS), which provided the data that were then analysed.

Since the data for this study were collected on an electronic platform the three measurement tools (demographical questionnaire, MBI-HSS, and AWS) and the approved information sheet were combined into a single online distribution questionnaire via Research Electronic Data Capture (REDcap). (Appendix B)

3.7.1. The Demographic questionnaire:

The researcher designed the demographical questionnaire and provided quantitative data from 12 questions: age, gender, qualification, and work experience (see Appendix B).

3.7.2. The Maslach Burnout Inventory – Human Services Survey:

The MBI-HSS was a quantitative self-report measurement tool (Appendix B). It was copy-write protected and needed to be purchased in order to use this tool. It consisted of three subscales namely: emotional exhaustion (EE) (9 items), depersonalisation (DP) (5 items) and personal accomplishment (PA) (8 items) (Maslach and Jackson, 1981). All subscale data were continuous in nature. The frequency with which the participants experienced feelings relating to each subscale were interpreted separately. These were measured on a 7-point Likert scale (0= Never, one = a few times a year or less, 2= once a month or less, 3= a few times a month, 4= once a week, 5= a few times a week, 6= every day) (Maslach, Jackson & Leiter, 2018).

The Maslach Burnout Inventory -Human Services Survey reliability is stable throughout various studies (Maslach & Jackson, 2018). Internal reliability is consistent across a variety of samples (Maslach et al., 1996-2018). Using Cronbach's coefficient alpha (Cronbach, 1976), the following estimates were found: 0.90 for EE, 0.79 for DP, and 0.71 for PA, indicating good internal reliability (Maslach, Jackson & Leiter, 2018). The standard error of measurement for each scale has been estimated as follows: 3.80 for EE, 3.16 for DP, and 3.73 for PA. However, a few studies found that DP had lower internal reliability of 0.61, indicating a useful research tool (Bakker, Le Blanc & Schaufeli, 2005; Demerouti et al., 2009; Maslach, Jackson & Leiter, 2018).

Convergent validity for the MBI-HSS has been shown by correlating scale scores with burnout observations by others, job circumstances that were theorized to be associated with burnout, and various longer-term outcomes typically associated with burnout (Maslach, Jackson & Leiter, 2018).

A scoring key was provided in the MBI-HSS scoring manual. Table 3.1 below shows how the scores were calculated for each subsection. Each burnout domain (EE, DP and PA) has to be interpreted separately and cannot be added up to obtain a single

burnout score (Maslach, Jackson & Leiter, 2018). To score the MBI-HSS for research purposes, it is recommended to sum the scale scores for EE, DP and PA individually (Maslach, Jackson & Leiter, 2018). This method has been most often used in burnout research in the human services professions (Maslach, Jackson & Leiter, 2018). For EE, high scores mean a high level of burnout, for DP high scores mean a high burnout level, and low PA scores indicate high burnout (Maslach, Jackson & Leiter, 2018).

Table 3.1: Calculation of the sum of the scaled scores (Maslach Jackson &Leiter, 2018)

Subscale	Calculation (SUM)	Interpretation
Emotional exhaustion	Items 1 + 2 + 3 + 6 + 8 + 13 + 14 + 16 + 20	Higher scores indicate higher degrees of burnout
Depersonalisation	Items 5 + 10 + 11 + 15 + 22	Higher scores indicate higher degrees of burnout
Personal accomplishment	Items 4 + 7 + 9 + 12 + 17 + 18 + 19 + 21	Lower scores indicate higher degrees of burnout

The group scores were treated as aggregated data, and the groups mean, and the standard deviation was compared to the normative data in the manual or any local norms (Maslach, Jackson & Leiter, 2018).

The Maslach Burnout Inventory was thus chosen in order to be able to determine if these results can be related to international and local studies.

3.7.3. The Areas of Work-life Survey

The Area of Work-life Survey (Appendix B): was quantitative in nature (Leiter & Maslach, 2011). It measured six areas of work-life: workload (5 items), control (4 items), reward (4 items), community (5 items), fairness (6 items), and values (4 items) (Leiter & Maslach, 2011). Participants rated statements relating to all six areas using a 5-point Likert scale (1 =Strongly Disagree, 2= Disagree, 3 = Hard to Decide, 4= Agree, 5 =Strongly Agree). All six work-life areas measured descriptive data of a continuous nature (Leiter & Maslach, 2011).

The AWS Cronbach alpha values have been reported to range between 0.70 to 0.85 (Leiter & Malsach, 2003, Laschinger & Leiter, 2006; Leiter & Maslach, 2009.) The correlations of the six-areas range between 0.51 and 0.62, meaning that the individual subtests are similarly responsive to their work setting qualities (Leiter & Maslach, 2011). The nature of the AWS suggests that the test re-test correlations will only be valid if an employee's relationship with his work-life is consistent (Leiter

& Maslach, 2011). However, if an employee's work-life changes, for example: if the person acquired a new position or changed companies, the results will differ from one assessment to the next (Leiter & Maslach, 2011).

The authors validated the test by examining written comments from the participants with the correspondence of scores on the AWS measure (Leiter & Maslach, 2011). The authors found that the participants' comments matched the subscale to which it was most directly relevant (Leiter & Maslach, 2011). Criterion-related validity found a strong correlation between the AWS and the three dimensions of the MBI-GS in independent samples (Maslach, Jackson, & Leiter, 1996; Leiter & Maslach, 2003). This test was further validated by the correlation between the MBI-HSS and the AWS (Laschinger & Leiter, 2006). A normative sample of N = 22714 comprised of subjects from developed (America, Germany, Italy and Canada) and developing countries (Mexico, Turkey and China), was used to establish descriptive statistics and cut off scores for the AWS (Leiter & Maslach, 2011). Table 3.2 below describes the quartile cut-off values for the AWS (Leiter & Maslach, 2011).

Table 3.2: Cut off scores for the Areas of Worklife Survey (Leiter & Maslach, 2011)

6 Areas of Work-Life	25 percentiles	50 percentiles	75 percentiles
Control	2.67	3.33	4.00
Fairness	2.33	2.83	3.33
Community	2.80	3.40	4.00
Values	2.75	3.25	3.75
Workload	2.33	3.00	3.50
Reward	2.75	3.25	3.80

In this study, the AWS was scored by calculating a score for each subscale. Each item ranges from 1 - which means a substantial mismatch between the person and their work environment, and 5 - which means a strong match between the person and their work environment (Leiter & Maslach, 2011). Some item scores must be reversed before they are included in the subscale score (Leiter & Maslach, 2011). Figure 3.1 below shows how to interpret the AWS scores, while Table 3.3 below shows how to calculate AWS subscale scores (Leiter & Maslach, 2011).

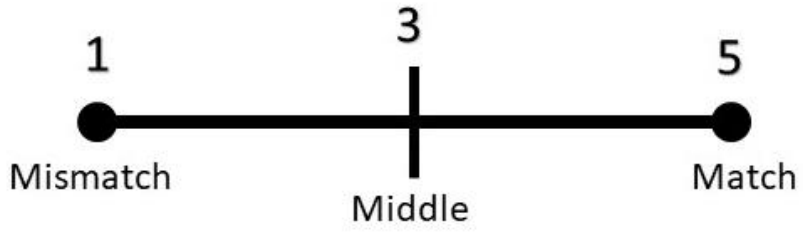


Figure 3.1: interpretation of the Areas of Work-life mean scores.

Table 3.3: Calculation of the Areas of Worklife Survey subscale scores (Leiter & Maslach, 2011)

6 Areas of Work-Life	Calculations
Control	Average of items 6, 7, 8, 9
Fairness	Average of items19, 20, 21, 22, 23R, 24R
Community	Average of items14, 15, 16, 17, 18R
Values	Average of 25, 26, 27, 28
Workload	Average of items 1R, 2R, 3R, 4, 5
Reward	Average of items 10, 11, 12R, 13R
R (reverse scoring) = (5 = 1) (4 = 2) (3 = 3) (2 = 4) (1 = 5)	

The AWS was selected as a data collection tool because South Africa is in a unique situation with both public and private sectors facing human resource challenges, which have contributed to over-worked, over-stretched and stressed health care staff (Dhai & Mahomed, 2018; Mkize, 2018). Therefore, it was crucial to look at what work-life factor(s) contributed to whether burnout was experienced or not. Being mindful that the distribution of this Survey coincided with the COVID-19 pandemic, which created unique work circumstances in South Africa. During this time occupational therapists were placed in an ethical dilemma of protecting both their clients and themselves from the consequences of COVID-19, while still ensuring clients received intervention in order to safeguard their health and well-being (Faircape Health, 2020; Ogunleye et al., 2020).

3.7.4. Research Procedure

This research was approved by Wits University's Faculty of Health Sciences Graduate Study Committee and Human Research Ethics Committee with the ethics approval number M190914 (Appendix C).

Following the above approval and the purchase of MBI-HSS, the researcher developed the electronic survey, which was circulated via REDcap. This included the approved information sheet (Appendix B) which explained the purpose of the research, outlined the research expectation of participants, time demands, that the research was voluntary, and that the participant could withdraw their participation without consequence at any point.

A small pilot study was conducted to test that questionnaires had been appropriately loaded to the online survey platform and that the questions were easy to answer.

In the pilot study, two occupational therapists from the researcher's workplace, who have six years of working experience completed the online questionnaire to determine the instructions' understandability, the transition from one questionnaire to the other and that all questions could be quickly answered. Participants from the pilot study suggested that the three questionnaires be separated by starting a new page (three pages instead of one long page). This was to ensure participants understood they were answering a new questionnaire with a new set of instructions. Feedback from these participants was noted and the electronic questionnaire corrected. Once the pilot study was completed, the research survey was distributed electronically through OTASA and National occupational therapy forum networks and South African occupational therapy social media platforms. The research was open for three months, and fortnightly reminders were sent out. After data collection, the researcher scored all measures as prescribed in the manuals. The analysis of the research data collected was then completed.

3.8. Ethical and legal considerations

Wits University's Faculty of Health Sciences Graduate Study Committee and Human Research Ethics Committee approved this research's ethical and legal considerations (ethics number: M190914). The approved information sheet was included in the electronic version of the survey. Consent was obtained from each participant by the participant clicking the next button after reading and understanding the information sheet (Appendix C).

The researcher had the responsibility to ensure that no questions within the three measurement tools were offensive. No identifying information was requested to maintain the participant's confidentiality. As the electronic survey sampling method

could have raised ethical concerns about a participant's identity, the research responses were sent to a central system, where any identifying information was removed. Table 3.4 below shows how ethical concerns using an electronic survey were addressed:

Table 3.4: Ethical considerations of an online survey

Ethical considerations:	How they were addressed in this study:
Informed voluntary consent	Prospective participants were presented with an information page which allowed them to make an informed, independent decision. Once the participants had read the information page and clicked next, informed consent was implied.
Privacy, anonymity and confidentiality	Using REDcap, participants did not have to provide their names (Patridge and Bardyn, 2018). This guaranteed that their responses could not be traced back to them. All data was then collected and transferred to an Excel spreadsheet using REDcap and stored on the researcher's password-protected personal computer for data analysis. Besides the researcher, data was only made available to the researchers' supervisors and statistician. Furthermore, according to the Health Professionals Council of South Africa (HPCSA) guidelines, all data will be destroyed after two years following this studys' publication or six years if not published (Health Professions Council of South Africa, September 2016). University names were protected in this research report by removing the names and supplying them with numbers to ensure anonymity.
Justice	This research survey attempted to recruit as many novice South African occupational therapists as possible, by using social media platforms, OTASA and national occupational therapy forum networks. This meant that participants who had access to smart devices, laptops and the internet could participate in this research.

3.9. Data management and analysis

All data were entered into an EXCEL spreadsheet. The data analysis required for each objective is listed below. The researcher made use of Statistica to analyse the results (TIBCO Software Inc., November 2018).

Objective 1: To identify and explore the three domains of burnout in novice occupational therapists according to the Maslach burnout inventory.

Descriptive statistics were used to analyse the data from the demographic questionnaire. The three domains of the MBI-HSS: were analysed using means to compare the scores to other studies as well as medians, and interquartile ranges since the data were ordinal. The data was then grouped into three categories namely: high, moderate and low and compared to the normative data found in the MBI-HSS manual and normative figures found in other burnout studies that used the

MBI on international occupational therapists and South African health care worker studies to determine the burnout prevalence rate in the sample in this study.

Objective 2: To explore the six work-life factors in novice occupational therapists within the South African context according to Areas of Work-life survey.

Descriptive statistics were used to analyse the demographic questionnaire, and the six areas of the AWS: were analysed using means to compare the scores to other studies as well as, medians, and interquartile ranges since the data were ordinal. This data was then compared to the normative data for the AWS.

Objective 3: To explore the relationship between the demographic information and the three domains of burnout and areas of work-life factors.

The Kruskal Wallis H test was used to determine if any statistical significance was found between the levels of burnout on the three domains of the MBI-HSS and the six areas of the AWS related to the demographic variables. Only the results where statistical significance (set at $p \leq 0.05$) was established were presented.

Objective 4: To explore the relationship between the three domains of burnout and the six work-life factors.

Both descriptive and inferential statistical techniques were used to acquire distributions, percentages, and statistical measures. A Spearman's rank correlation was used to explore the strength and direction of relationships between the three domains of burnout from the MBI-HSS and the six work-life factors found in the AWS. For this study, the significant correlations as significant was set at $p = 0.05$. table 3.5 below highlights the statistical tests used for each objective.

Table 3.5: A summary of research objectives, variables, type of data and the statistical tests used to obtain the results.

Objective	Variables	Type of data	Statistical test
To identify and explore the three domains of burnout in novice occupational therapists according to the Maslach burnout inventory	Dependent variable	Ordinal data, cut-offs related to means, normative data	Descriptive statistics describe the mean, median, standard deviation, percentages, frequencies, and ranges, which can be compared to normative data.
To explore the six work-life factors in novice occupational therapists within the South African context according to Areas of work-life survey	Independent variable	Ordinal data	Descriptive statics to describe, the mean, median, percentages, standard deviation frequencies and ranges. Which can be compared to normative data
To explore the relationship between the demographic information and the three domains of burnout and six areas of work-life factors.	Dependent and independent variables	Nominal, ordinal and interval data	Nonparametric Kruskal-Wallis (also known as ANOVA by Ranks) test
To explore the relationship between the three domains of burnout and the six work-life factors	Independent variable	Ordinal data	Nonparametric Spearman's rank-order correlation test

3.10. Conclusion

This chapter has outlined and justified the research methodology implemented in this research report. The researcher decided on a descriptive quantitative, cross-sectional, survey design due to the research's nature. The critical measurement tools were three questionnaires, which provided descriptive quantitative data. The participants were selected through a convenient snowballing sampling method and recruited using online professional platforms. The results were analysed through Statistica (TIBCO Software Inc., November 2018) due to the large sample of participants. The significant results and findings of this research report are discussed in the following chapter.

CHAPTER 4: RESULTS

4.1. Introduction

In Chapter 3, the research participants and how the survey was developed and distributed was described. Chapter 4 reports on the results using this study's four objectives to link efficiently to Chapter 5's discussion.

4.2. Demographic profile of the sample

There were 447 responses to the burnout survey. This was a 50.50% return rate. However, of the 447 responses, 171 responses were discarded as none of the questionnaires were completed. Another seven responses were removed as the REDcap system did not capture the participants' demographic information and only captured their MBI-HSS and AWS scores. A further two participants' responses were removed as they did not meet this study's inclusion criteria. Another six responses were excluded from this study as the AWS questionnaire was not completed. Thus, of the responses, only 261 participants were analysed. This represented approximately 29.49% of the estimated population of novice occupational therapists in South Africa, which met the required sample size estimation using the survey table (Bartlett, Kotrlik & Higgins, 2001). Of the N=261 participants, most participants were female (99.23%; n=259), and the highest percentage was between the age of 26 and 30 years old (54.40%; n=142).

4.2.1. Educational information of the sample

Table 4.1 reports that the highest number of participants had completed their undergraduate education at institution 1 (29.50%; n=77), and while there was only a single participant from institution 8. There were only 33 participants who reported having a postgraduate qualification (12.64%).

Table 4.1: Educational demographic information (N=261)

Undergraduate educational Institution	**n**	**%**
1	77	29.50
2	42	16.09
3	27	10.345
4	12	4.60
5	35	13.41
6	43	16.48
7	19	7.28
8	1	0.38
other	5	1.92
Total	**261**	**100**
Postgraduate qualification	**n**	**%**
Yes	33	12.64
No	228	87.36
Total	**261**	**100**

4.2.2. Vocational information of the sample

As can be seen from Table 4.2 below the majority of participants had five years' experience (39.85%; n=104). Most participants reported working in the field of Paediatrics (52.50%; n=137). However, 100 participants (38.31%) reported working in two or more fields of practice. Most of the participants worked in a private practice setting (50.96%; n=133), while 65 participants (24.90%) reported working in 2 or more practice settings. Most participants reported working 8 hours a day (48.28%) and held a general employee status in the organisation in which they worked (68.20%).

Table 4.2: Field of work, work setting and number of years of experience (N=261)

Work experience (years)	**n**	**%**
2	43	16,48
3	68	26,054
4	46	17,62
5	104	39,85
Total	**261**	**100**
Field of Practice	**n**	**%**
Paediatrics	137	52.50
Mental health	71	27.20
Physical rehabilitation	112	42.91
Medico-legal	25	9.58
Vocational rehabilitation	45	17.24
Other	31	11.88
2 or more fields of practice	160	61.30
Work setting	**n**	**%**
Private practice	133	50.96
Private hospital	45	17.24
Private rehabilitation centre	38	14.56
Government clinic	4	1.53
Government hospital	48	18.40
Government rehabilitation centre	6	2.30
NGO	11	4.21
School	52	19.92
Other	13	4.98
2 or more settings	89	34.10
Time at the current organisation	**n**	**%**
Under 6 months	34	13,03
6 months - 1 year	31	11,88
1-2 years	69	26,44
2-3 years	53	20,31
3-4 years	26	9,96
4-5 years	48	18,39
Total	**261**	**100**
Working hours	**n**	**%**
2 or less	1	0,38
3	2	0,77
4	5	1,92
5	5	1,92
6	11	4,21
7	27	10,34
8	126	48,28
9	50	19,16
10	23	8,81
11	3	1,15
12 or more	8	3,07
Total	**261**	**100**
Current position at an organisation	**n**	**%**
Owner	40	15,33
Manager	16	6,13
Supervisor	17	6,51
General employee	178	68,20
Other	10	3,83
Total	**261**	**100**
Employment status	**n**	**%**
Part-time	13	4,98
Full time	187	71.65
Self-employed	48	18,39
Locum	13	4,98
Total	**261**	**100**

4.3. Objective 1

To identify and explore the three domains of burnout in novice occupational therapists according to the Maslach burnout inventory - Human Services Survey.

The MBI-HSS divides the burnout syndrome into three domains, namely: Emotional Exhaustion (EE), Depersonalisation (DP) and Personal Accomplishment (PA).

Table 4.3 reports the MBI-HSS mean, median, upper quartile and lower quartile ranges for the three burnout domains.

Within the EE component, a high perceived burnout was indicated by a high EE sum of the raw mean score (>13). As seen in Table 4.3, most participants felt emotionally exhausted a few times a month to once a week. This can be interpreted by observing the mean of the raw scores at 3.98 (SD of 1.20), as it falls between a few times month (3) and once a week (4) on the Likert scale.

In the DP component, a high level of perceived burnout is indicated by a high DP sum of the raw mean score (<32). As seen in Table 4.3 below, most participants only experience depersonalisation once a month. This was interpreted by mean of the raw scores at 2.60 (SD of 1.10), indicating most people answered once a month (2) on the Likert scale.

Within the PA component, a high level of perceived burnout is indicated by a low PA sum of the raw mean score (<32). As seen in Table 4.3 below, most participants experience a sense of personal accomplishment at least once a week (4) on the Likert scale, indicating a higher sense of personal accomplishment, with a mean score of 4.76 (SD of 0.74).

Table 4.3: The Maslach Burnout Inventory-Human Services Survey participants' subscale scores (N=261).

		Mean (SD)	Median	Lower quartile range	Upper quartile range
Emotional Exhaustion (EE)	SUM of raw score	35.80 (10.80)	36.00	28.00	44.00
	Mean of raw score	3.98 (1.20)	4.00	3.11	4.89
Depersonalisation (DP)	SUM of raw score	12.98 (5.51)	12.00	9.00	17.00
	Mean of raw score	2.60 (1.10)	2.40	1.80	3.40
Personal accomplishment (PA)	SUM of raw score	38.11 (5.93)	39.00	34.00	42.00
	Mean of raw score	4.76 (0.74)	4.88	4.25	5.25

4.3.1. Categorising burnout according to the Maslach Burnout Inventory – Human services survey

Table 4.4 reports the number of participants in each burnout category. Most participants (78.54) fell into the high risk of experiencing EE category, while 49.04% of participants experienced high DP levels. However, most participants experienced a high level of PA within their workplace and therefore, a low sense of burnout in this category, as indicated by a low score, (60.15%).

Table 4.4: Categorisation of burnout scores (N=261)

Burnout domains	Burnout categorisation scores		
	High	Moderate	Low
Emotional exhaustion (EE)	205 (78.54%)	49 (18.77%)	7 (2.68%)
Depersonalisation (DP)	128 (49.04%)	101 (38.70%)	32 (12.26%)
Personal accomplishment (PA)	46 (17.62%)	58 (22.22%)	157 (60.15%)

4.3.2. Level of clinical burnout:

According to the EE+1 rule for the Maslach Burnout Inventory a participant who scored high in all the EE and DP dimensions and low in the PA dimension has been defined clinically as extremely burnt-out (Cartwright et al., 2009.; Schaufeli, Leiter & Maslach, 2008; Rotenstein et al., 2018b). Table 4.5 below shows the percentage of participants who are currently at risk of being burnt-out according to the EE+1 rule.

A total of 49.82% are at risk of burnout with 34.10% (n=89) of participants experiencing high EE and DP levels, while 3.83% (n=10) of participants experience a high level of EE and decreased feelings of PA. Only 11.49% (n=30) of participants are experiencing burnout in all three domains.

Table 4.5: Percentage of participants experiencing clinical burnout according to the EE + 1 rule (N=261) (Cartwright et al., 2009.; Schaufeli, Leiter & Maslach, 2008; Rotenstein et al., 2018b).

EE + 1 rule	n	%
High EE + High DP	89	34.10
High EE + low PA	10	3.83
High EE + High DP + Low PA	30	11.49

4.4. Objective 2

To explore the six work-life factors in novice occupational therapists within the South African context according to Areas of work-life survey

The AWS assessed the fit to the workplace of novice occupational therapists in the six different areas, namely: workload, fairness, values, control, community and reward. Using the normative data, the authors of the AWS state that a mean score of more than 3, means there is a good work-person fit, while an average of below 3, means there is a mismatch between the person and work environment. Table 4.6 below shows the normative scores of the AWS, the participants mean, median, upper quartile and lower quartile range for the subscales in the AWS.

The *area of workload*, a mean score of below 3 indicated that the participants are experiencing a high workload volume. The sample's overall mean was 2.65, which indicated a substantial mismatch between the participants and environment requirements, demonstrating that this study's participants experience higher workplace demands than the normative data sample.

The *area of control*, a mean score of above 3, indicated a balance between control and accountability in their workplace. As seen in Table 4.6, the mean of 3.58, indicates that generally, participants in this sample experienced an excellent balance of control and accountability. Overall, the sample mean was higher than the normative data, indicating a positive work fit in the control area.

The area of fairness, a mean score of above 3 indicates that resources are distributed fairly, respect is universal, and rules and procedures are consistent in an organisation. As seen in Table 4.6, the mean for fairness is 3.10, which was higher than the normative data mean, indicating the right person work fit in the fairness area.

The *area of reward*, a mean of above 3 indicates an organisation recognises an individual's contribution to the workplace. Table 4.6 shows that participants in this study feel their contribution is recognised with a mean score of 3.26.

The *area of community*, a mean score above 3 indicates an organisation provides its employees with support and collaboration. Table 4.6 shows a mean score of 3.57, which is higher than the normative data mean score, which indicates the right person work fit in the area of community.

The *area of values*, a mean score of above 3 indicates that a person and their organisation's values are alike. Table 4.6 shows a mean score of 3.60, which is higher than the normative data, indicating an organizational and personal value fit.

Compared to the normative data for the AWS, novice occupational therapists experience lower scores for workload but higher scores on all other components.

Table 4.6: Area of Work-life survey subscale scores compared to normative data (N=261)

6 Areas of Work-Life	**Mean**		**25 percentiles**		**50 percentiles**		**75 percentiles**	
	Normative data (N= 22582)	Current study	Normative data	Current study	Normative data	Current study	Normative data	Current study
Control	3.31	3.58	2.67	3	3.33	3.75	4.00	4.13
Fairness	2.78	3.10	2.33	2.5	2.83	3.17	3.33	3.67
Community	3.38	3.57	2.80	3.2	3.40	3.80	4.00	4
Values	3.24	3.60	2.75	3	3.25	3.75	3.75	4.25
Workload	2.96	2.65	2.33	2.00	3.00	2.60	3.50	3.20
Reward	3.19	3.26	2.75	3	3.25	3.25	3.80	4

Table 4.7 below shows the number of participants who experience low, moderate and high work environment–person fit. As seen in the figure below, majority of participants felt that in the categories of values (50.57%, n=132), community

(49.74%, n=122) and fairness (49.74%, n=122), there is a congruence between themselves and their workplace.

Table 4.7: participants who experience low, moderate and high work environment person fit (N=261)

	High congruence n (%)	**Moderate congruence n (%)**	**Low congruence n (%)**
Workload	43 (16.48)	122 (46.74)	96 (36.78)
Values	132 (50.57)	78 (29.89)	51 (19.54)
Community	122 (49.74)	91 (34.87)	48 (18.39)
Fairness	122 (49.74)	88 (33.34)	51 (19.54)
Control	100 (38.31)	127 (48.66)	34 (13.03)
Rewards	87 (33.33)	88 (33.34)	86 (33.33)

4.5. Objective 3

To explore the relationship between the demographic information and the three domains of burnout and six areas of work-life factors

4.5.1 Demographic factors affecting burnout

When analysing the relationships between the three domains of burnout and the demographic information a statistically significant difference in EE scores between the participants time at the place of employment and employment status held at their current organisation was found. Furthermore, a statistically significant difference between the DP scores and their field of practice. No statistical difference for personal accomplishment and any demographic variables were found when analysing the results.

4.5.1.1 Time at organisation

A Kruskal-Wallis H test showed a statistically significant difference between EE and time at an organisation, p= 0.026. Table 4.8 below shows the EE categorisation and participants time at their organisations. Participants experiencing the highest levels of high EE (92.31%) have been at their current organisation 3-4 years, followed by those who had been their current organisation six months-1 year (83.87%) and 4-5

years (83.33%). Only 52.82% of high levels of EE were experienced by participants with less than six months at their current organisation.

Table 4.8: Time at organisation and Emotional Exhaustion (N=261)

	High EE n (%)	Moderate EE n (%)	Low EE n (%)
Under 6 months n=34	20 (58.82)	11 (32.35)	3 (8.82)
6months -1 year n=31	26 (83.87)	4 (12.9)	1 (3.23)
1-2 years n=69	55 (79.71)	12 (17.39)	2 (2.9)
2-3 years n=53	40 (75.47)	13 (24.53)	0(0)
3-4 years n=26	24 (92.31)	2 (7.69)	0(0)
4-5 years n=48	40 (83.33)	7 (14.58)	1 (2.08)

4.5.1.2. Employment status

A Kruskal-Wallis H test showed a statistically significant difference between EE and employment status, p = 0.001. As seen in Table 4.9 below, self-employed participants reported the highest EE level (87.5%), followed by full-time employment (79.68%). Furthermore, the lowest percentage of high EE was reported by the participants who were locums.

Table 4.9: Employment status versus emotional exhaustion categorisation (N=261)

	High EE (%)	Moderate EE (%)	Low EE (%)
Full time n=13	79.68	17.65	2.67
Part-time n=187	69.23	30.77	0
Self-employed n=48	87.5	12.5	0
Locum n=13	38.46	46.15	15.38

4.5.1.3 Field of practice

A Kruskal-Wallis H test showed a statistically significant difference between DP and field of practice, p = 0.012.

Table 4.10 below shows the depersonalisation categorisation percentages relating to the different fields of practice. The field of paediatrics reported high levels of depersonalisation (37.84%). In comparison, high levels of depersonalisation were reported by participants in mental health (66.63%), physical rehabilitation (56.82%),

medico-legal (66.67%) and by participants working in two or more fields of practice (50%).

Table 4.10: Depersonalisation score categories relating to the different fields of practice (N=261)

	High DP (%)	Moderate DP (%)	Low DP (%)
Paediatrics n=74	37.84	37.84	24.32
Mental health n=27	66.63	29.63	3.7
Physical rehabilitation n=44	56.82	38.64	4.55
Medico-legal n=6	66.67	0	33.33
Vocational rehabilitation n=3	0	66.67	33.33
Other n= 7	42.86	42.86	14.29
Two or more fields n=100	50	43	7

4.5.1.4 Sector of practice

As seen in Table 4.11 below, participants who are currently working in the public sector (79.21%) and private sector (79.52%) are experiencing a high level of EE. While participants working in both sectors are experiencing moderate levels of EE (57.14%).

Table 4.11: Percentage of participants experiencing high, moderate and low emotional exhaustion in various employment sectors (N=261)

	High EE (%)	Moderate EE (%)	Low EE (%)
Private n=166	79.52	18.07	2.41
Public n=78	78.21	17.95	3.85
Both n=7	42.86	57.14	0
Other n=10	90	10	0

Table 4.12 below shows that both the private (48.80%) and public sectors (52.56%) experience high DP levels.

Table 4.12: Percentage of participants experiencing high, moderate and low depersonalisation in various employment sectors (N=261)

	High DP (%)	Moderate DP (%)	Low DP (%)
Private n=166	48.8	38.55	12.65
Public n=78	52.56	38.46	8.97
Both n=7	28.57	57.14	14.28
Other n=10	40	30	30

Table 4.13 below shows most participants have a high sense of personal accomplishment; however, 23.07% of participants in the public sectors experience a low level of personal accomplishment than the private sector was only 16.27% experience a low sense of personal accomplishment.

Table 4.13: Percentage of participants experiencing high, moderate, and low Personal Accomplishment in various employment sectors (N=261)

	High PA (%)	Moderate PA (%)	Low PA (%) **
Private n=166	60.24	23.49	16.27
Public n=78	57.69	19.23	23.07
Both n=7	57.14	42.86	0
Other n=10	80	10	10

**Low Level of personal accomplishment indicates a higher risk of burnout.

4.5.2 Demographic factors affecting fit to the workplace environment.

4.5.2.1 Work setting

A Kruskal-Wallis H test showed that there was a statistically significant difference for the variable employment setting and all components of the AWS.

The AWS area of workload mean rank difference for work setting was H=24.90, and a p-value of 0.0094 (highest was 178.85, and the lowest mean rank score was 78.50). Table 4.14 below shows the difference between the various employment settings and perceived workload. Occupational therapists working in either two or more public setting (100%), occupational therapists working within a government clinical setting (100%) and private rehabilitation centres (85%) experienced the least workload environment fit. While therapist working in private hospitals and both

government and private settings are experiencing a good workload-work environment fit (71.43%)

Table 4.14: Difference between perceived workload and work settings (N=261)

	Workload		
	Low congruence (%)	**Moderate congruence (%)**	**High congruence (%)**
Private Practice n=71	59,15	11,27	29,58
Private Hospital n= 14	28,57	0	71,43
Private rehabilitation centre n= 20	85	0	15
Government clinic n=3	100	0	0
Government hospital n= 41	51,22	9,75	39,02
Government rehabilitation centre n=5	40	0	60
NGO n= 4	50	0	50
School n= 28	75	3,57	21,43
Other n=10	50	0	50
2 or more private practice settings n= 57	63,16	12,28	24,56
2 or more government settings n= 1	100	0	0
Both government and private n= 7	28,57	0	71,43

While the AWS area of control's mean rank difference in the Kruskal-Wallis H test was H=22.53 with a p-value of 0.021. Table 4.15 below shows how therapists working in two or more government settings (100%) and therapists working in a government clinic (66.67%) are experiencing the least amount of control within their workplace environment, indicating a negative person-work-environment fit.

Table 4.15: Work setting and perceived amount of control in the work environment (N=261)

	Control		
	Low congruence (%)	**Moderate congruence (%)**	**High congruence (%)**
Private Practice n=71	14,08	9,86	76,06
Private Hospital n= 14	7,14	14,26	78,57
Private rehabilitation centre n= 20	20	20	60
Government clinic n=3	66,67	0	33,33
Government hospital n= 41	39,02	7,32	53,66
Government rehabilitation centre n=5	0	20	80
NGO n= 4	25	0	75
School n= 28	17,86	82,14	82,14
Other n=10	20	20	60
2 or more private practice settings n= 57	10,52	5,26	24,56
2 or more government settings n= 1	100	0	0
Both government and private n= 7	28,57	0	71,43

While the AWS area of fairness, the Kruskal-Wallis H test mean rank difference was H=37.39 and had a p-value of 0.003. Table 4.16 below shows that occupational therapists working in NGO's (100%) experienced the best person-work environment fit in the category of fairness.

Table 4.16: Difference in perceive workplace fairness and work settings (N=261)

	Fairness		
	Low congruence (%)	**Moderate congruence (%)**	**High congruence (%)**
Private Practice n=71	28,17	7,04	64,79
Private Hospital n= 14	21,43	0	78,57
Private rehabilitation centre n= 20	50	10	40
Government clinic n=3	66,67	0	33,33
Government hospital n= 41	75,61	7,32	17,07
Government rehabilitation centre n=5	40	20	40
NGO n= 4	0	0	100
School n= 28	46,43	3,57	50
Other n=10	40	0	60
2 or more private practice settings n= 57	33,33	3,51	63,16
2 or more government settings	100	0	0
Both government and private	42,86	0	71,43

The AWS area of reward had a mean rank difference in the Kruskal-Wallis H test showed H=21.38 with a p-value of 0.030 (highest mean rank score of 151.70 and lowest of 44.00). Table 4.17 below shows how occupational therapists working in government clinics (100%) and two or more government practice settings (100%) experience the least amount of workplace rewards, indicating a poor person-environment fit.

Table 4.17: Difference between work settings and workplace reward (N=261)

	Reward		
	Low Congruence (%)	**Moderate congruence (%)**	**High congruence (%)**
Private Practice n=71	28,17	11,27	60,56
Private Hospital n= 14	21,42	14,26	64,29
Private rehabilitation centre n= 20	35	10	55
Government clinic n=3	100	0	0
Government hospital n= 41	53,66	14,63	31,7
Government rehabilitation centre n=5	40	0	60
NGO n= 4	0	50	50
School n= 28	28,57	17,86	53,57
Other n=10	20	10	70
2 or more private practice settings n= 57	28,07	7,02	64,91
2 or more government settings	100	0	0
Both government and private	28,57	0	71,43

The Kruskal-Wallis H test for the AWS area of community had a mean rank difference 28.20 and a p-value of 0.003 (highest of 152.17 and lowest of 24.50), Table 4.18 below shows that occupational therapists working in private hospitals (92.86%) and two or more private practice settings (89.47%) experienced the best sense of community in their workplace environment.

Table 4.18: Perceived workplace community in different work settings (N=261)

	Community		
	Low congruence (%)	**Moderate congruence (%)**	**High congruence (%)**
Private Practice n=71	18,31	2,82	78,87
Private Hospital n= 14	7,14	0	92,86
Private rehabilitation centre n= 20	10	15	75
Government clinic n=3	66,67	0	33,33
Government hospital n= 41	39,02	4,88	56,1
Government rehabilitation centre n=5	20	0	80
NGO n= 4	25	25	50
School n= 28	17,86	14,29	67,86
Other n=10	10	0	90
2 or more private practice settings n= 57	7,02	3,51	89,47
2 or more government settings n= 1	100	0	0
Both government and private n= 7	14,29	0	85,71

Lastly, the Kruskal-Wallis H test for the AWS area of value had a mean rank score different of H=45.54 and a p-value of 0.00 (149.96 and lowest if 26.50). Table 4.19 below shows how occupational therapists working in a private hospital setting (85.71%) or two or more private practice settings (85.96%), organisation values mostly matched their own personal values.

Table 4.19: Perceived workplace values and different work settings (N=261)

	Values		
	Low congruence (%)	**Moderate congruence (%)**	**High congruence (%)**
Private Practice n=71	12,68	7,04	80,28
Private Hospital n= 14	7,14	7,14	85,71
Private rehabilitation centre n= 20	15	25	60
Government clinic n=3	100	0	0
Government hospital n= 41	51,21	7,32	41,46
Government rehabilitation centre n=5	20	0	80
NGO n= 4	25	0	75
School n= 28	10,71	10,71	78,57
Other n=10	20	10	70
2 or more private practice settings n= 57	8,77	5,26	85,96
2 or more government settings n= 1	100	0	0
Both government and private n= 7	28,57	0	71,53

4.5.2.3 Field of practice

The statistical significance for the AWS area of reward (mean rank difference H=13.69, the p-value of 0.030) and the AWS area of fairness and field of practice was found (mean rank difference H=18.07, the p-value of 0.006).

Table 4.20 below shows the percentage of occupational therapists' various fields of practice and the AWS of reward. As seen below, participants in the medico-legal field of practice (83.33%) experienced the highest reward person-workplace fit.

Table 4.20: Difference in AWS reward scores and various practice fields (N=261)

	Reward		
	High congruence (%)	**Moderate congruence (%)**	**Low congruence (%)**
Paediatrics (n=74)	66,22	6,76	28,17
Mental health (n=27)	70,37	11,11	18,51
Physical rehabilitation (n=44)	45,45	13,64	40,91
Medico-legal (n=6)	83,33	16,67	0
Vocational rehabilitation (n=3)	66,67	0	33,33
Other (n=7)	28,57	28,57	42,86
Two or more (n=100)	47	13	40

Table 4.21 below shows the field of vocational rehabilitation (100%) and paediatrics (70.27%) experienced the greatest amount of fairness within the work environment.

Table 4.21: Difference in AWS fairness scores and various practice fields (N=261)

	Fairness		
	High congruence (%)	**Moderate congruence (%)**	**Low congruence (%)**
Paediatrics (n=74)	70,27	6,76	22,94
Mental health (n=27)	48,15	11,11	40,74
Physical rehabilitation (n=44)	40,91	9,1	50
Medico-legal (n=6)	50	0	50
Vocational rehabilitation (n=3)	100	0	0
Other (n=7)	42,86	14,29	42,86
Two or more (n=100)	46	2	52

4.5.2.4 Years of experience

Following the Kruskal-Wallis H test, workload and years of experience had a mean rank difference of H= 9.20 with a p-value of 0.027. As seen in Table 4.22 below, people with more years of experience (5 years = 67.31%) seem to be experiencing higher perceived workload than those with less working experience (2 years = 41.86%).

Table 4.22: Years of experience and perceived workload (N=261)

	Workload		
	High congruence (%)	**Moderate congruence (%)**	**Low congruence (%)**
2 years (n=43)	46,51	11,63	41,86
3 years (n=68)	38,24	5,88	55,88
4 years (n=46)	26,09	8,7	65,22
5 years (n=104)	25,96	1,92	67,31

4.5.2.5 Working hours.

Following the Kruskal-Wallis H test, there was a statistically significant difference for the variable working hours and workload. The workload mean rank difference for was H=27.78 with a p-value of 0.002. As seen in Table 4.23 below, people working more than 9 hours experience the less harmonious relationship between their workload within their work environment (76.19%).

Table 4.23: The area of workload and number of hours worked (N=261)

	Workload		
	High congruence (%)	**Moderate congruence (%)**	**Low congruence (%)**
Less than 4 hours (n=8)	75	0	25
4-8 hours (n=169)	39.09	10.65	53.25
9 or more hours (n=84)	21.43	2.38	76.19

4.5.2.6 Length of time at an organisation

The Kruskal-Wallis H test found a statistically significant difference for the variable time at current organisation and AWS area of workload (mean rank difference of

21.08 and a p-value of 0.0008). Table 4.24 below shows how participants that have been at their organisation for 3-4 years are experiencing the least harmonious relationship with their work in terms of workload (73.08%).

Table 4.24: Participants workload and years of experience (N=261)

	Workload		
	High congruence (%)	**Moderate congruence (%)**	**Low congruence (%)**
Under 6 months n=34	35,29	11,77	52,94
6months -1 year n=31	28,71	12,9	48,39
1-2 years n=69	34,78	7,25	57,97
2-3 years n=53	30,19	3,77	66,04
3-4 years n=26	19,23	7,69	73,08
4-5 years n=48	33,33	6,25	60,42

4.6 Objective 4

Association between domains of the Maslach Burnout Inventory- human services survey and the Areas of Work-life Survey

A Spearman's rank correlations test was used to identify if any of the six work-life areas could predict the three domains of burnout. These results are reported in Table 4.25. As seen in Table 4.25, all correlations were significant at p=0.05. However, only the workload variable had a moderate negative correlation with EE, indicating a substantial mismatch in the work environment's workload. This had a strong correlation to a high EE level, indicating a higher perceived burnout in this dimension. Using a multiple linear regression to analyse the relationship between EE and workload indicated that 25% of the variance in EE was accounted for by a variation in workload.

Table 4.25: Correlation Area of Work-life Survey and Maslach Burnout Inventory - Human Services Survey (N=261)

	Emotional Exhaustion	Depersonalisation	Personal Accomplishment
Workload	-0.50*	-0.20	0.07
Control	-0.36	-0.28	0.32
Fairness	-0.37	-0.31	0.27
Community	-0.37	-0.25	0.33
Rewards	-0.38	-0.31	0.34
Values	-0.33	-0.30	0.28

*p=0.05 therefore only significant variable to workload and emotional exhaustion

All other corrections were negative and low for EE and depersonalisation indicating that only between 14,4% to 4% of the variation in high burnout were accounted for by a mismatch of other work variables to the work environment.

Low positive correlations were found for personal accomplishment, and work areas with low burnout were associated with a mismatch in the work variables and the work environment. The variance in personal accomplishment accounted for by the work variable was only between 0.4 and 11%

4.7 Conclusion

This conclusion section will be structured according to the four objectives of this study. Paragraph two summarises the main finding from objective 1, and paragraph three highlights the finding from objective 2. While paragraphs four, five and six highlights the key findings from objective three and in paragraph seven, objective four key findings are explored.

When exploring the three domains of burnout in novice occupational therapists we can see that, of the 261 participants, 49,42% of them can be classified as “burnt-out” by the EE + 1 rule, indicating a high prevalence of burnout within in this study’s sample. Furthermore, 78.54% of participants in this study experienced high EE levels, while only 49.04% of participants were experiencing high levels of DP, and 17.62% experienced low levels of PA.

When analysing the six areas of Work-life, participants expressed a harmonious relationship between themselves and their work in the areas of values, community, and fairness. Furthermore, this study participants indicated that they are

experiencing higher workplace demands in terms of the workload than the normative sample group.

When investigating the domains of burnout and the demographic information, a statistically significant difference in EE scores between the participants time at the place of employment and employment status held at their current organisation was found. Participants at their organisation for 3-4 years (92.31%) and were self-employed (87.5%) reported the highest EE level. Furthermore, a statistically significant difference was found between the DP scores and participants' field of practice, with mental health (66.63%) and medico-legal (66.67%) participants reporting the highest DP levels. However, no statistical difference for personal accomplishment and any demographic variables were found.

When analysing the demographic information of work setting in relations to the AWS, government clinics (100%) and private physical rehabilitation centres (85%) had the highest workload. While practitioners in private practice and school settings felt the most sense of control in their workplace and participants working in private hospitals (78.57%) and NGO's (100%) reported experiencing the greatest fairness in their workplace. The highest sense of community (92%) was reported by participants who worked in a private hospital. In contrast, the most congruent work setting in the area of values was reported by participants who worked in 2 or more private practice settings (85.96%). Lastly, participants in a government clinic and two or more government settings experienced the least amount of reward in their workplace (100%).

When examining participants' practice field related to the AWS, participants working in vocational rehabilitation (100%) and paediatrics (70.27%) experience the most fairness. Participants in the medico-legal field experienced the highest sense of reward (83.33%). When understanding the data from workload, years of experience, working hours and length of time at their current organisation was found to be significant. Participants with five years working experience (67.31%), participants who were currently at their organisation for 3-4 years (73.08%), and participants who worked more than nine hours (76.19%) reported the highest workload.

Lastly, when conducting the Spearman's correlation, it was found that 25% of the variance in EE was accounted for by a variation in workload. Statistical significance

results were found between workload and the demographic variables of work setting, number of working hours and years of experience.

In Chapter 5, the results will be discussed in detail and interpreted further. The researcher will further outline this study's limitations and recommendations for future research.

CHAPTER 5: DISCUSSION

5.1. Introduction

This penultimate chapter of this research report will review and discuss the results of this study reported in Chapter 4 with the literature to determine the extent to which the results answer of the two research questions set for this study namely:

- To what extent do South African novice occupational therapist experience the burnout?
- What work-life factors influence their work stress levels and contribute to burnout?

The chapter will begin with a discussion of this study's sample, followed by a detailed discussion of the results according to the research objectives.

5.2. Sample size and characteristics

This study's sample was delimited to occupational therapists registered as independent practitioners with HPCSA, working in South Africa with between two and five years of experience. While the population was calculated to be 885 (see 3.43) the survey was not addressed to these individuals but circulated on profession's electronic platforms. Hence, the reach of the survey to the target population was uncertain. While 447 responses were returned, 186 had to be excluded as they were predominantly incomplete. Of the 186 excluded 91.94% responses were discarded as none of the questionnaires were completed. 3.76% of the 186 responses were removed as the REDcap system did not capture the participants' demographic information and only captured their MBI-HSS and AWS scores. Another 1% of the 186 was removed as they did not meet this study's inclusion criteria. A further 3.23% of the 186 responses were excluded from this study, as the AWS questionnaire was not completed.

Thus, the sample size of 261 participants was within the sample size of 260-270 determined from a survey table with a 0.05 margin of error, a p-value of 0.50 and a t-value of 1.96 (Bartlett, Kotrlik & Higgins, 2001) and was therefore acceptable. This sample size meant that this study had a response rate of 29.49%. As this was a targeted on-line survey, this response rate is considered average (Sheehan, 2001).

Cook et al. (2000) considered that when conducting electronic online or internet surveys, the samples' representativeness rather than response rate is more important. So even though this study's non-response bias was 71.51%, this study population was well represented. South African occupational therapists consist of mostly females (95%) below the age of 40 (67.7%), and the majority of the workforce is primarily in the private sector (74.8%) (Ned et al., 2020). This study reflected the population with the majority being female (99.23%) between the age of 25-30 years old (54.40%), and the private sector was the most represented (66.28%).

5.2.1. Profile of the sample:

As reported above, participants in this study were mainly female (99.23), and most participants were between the age of 25-30 years old. The gender demographic information correlates with international studies (Brown & Pashniak, 2018; Gupta et al., 2012; Lloyd & King, 2004; Painter et al., 2003; Rogers & Dodson, 1990), besides Balogun et al. (2002) and Delos Reyes (2018) whose female representativeness was less than 90%. Reporting of age representativeness differs in methodology through the majority of studies. Table 2.5 (see section 2.8) compares personal data (age and gender) from international burnout occupational therapy research.

In a recent South African study on burnout in community service therapists, most participants were female (97.33%) (Struwig, 2020), which is similar to this study in terms of gender representation. However, in contrast, Struwig (2020) reported ages ranging between 22-30 years old, with most participants being 23 years old (54%) (Struwig, 2020). While this age difference between the two studies is predominantly due to the different inclusion criteria's (community service therapists vs therapist with 2-5 experience), it is consistent with the fact that most students enter tertiary education programmes straight after school which will also account for this age.

This study reported that only 12.64% of participants in this study had higher education post-graduate training, which is higher than reported in the Delos Reyes (2018) study of only 8%. This could be due to contextual factors as the study done by Delos Reyes (2018) took place in the Philippines, where there are not many post-graduate training opportunities. However, when we compare this number within the South African context, this study had similar postgraduate representativeness to the study by Du Plessis, Visagie & Mji (2014) of 14.29%.

This study's inclusion criteria limited participants to those having between 2-5 years of working experience, and all participants included in this study fell into this experience time frame. One of the first burnout studies by Lamb (1979), found that younger professionals with less experience were more susceptible to burnout than older, more experienced professionals. Further to this, a meta-analysis study conducted by Brewer and Shapard (2004) on age and years of experience and their relationship to burnout found a small but significant negative correlation between age and years of experience with burnout. This result indicates that younger, less experienced employees were more susceptible to burnout (Brewer & Shapard, 2004). No international or local occupational therapy studies had a limitation on the experience of their participants. However, the burnout studies by Delos Reyes (2018) and Balogun et al. (2002) had samples with the most similar work experience demographic results to this study. Delos Reyes (2018) reported that 62% of his participants had five years or less working experience. Within this study, their participants with less than ten years experienced the highest levels of burnout (Delos Reyes, 2018). Similar results to the Delos Reyes (2018) study were found in studies by Du Plessis, Visagie & Mji (2014) and Kamal et al. (2016). A study by Brown & Pashnaik (2018) who had most participants with over ten years working experience found that their participants with less than ten years' experience were experiencing higher levels of DP and lower EE levels. However, Poulsen et al. (2014), found participants with less than ten years' experience had higher EE and DP levels with low PA levels. Understanding that higher burnout rates exist in younger professionals is crucial for explaining burnout rates later described in this chapter (5.3.1, 5.3.2 and 5.3.3).

In this study, occupational therapists working in a specific context or field of practice were not targeted. While participants from both health sectors (63.60% in the private sector, 29.88% in the public sector, 2.68% working in both and 3.83% working in other) and all fields of practice were represented, the field of paediatrics was mostly represented (52.50%) followed by physical rehabilitation (42.91%) and mental health (27.2%). This is a similar general trend to national data collected by OTASA (2020). Within the OTASA censorship data collected, 69.42% of its members belonged to the private sector, 13.25% to the public sector, 36.42% in paediatrics, 11.76% in mental health and 18.24% in physical rehabilitation. These results are

similar to a study by Brown & Pashnaik (2018) whose participants were mainly from a community setting (schools) (62.5%), physical rehabilitation (46.7%), and mental health (36.7%) fields of practice. In their study, Rogers & Dodson (1990) had 48% of their respondents work with physical dysfunction; 33% of respondents worked with children and only 5% of respondents worked in mental health. However, some burnout research targeted occupational therapy fields, such as mental health (Lloyd & King, 2004; Scanlan & 2013).

Painter et al. (2003) characterised their practice settings into three categories: community-based (schools, outpatient clinics, home setting), hospitals based, and chronic settings based. Gupta et al. (2012) also characterised their work setting as a community, hospital, and chronic setting. These categories can be compared to this study's practice setting. However, Painter et al. (2003) and Gupta et al. (2012), do not consider private or public practice settings. This suggests that occupational therapy service systems differ globally, making comparing study data difficult and generalising findings to the profession even harder.

In South Africa, the regulation for full-time work is 40-45 hours per week as per Section 9 of the Basic Conditions of Employment Act. This is consistent with 48.28% of participants who work 8 hours per day. However, 22.23% of participants reported working between 9 and 12 plus hours per day, suggesting that these participants' workload did not fit comfortably into the regulated time. This study's working hours can only be compared to the study by Delos Reyes (2018) as no other burnout study could be found in the literature that reported on working hours. Majority of participants in this study reported working 4-8 hours a day (64.75%), these results are similar to the Delos Reyes (2018) study which had similar working hour results with most participants working 4-7 hours a day (63%).

Many international burnout studies on occupational therapist exist, and although there are similarities in terms of global training and approach to practice, this study's inclusion criteria differ substantially. This study aimed to explore burnout in novice occupational therapists (2-5 years of work experience). In contrast, most international studies investigated burnout in their occupational therapist regardless of their working experience (Lloyd & King, 2001; Painter et al., 2003; Moreno Rodríguez et al., 2004; Poulsen et al., 2014; Escudero-Escudero, Segura-Fragoso & Cantero-Garlito, 2020). Furthermore, this study took place within South Africa, a

developing country which makes generalisation complex. Therefore, demographic information such as age or working experience and burnout domains from this study needs to be compared to international studies with caution. This further highlights the need for more South African research on this topic.

5.3. Objective 1

Identification and exploration of the domains of burnout in novice South African occupational therapists according to the Maslach burnout inventory.

As discussed in Chapter 2 (2.5.4) and 3 (3.7.2) of this report, many ways of reporting burnout rates exist in the literature (Doulougeri et al., 2016). However, only a single method is recommended by Maslach and Leiter (2001), who developed the MBI-HSS. The developers suggest comparing the sample mean, and standard deviation to the fourth edition manual's normative data as the preferred method (Maslach, Jackson & Leiter, 2018). However, there is no normative data available for occupational therapists. Therefore, the above method will be used in conjunction with the cut-off method to compare the results of this study with other studies where occupational therapists are the sample being studied. The cut-off scores described in the Balogun (2002) study were used to interpret the results of this current study.

By using both these two methods to explore burnout rates in this study's population (sample mean and standard deviations; cut off scores) may assist future researchers to compare their results to this study, as well as limit possible problems such as over or under-reporting burnout rates (Doulougeri et al., 2016). Reporting MBI-HSS results is an area in research that needs more consistency and clarity going forward (Doulougeri et al., 2016).

Table 2.6 (see section 2.8) shows the mean and standard deviation of this study three domains of burnout than international studies done on burnout and occupational therapists. Three general trends can be drawn from these results and will be discussed below in detail using the three domains of burnout.

5.3.1. Emotional Exhaustion

The participants in this study were experiencing a higher level of perceived EE at 35.80 than any of the other studies (see Table 5.2). One possible hypothesis for this finding is this study's unique inclusion criteria and the literature that supports

younger therapists experiencing higher levels of burnout (Brown & Pashnaik, 2018; Delos Reyes, 2018; Du Plessis, Visagie & Mji, 2014; Kamal et al.,2016; Poulsen et al., 2014). Malach et al. (2001), consider EE to be the primary domain of burnout. Individuals who are often emotionally exhausted are too tired to meet the demands of their occupation and cannot engage with people (Maslach et al., 2001).

When comparing this study's results to the normative table found within the MBI-HSS manual (4th edition) this study's EE mean (35.80) is significantly higher than normative data for other services (Social Services =21.35 Mental Health = 16.89, Other = 21.42, Medicine =22.19) (Maslach, Jackson & Leiter, 2018). However, this comparison must be interpreted with caution as normative data within the MBI-HSS 4th edition manual does not exist for occupational therapists, therefore when using the normative data from this manual, we compare it to others health-care professionals.

The study by Painter et al. (2003) supports this study's' finding of a higher EE than the normative data found in the MBI-HSS manual for occupational therapists. The researchers hypothesized that occupational therapists experience a higher EE level because they tend to overextend themselves due to their professional identity of caring (Painter et al., 2003). Two further reasons can be hypothesized for this general trend being found.

The first reason for the significantly high EE level could be related to the fact that the data collection took place during the COVID-19 pandemic (March-June 2020). During the pandemic, participants in this study that were working in private practice were facing challenges such as not being classified as essential (South Africa, 2015), moving their practices online, not being able to offer routine services (South Africa, 2015), and offering support to their clients and families through alternative means. In comparison, health care workers in a public setting had the challenge of protecting themselves from the virus, attending to their patients' needs and allocated other responsibilities to help manage the pandemic.

The second reason is that this study took place in the context of South Africa. As mentioned in Chapter 1 and 2, South Africa's health care system is currently in a crisis with limited resources, staff shortages and the introduction of the NHI and places many environmental stressors (under-resources, understaffed and high

client loads) on its health care workers (Dhai & Mahomed, 2018; Mkize, 2018; South Africa Department of Health, 2019). Furthermore, private practitioners within South Africa feel the pressure of forensic audits, high administration loads relating to auditing and time constraints (how many sessions medical aid is willing to pay for) (Competition Commission South Africa, 2019; De Klerk et al., 2016).

However, the above statement must be considered with caution as international studies completed on health care workers during the pandemic have found results that differ from this current study. When analysing the literature, the researcher found differing results in the various COVID-19 MBI burnout studies in health care workers due to the use of cut-off scores (Barello, Palamenghi & Graffigna, 2020; Dinibutin, 2020). A study by Barello, Palamenghi & Graffigna (2020) on Italian health care workers, set their cut off values at different values (high = <24, moderate 15-23 and low >14), and reported that of their health care workers, only 37% experienced high levels of EE, 22% reported moderated levels of EE and 33.5% experienced low levels of EE (Barello, Palamenghi & Graffigna, 2020). However, this study results must be interpreted with caution as 14% of their EE data was missing. Due to the limited sample size, the results could not be compared to the normative data or generalised to the Italian population. Another study by Dinibutin (2020), on doctors in Turkey during the COVID-19 pandemic found that the participants in their study' median EE score were 3.00, while the median in this study was 4.00, indicating higher levels of perceived EE in this study's sample. This could be because the Dinibutin (2020) study had some limitations, the first being a low sample size (Dinibutun, 2020). The second was that the study took place during the peak of Turkey's COVID-19 outbreak. No previous burnout studies had been completed on the named population; therefore, there were no pre-COVID-19 rates or data on burnout rates when the pandemic started to subside (Dinibutun, 2020). Lastly, this study also took place in a single city; therefore, it could not be generalised to the Turkish doctor population (Dinibutun, 2020).

When considering the cut-off score reporting method, this current study reported 205 participants experiencing high levels of EE (78.54%), with 49 participants experiencing moderate levels of EE (18.77%) and only 7 participants reporting a low level of EE (2.68%). When comparing these results to those reported by Struwig (2020) in a South African occupational therapy community service sample, which

took place in the second half of 2019 and beginning of 2020, found that 55% of their participants reported high levels of EE, 31% experience a moderate level of EE, while 14% experienced low levels of EE, using the same cut-off scores. The results of the Struwig (2020) study could differ from this study' results because it took place on a single population (community service occupational therapists); therefore, only a public sector before COVID-19 was considered (Struwig, 2020).

This current study's results were also higher than Du Plessis, Visagie & Mji (2014) study that found that the mean level of EE of their multidisciplinary rehabilitation team participants was 27.88. However, Du Plessis, Visagie & Mji (2014) study had a small sample size of 49 and cannot be generalised to a rehabilitation team population within the South African context.

5.3.2. Depersonalisation

The second general trend drawn from this current study results is that the participants in this study reported higher levels of DP (mean of 12.98) than all other studies (see Table 4.6). Compared to international studies, the higher mean in this study can be explained again by the context factors, as mentioned before, South African health care workers experience and the literature supporting higher burnout in younger novice occupational therapists.

This study's mean of 12.98 was lower than the Balogun et al. (2002) study where a mean of 18.10 was reported. Balogun et al. (2002) hypothesized that their higher level of DP was due to their participants working only in a clinical setting (clinics or hospitals). Balogun et al. (2002), inclusion criteria, including all therapist regardless of their years of experience, differed considerably from this study's inclusion criteria (only 2-5 years of experience). Literature suggests that EE and DP are closely linked where DP usually occurs because a person is exhausted, and it causes them to withdraw from their clients (Innstrand et al., 2001; Maslach et al., 2001). Therefore, DP is the burnout phase that follows EE (Innstrand et al., 2002). Therefore, it can be hypothesized that this study's lower DP level is because the participants years of experience (2-5 years) are lower than the Balogun et al. (2002) study where the average was of 8 years. Therefore, it is possible if we had to follow the participants from this study longitudinally, the participants could experience higher levels of DP because, without intervention, high EE is likely to turn into DP. This is because DP

follows EE in the cycle of burnout; therefore, without intervention to assist the participants in this study, high levels of EE could turn to a higher DP later in their careers.

The Struwig (2020) study reported that 23% of her participants experienced high DP levels, while 37% of participants reported moderate DP levels, and 40% experienced low levels of DP. This current study differed in that half the participants in this study reported high DP levels (49.04%). In comparison, about a third of participants (38.70%) had moderate DP levels (which was similar to Struwig, 2020), and only 12.26% reported low levels of DP. The difference in these findings can be explained by the above hypothesis of years of experience and current COVID-19 pandemic. Struwig (2020) explored occupational therapists' burnout within one year of experience, whereas this study explored therapists with 2-5 years' experience. Therefore, participants from this study could have possibly been exposed to high levels of EE for a more extended period of time during a national health crisis and lockdown, which means they may have moved to the next phase of burnout and experiencing higher DP levels (Innstrand et al., 2001).

The mean DP of 12.98 in this current study is more than double that Du Plessis, Visagie & Mji (2014) reported with a study mean DP of 6.31. The second domain of burnout, DP occurs when a health practitioner becomes emotionally drained, which reduces the persons' capacity to meet their clients' demands, resulting in the impersonal treating of clients in order to cope with their stress (Malsach et al., 2001). The first being before the phasing in of the NHI where the study by Du Plessis, Visagie & Mji (2014) took place in 2010 in South Africa; therefore, health care professionals were not yet aware of this significant transition. The second is that the Du Plessis, Visagie & Mji (2014) study took place in a well-resourced rehabilitation centre, whereas this study was conducted across various settings. Lastly, this study took place during the COVID-19 pandemic. The current health pandemic has changed how we interact and engage with clients and the world around us (Fan et al., 2020). It has also increased the amount of personal and work-related stress health care workers experience. Therefore, an already strained health care systems, COVID-19 (Chersich et al., 2020), and change in daily practice (Sima, Thomas & Lowrie, 2017) has placed even more stress on health care workers in South Africa (Behrens, 2020) and could possibly explain the higher level of DP.

Interesting when comparing the DP mean score of this study to normative data found in the 4th edition of the MBI-HSS manual, participants in this study seem to be experiencing a higher level of DP (Maslach, Jackson & Leiter, 2018). Again, this could be linked to South Africa's health system's unique health care challenges and the fact that data collection took place during the COVID-19 pandemic.

5.3.3. Personal accomplishment

Lastly, the participants in this study are experiencing similar levels of PA (38.11) to other studies on occupational therapy cohorts, except for Balogun et al. (2002) whose participants experienced PA levels as low as 18.00 (see Table 4.6). High levels of PA are associated with feelings of competence and positive achievement in one's work (Maslach & Leiter, 2016). Low PA levels are seen as the third stage of burnout (Innstrand et al., 2001). Therefore, it is possible that due to the inclusion criteria of the Balogun et al. (2002) study, the participants from that study experienced lower levels of PA, as it included therapists with an average of 8 years of experience. Therefore, the participants in the Balogun et al. (2002) study, could already have reached the third stage of burnout (PA) due to working a more extended period than the novice therapists in this study.

The reason for similar PA results to international studies has not been hypothesized in literature. Rogers & Dodson (1990) proposed that an occupational therapist might be the most at risk of experiencing burnout in the domain of personal accomplishment because occupational therapy outcomes are often associated with small clinical gains or maintaining function which potentially could place them at risk at feeling ineffective and incompetent (Rogers & Dodson, 1990).

Overall, the occupational therapy participants from all these studies have reported higher scores than the normative data figures (Rogers & Dodson, 1990; Schlenz, Guthrie & Dudgeon, 1995; Lloyd & King, 2001, 2004; Painter et al., 2003; Brown & Pashniak, 2018; Delos Reyes, 2018). As PA is associated with feelings of competence and effectiveness, It is possible that despite the many challenges that cause High EE and DP, the autonomy, and creative nature and passion members have for the occupational therapy profession as suggested by Roger & Dodson (1990), could be the reason higher levels of PA are evident in this population.

However, more research is needed to understand why occupational therapy's profession experiences higher PA levels than the normative data.

5.4. Objective 2

To explore the area of work-life factors in novice occupational therapists within the South African context according to Areas of Work-life survey.

Maslach & Leiter (2016) reported six work-life areas that might contribute to burnout (Leiter & Malsach, 2016). Table 4.6 in Chapter 4 compares the results obtained in this study, the six areas of work-life scores in this study to the normative data available. These six areas will now be discussed, but due to a lack of AWS studies on occupational therapists, this section will be compared to the professional literature on job satisfaction. Gupta et al. (2014) is the only occupational therapy study that used the AWS in burnout research. However, the researchers did not report the AWS descriptive statistics, limiting the comparison to this study's results.

However, since the mean results from this study do not differ significantly from the normative data, it can be inferred that participants' perspectives within this study do not differ significantly from the normative sample group. Results from the AWS can be interpreted using a match-mismatch scale. Figure 3.1 shows how to interpret this scale.

5.4.1. Workload

Within the literature, workload is the most discussed variable associated with burnout (Cordes & Dougherty, 1993; Maslach, Schaufeli, & Leiter, 2001; Schaufeli & Enzmann, 1998). High workload leaves individuals with limited time and resources to complete their job demands, leading to a higher stress level (Leiter & Maslach, 2011). High level of workload has been found to have a strong correlation to emotional exhaustion (Leiter & Maslach, 2011). Research on job satisfaction within the mental health occupational therapists found that dissatisfied participants reported high workload (23%) and a large amount of paperwork (15%) as some of the reasons (Scanlan & Still, 2013).

Results in this study are slightly lower (2.65) than the normative data (2.95). This means that participants in this study are experiencing similarly high workload levels

to the normative data. However, they are marginally closer to the scale's mismatched side in Figure 3.1 in Chapter 3.

This finding is critical within the South African context, as the limited number of occupational therapists to the general population has been reported, and staff shortages are commonplace (Ned et al., 2020). In 2015 The South African Department of Health Workload Indicators of Staffing Need tool found that 407 occupational therapists are needed within community settings (NDoH, 2015). However, only 169 occupational therapists work in community settings, which means that an extra 238 therapists are needed to meet the determined target (NDoH, 2015; Ned et al., 2020). The World Federation of Occupational Therapy in 2016 also reported that globally the profession of occupational therapy has a shortage of professionals to meet population needs (WFOT, 2016) and South Africa is one of the countries where there is a critical shortage of occupational therapists (WFOT, 2016). Therefore, this shortage of occupational therapists in South Africa leads to a higher workload to meet population demands. Furthermore, the AWS manual's normative figures were taken from first world countries such as the USA, Italy and Canada within various professions such as educators, hospital and university employees.

However, it could be that South African occupational therapists often have the perception that they are overworked. However, these results reveal that our workload is not too different from the normative data. Therefore, this finding contradicts the literature that occupational therapists experience a higher workload than other healthcare professions. Therefore, it is possible to infer that there is no difference in workload between a minority and majority world occupational therapist. This could be reduced to something as simple as there is only so much time in one day, and therefore a person can only do so much within their day.

5.4.2. Fairness

Individuals view workplace fairness as the extent to which decisions are seen as fair (Leiter & Maslach, 2011). People who perceived their workplace as fair experience higher self-worth and sense of respect (Leiter & Maslach, 2011).

Just under half of the participants in this study (49.74%) had a high congruence, and a third of participants had moderate congruence (33.34%) in the area of

fairness. Furthermore, this study found that 19.54% of its participants felt their workplace was unfair, which is similar to the Struwig (2020) community service therapist study, which reported 20% of unfairness. Within the Struwig (2020) study, participants who reported high workplace unfairness linked this to their supervisors. This finding is shared within the literature, where a lower sense of job satisfaction has been associated with unfair supervision (Moore, Cruickshank & Haas, 2006).

Research on job satisfaction within occupational therapists and physiotherapists within the South African context has found that 100% of their participants felt impartial about their workplace supervision (Sewpersadh, Lingah & Govender, 2016). Further, this study looked at operating conditions, and 70% of their participants felt ambivalent, 22% were satisfied, and 8% were dissatisfied (Sewpersadh, Lingah, & Govender, 2016). Moreover, Scanlan & Still (2013), research on job satisfaction in mental health found that 23% of their participants were dissatisfied with how their organisation was run and 15% experienced difficulties with their managers.

This current study indicated that participants felt a slightly higher sense of fairness (3.10) which was closer to the match end of the scale than the normative data (2,78). This study's results were higher than Fiabane et al. (2012) study on job satisfaction and work stress within a rehabilitation centre within Italy (AWS fairness mean of 2.66). Fiabane et al. (2012) study's' participants reported that their workplace unfairness contributed the most to their workplace stress. This was also seen in Gupta et al. (2014) study, who reported their participants felt that there was a lack of autonomy and respect within their workplace (Gupta et al., 2014). Van Stormbroek and Buchanan (2019) in their study on community service occupational therapists within a South African context found that most participants had supervisors (89.6%) but not on the quality of this supervision or fairness (Van Stormbroek & Buchanan, 2019). Therefore, this contrasting finding could be due to the different contextual factors (resources, working conditions, staffing, financial gain etc.) found between South African, Canadian and Italian occupational therapists.

5.4.3. Control

The area of control captures an individual's ability to gain access to resources, influence decisions relating to their work, and practice self-government, in order to complete their work (Leiter & Maslach, 2011).

This study's results were similar (3.58) to the normative sample group (3.31), with both means being closer to the scale's match side. These results indicate that participants in this study experienced a similar sense of control to the normative sample. Occupational therapy literature on control varies in findings.

The Gupta et al. (2014) Canadian occupational therapy study found that their participants felt they lacked autonomy and decision power regardless of their practice setting (clinic, hospital, private practice).

While a study by Moore et al. (2006) on urban Australian occupational therapists found that their occupational therapists felt the most satisfied due to the nature of occupational therapy and freedom within the profession. Freedom of work can closely be related to the area of control within the AWS.

This means that this finding compliments Moore et al's. (2006) findings. It is possible that South African occupational therapists have more power to make a decision and be creative within their professions despite a limited budget and access to resources.

5.4.4. Community

The area of community encompasses workplace communication and conflict resolution (Leiter & Maslach, 2011). Results in this study were similar (3.57) to the normative sample group (3.38). This means that this study participants' felt a similar sense of community and fell closer to the scale's match side.

This result is supported by early research done by Eklund and Hallberg (1999) on Swedish occupational therapists in mental health. The researchers found that their participants were generally satisfied with the communication and co-operation among team members within their workplace.

This finding is further supported by Scanlan & Still (2013), whose participants quoted good support team (67%) for reasons for experiencing job satisfaction in their

workplace. However, in this same study, poor team communication accounted for 15% of job dissatisfaction.

Another study by Sewpersadh, Lingah, & Govender (2016) found that 84% of participants felt impartial, and 16% felt dissatisfied with their workplace communication. 62% of participants felt ambivalent towards their co-workers, and 18% were dissatisfied due to their co-workers, and 20% of participants were satisfied with their workplace co-workers.

Within the burnout literature relating to the occupational therapy profession, a person's inability to define their role as an occupational therapist has been found to contribute to the high level of burnout (Edwards & Dirette, 2010). Edward & Dirette (2010), found that the occupational therapists were more at risk for experiencing burnout when they lacked a strong professional identity. This also supports Lloyd and King's (2001; 2005) findings where lack of professional status and insufficient recognition contributed to burnout in occupational therapists. Moreover, this study's results differ from the above authors' findings and a study by Moore et al. (2006) where the participants who reported feeling dissatisfied by their job were because of an unclear role (Moore et al., 2006). An unclear role can be closely correlated with the area of community within the AWS. Further to this, occupational therapy mental health literature reports that their participants have a perception that their role is not clearly understood and appreciated (Bassett & Lloyd, 2001; Hayes et al., 2008; Lloyd, King & Bassett, 2002). The authors suggest that this perception is driven by individual therapists' low professional efficacy and resilience (Ashby, Ryan, Gray & James, 2013).

It is possible that the participants in this study have a better sense of their roles within a multidisciplinary team. However, further qualitative studies would need to be conducted on this population to understand how they see their role. It can be further hypothesized that a higher sense of community was felt due to the COVID-19 pandemic. In conjunction with the uncertainty around their professional role and the way forward, the collective need for support and information could have created a higher sense of community among the South African occupational therapists during this study's data collection.

5.4.5. Values

The area of values speaks directly to how much individuals' values match that of their organisation (Leiter & Maslach, 2011). A persons principles and enthusiasm often draw people to their jobs (Leiter & Maslach, 2011). These ideals and motivations are covered by the values dimension (Leiter & Maslach, 2011). Research has found that when there is a mismatch between a person's and organisation's values, it can weaken a person's engagement and lead to burnout (Schaufeli, Leiter, & Maslach, 2009; Siegall & McDonald, 2004).

Results in this study were similar (3.60) to the normative sample group (3.24). This means that participants in this study's participants values matched that of their organisation. However, in Gupta et al. (2014) occupational therapy study, participants felt conflicted at work because their values did not match the organisation values.

In South Africa, there is a perception that many young occupational therapists are forced into private practice due to a lack of job opportunities in the public sector. However, this may allow therapists to join organisations that possibly share the same values as them. However, this study did not inquire why participants felt a good match in values. Therefore, it is recommended for future studies that qualitative data is collected to understand novice South Africa occupational therapists' perception of the area of values within their workplace.

5.4.6. Reward

The area of reward encompasses how much a person feels their contribution is recognised (Leiter & Maslach, 2011). Results in this study were similar (3.26) to the normative sample group (3.19). This finding indicates that participants in this study are closer to the match end of the scale. This finding contrasts with Moore et al. (2006) study, where the participants reported feeling dissatisfied in their job because of low financial recognition and unclear role (Moore et al., 2006). Financial recognition falls within the areas of rewards. Further to this, Moore et al. (2006) suggest that having effective recognition of a person's achievements and contributions may enhance job satisfaction. Most participants in Balogun's (2002) study also reported feeling dissatisfied with career and pay prospects. This is consistent with the results of the Sewpersadh, Lingah, & Govender (2016) study

that found that within their South African participants quoted pay (60%), promotion (6%), and rewards (38%) as contributing factors to workplace dissatisfaction.

South African occupational therapists often have a perception that they are underpaid. However, this finding in this study contradicts this perception. In fact, occupational therapists in the public sector are paid on the same scale as physiotherapists and speech therapists (Department of Health, 2010). Moreover, recognition and promotional opportunities are the same across the board for all three professions (Department of Health, 2010). Further to this, occupational therapy and physiotherapy medical aid billing are different, which could lead to a perception of physiotherapists being paid more. However, this may not be the case as this had not been examined scientifically.

Hansen, Smith, and Hansen (2002) argued that pay/awards act to decrease job dissatisfaction, while employee recognition (praise and celebrating achievements) is crucial for job satisfaction. Therefore, it is crucial that we understand the novice South African occupational therapy perspective on reward within their workplace in future studies.

5.5. Objective 3

To explore the relationship between the demographic information and Maslach Burnout Inventory – Human Services Survey and Areas of Work-life Survey.

This section will be discussed in two parts, using both local and international studies. First, the MBI-HSS will be discussed according to four demographic variables (time at the organisation, type of employment, the field of practice, and sector of practice). The second section will discuss the AWS factors and the demographic information using five demographic variables (work setting, a field of practice, years of experience, working hours, and time at the current organisation).

5.5.1. Maslach Burnout Inventory and demographic characteristics:

5.5.1.1. Time at organisation

When analysing the three domains of the MBI-HSS to the time at the current organisation, only the domain of EE was significant at p= 0.026. Participants who were currently employed at their organisation for 3-4 years had the highest risk of

burnout in the EE domain (92.31%), while participants with less than six months at their current organisation experienced the least amount of EE (58.82%).

This could be explained by a study by Lasalvia et al. (2009) on mental health care workers who found higher exhaustion levels in staff who had been working at their current organisation for more than one year. The researchers suggested a dose-response' relation, meaning a direct relationship between EE and years of employment (Lasalvia et al., 2009). This theory could explain the correlation found between EE and years of employment.

Another suggestion could be that novice occupational therapists' initial ideas and passion for their profession could be slowly being eroded by workplace difficulties and limitations (Edelwich & Brodsky, 1980; Swidler & Ross, 1993). Swidler & Ross (1993) suggested that this was particularly true for South African trained speech therapists in their study due to South Africa being a multicultural society and students being taught through western techniques and having access to resources, which were no longer applicable in the context of their real-life work.

Although very little literature could be found to interpret these results, it can, however, be hypothesized that it is possible that the participants in this study were working in environments where there was an incorrect fit (Novotná, Dobbins, & Henderson, 2012). Therefore, increased time at an organisation that does not meet personal preferences, especially during the COVID-19 pandemic with social distancing techniques and PPE regulations could cause a person to become emotionally exhausted (Mullaney, 2017).

Another hypothesis could be that participants in this study could be experiencing emotional dissonance. Emotional dissonance occurs when a persons' expressed emotion is not the same as their experienced emotion (for example, acting happy when stressed) (Abraham, 2000). When people act happy or pleasant while experiencing negative emotions such as stress may cause emotional exhaustion due to emotional energy drained by effortfully acting pleasant (Abraham, 2000). A study by Kenworthy et al. (2014) found a consistent relationship between emotional dissonance and emotional exhaustion (Kenworthy et al., 2014). Therefore, it could be hypothesized that a person at an organisation for longer could experience higher

emotional dissonance. However, more evidence would be needed to support this theory.

5.5.1.2. Type of employment

This study found that participants who were self-employed reported experiencing the highest amount of EE (87.5), followed by participants who worked full-time (79.68). This finding can be explained by the COVID-19 pandemic, which limited self-employed participants earnings due to the restrictive regulations associated with the Disaster Management Act.

This is different from the Delos Reyes (2018) study, where researchers found that their part-time working participants reported higher EE and DP levels. However, Delos Reyes (2018) study differs significantly from this study as the participants from the Delos Reyes (2018) study only had the option of full-time vs, part-time employment. Further to this, Delos Reyes (2018) found that their participants who worked part-time reported travelling issues and adjusting to multiple work environments to be the leading cause of their stress. This study additionally found that therapists who had seven or more contact hours with patients had a high EE and PA level. The stress was not believed to be linked to the number of clients seen, but rather the number of hours worked (Delos Reyes, 2018). Interestingly enough, the number of hours worked was not directly correlated to EE and PA in this current study.

South Africa's public health system has limited job opportunities for newly graduated occupational therapists due to limited funding and post opportunities (Ned et al., 2020; South Africa Department of Health, 2019). The limited of opportunities in the public sector forces novice occupational therapists to find work within the private sector (Ned et al., 2020). However, the private sector is more competitive, and occupational therapists with little experience compete with therapists with more experience for the same job.

What is interesting about this result is this study examined only participants with 2-5 years of experience, which led the researcher to hypothesize that some therapists with limited experience are forced to become self-employed, leading to higher levels of EE due to not being experienced and experiencing higher workplace and financial stress, with possible poor coping strategies.

People who are self-employed have additional responsibilities in a work environment, which places more physical and financial stress (especially in the time of COVID-19 and loss of income) and demands on them (Schonfeld & Mazzola, 2015). This could explain why participants in this category experience the highest amount of EE (Gandi et al., 2011).

5.5.1.3. Field of practice

Participants in this study reported the highest amount of DP when working in the field of mental health, physical rehabilitation, and medico-legal, respectively. This finding correlates to the Painter et al. (2003) study, whose mental health and rehabilitation participants experienced high burnout levels in all three domains. Painter et al. (2003) hypothesized that this was due to intrinsic and extrinsic factors associated with these more chronic settings.

This hypothesis is further supported by literature (Bailey, 1990b; Brown & Pranger, 1992; Maslach, 1978, 1982; Sortet & Banks, 1996; Wandling & Smith, 1997). Literature has found that patients in a chronic setting have more emotional, physical, and cognitive deficits (Bailey, 1990b; Brown & Pranger, 1992; Maslach, 1978, 1982; Sortet & Banks, 1996; Wandling & Smith, 1997). This means that occupational therapists in these settings need to overcome more barriers to achieve therapy goals (Painter et al., 2003). These obstacles will impact the severity of their burnout (Bailey, 1990b; Brown & Pranger, 1992; Maslach, 1978, 1982; Sortet & Banks, 1996; Wandling & Smith, 1997).

Further to this, Painter et al. (2003) suggest that these settings have more stress associated with higher workloads, limited resources, and reduced autonomy. These factors place more time and energy constraints on the occupational therapists leading to burnout (Painter et al., 2003)

No current burnout occupational therapy studies mention medico-legal work in their studies. However, due to the nature of this field of practice, it is understandable why a high amount of DP can be found. The medico-legal field is associated with chronic disabilities that severely impair function (Cook & Lukersmith, 2010). Therapists in this field may have higher DP levels because, as practitioners, they are trying to protect themselves from their daily negative experiences (Maslach, Jackson & Leiter, 2018). This field of practice is also associated with high-stress levels due to

tight deadlines and reports that require accuracy and evidence that is legally defensible (Cook & Lukersmith, 2010). High stress, tight deadlines, and administration have been associated with higher burnout levels in the literature (Gandi et al., 2011). Furthermore, during the COVID-19 pandemic, South African therapists working within this field experienced significant payment difficulties from the Road Accident Fund, which withheld funds because the service was seen as unessential (Medical Brief, 2021).

5.5.1.4. Sector of practice

Over two-thirds of participants in both private (79.52%) and public sector (78.21%) reported experiencing high levels of EE. While just over half of the public sector participants (52.56%) experienced high DP levels, and just under half of the participants experienced high DP levels from the private sector (48.8%). Moreover, half the participants in the public (57.69%) and private sector (60.24%) also experienced a high sense of PA. However, more public participants (23%) reported a low PA level, than the private sector (16%). Lower PA is associated with being at risk of experiencing burnout. The above results mean that participants in this study, regardless of the sector in which they work, are experiencing similar burnout levels in the three domains. This could be because both sectors hold unique workplace challenges. A possible future study could be conducted on the unique sector challenges placed on South African occupational therapists. Another hypothesis for this finding could be due to the data collection occurred during the COVID-19 pandemic, as mentioned previously.

This result for an occupational therapy cohort contradicts Coetzee & Kluyts (2020) study on South African Anaesthetists, who found that participants in the public sector reported higher EE and DP levels and lower PA levels than private sector participants. However, due to these two professions' different nature and scope of practice, a conclusion cannot be drawn.

5.5.2. Areas of Work-life Survey and demographic characteristics:

5.5.2.1. Work setting

The results of this study indicated that the work setting correlated with all six areas of work-life.

In the workload area, participants working in a private hospital setting (n=14) and participants working in both the private and public sector (n=7) experienced the most harmonious relationship to their workload. While all participants working in a government clinic (n=3) and two or more government settings (n=1) experienced a complete incongruent relationship to their workload. Moreover, 85% of participants working in a private rehabilitation centre (n=20) and 75% of participants working in a school (n=28) also reported having a higher workload than they could manage.

In the areas of control, participants working in private practice (n=71), private hospital (n=14), school (n=28), government rehabilitation centre (n=5), and both the private and public setting (n=7) reported experiencing the most sense of control in their work setting. Simultaneously, 60% of participants from the government clinic setting (n=3) reported the least amount of control.

In the area of fairness, 100% of participants working in NGO (n=4) felt their workplace had fair rules and experienced justice. While 50% or more of the participants from private rehabilitation centres (n=20), government clinics (n=3), and government hospitals (n=41) felt their settings did not have fair or justice.

In the area of reward, over 60% of participants from private practices (n=71), private hospitals (n=14), and two or more private practice (n=57) settings experience high congruence in the area of reward with their organisations. However, all participants from a government clinic (n=3) setting felt a mismatch between the area of reward and their workplace.

In the area of community, two-thirds of the participants working in government clinics (n=3) reported a poor sense of community in their organisations. While the majority of participants working in private practices (n=71), private hospitals (n=14), government rehabilitation centres (n=5), and both private and public settings (n=7) experience a positive sense of community in their organisations.

In the area of values, all participants from government clinics (n=3) setting reported a low congruence of values with their work setting. Once again, the majority of participants from private practice (n=71), private hospitals (n=14), schools (n=28), two or more private practices (n=57), and government rehabilitation centre (n=5) felt their organisations' values matched theirs.

Overall, the meaning of these findings suggested that working in the private sector could possibly produce a more harmonious relationship to a persons' workplace in the six Areas of Work-life. However, a more transactional view that looks at the person within a specific context analysing more than one factor at a time could provide a better analysis of these findings. It should be noted that the one participant that represented working in two or more government settings had a low congruence to all six Areas of Work-life. Due to the low representation, no conclusion can be drawn. However, examining AWS and public health settings could be considered for further research. Currently, no studies exist that analyse the AWS to demographic information and, therefore, these cannot be compared. Overall, due to the limited sample size in the various work settings, these results need to be interpreted with caution.

5.5.2.2. Field of practice

Field of practice was found to have a relationship with the AWS areas of fairness and reward. Mental health, paediatrics, and vocational rehabilitation reported having the highest congruence in the area of rewards with their workplace. While 100% of participants from the vocational rehabilitation field (n=3) and 70% of participants from the field of paediatrics (n=74) felt their workplace was fair.

No literature exists on occupational therapists and their perception of reward and fairness in their perspective fields. An interesting future study could potentially investigate job satisfaction and occupational therapists in a variety of fields.

However, the literature on job satisfaction in occupational therapists exists. The AWS area of reward is often associated with recognition in the form of pay scales, awards, and promotions. Literature indicates that salary is most often associated with job dissatisfaction in occupational therapists (Scanlan & Still, 2013; Sewpersadh, Lingah & Govender, 2016). A South African study on job satisfaction within the KwaZulu Natal public health sector found that participants in their study were dissatisfied with the salary scales and found the structure of promotions unfair (Sewpersadh, Lingah & Govender, 2016). Therefore, it is possible that within the private sector, occupational therapists in the fields of mental health, vocational rehabilitation, and paediatrics provide their professionals with adequate reward structures within their workplace.

5.5.2.3. Years of experience

A participant's years of experience were found to be correlated with workload. Participants' years of experience directly correlated to the amount of workload they had (increasing years of experience came to a higher workload). As mentioned in the literature previously, a high workload is associated with high levels of EE (Schaufeli, Leiter & Maslach, 2008). Therefore, this finding of higher years of experience and higher workload indicates that a study on more experienced South African occupational therapists (above five years of experience) is needed in order to understand burnout within this population and see if there is a correlation between burnout, workload and years of experience.

5.5.2.4. Working hours

The AWS area of workload and working hours was found to be correlated. Working hours were found to have a direct correlation with workload. The more hours a person worked, the higher their workload was reported to be. High workload has been directly correlated with high EE (Schaufeli, Maslach & Leiter, 2008). Literature suggests that employees working over 40-60 hours per week are at a high risk of experiencing burnout (Hu, Chen & Cheng, 2016).

A South African study by Du Plessis, Visagie & Mji (2014) found that 22.23% of participants reported working between 9 and 12 plus hours per day, suggesting that these participants' workload did not fit comfortably into the regulated time, which correlates with this current study where 32.18% of participants worked nine or more hours, with 75% of them reporting a low congruence with the workload and their environment.

5.5.2.5. Time at the current organisation

Length of time at a participant's current organisation and the amount of workload was found to be correlated. This study found that participants who were currently at their organisation for 3-4 years were experiencing a higher workload than they could manage. These results support the literature that suggests that the longer a person works at an organisation, the more responsibility they are given, therefore increasing their workload (Schaufeli, Leiter & Maslach, 2008).

Workload is strongly associated with higher levels of experienced EE (Maslach & Leiter, 2001). Therefore, it is possible that this workload finding could explain why

time at organisation and EE were found to be correlated in the previous section (5.2.4.1.1). This hypothesis will be explored below when discussing the last objective.

5.6. Objective 4

To explore the relationship between the domains of burnout and the work-life factors.

This study found that all six work-life areas negatively correlated to EE, DP, and PA. However, a significant correlation was found between workload and EE. This finding supports the literature. Literature suggests that workload directly relates to EE (Cordes & Dougherty, 1993; Maslach, Schaufeli, & Leiter, 2001; Schaufeli & Enzmann, 1998). Further to this high workload is perceived as one of many work-related demands that can create higher stress levels and is correlated with EE in occupational therapy practitioners (Gupta et al., 2012). Therefore, ongoing high workload demands could lead to adverse health conditions such as hypertension, elevated heart rate, and chronic sleep difficulties (Siegrist et al., 2004). Du Plessis, Visagie & Mji (2014) found that poor coping skills, increased workload and poor work environment had a significant relationship with EE. Therefore, it is imperative that occupational therapists identify high workloads and increased stress to identify when to get help so that EE does not occur. Moreover, investigating further into participants' work environments is imperative to understand what is causing such high EE and DP levels within this sample.

This finding contradicts previous studies where it has been found that the area of community is a significant predictor for PA, the area of reward is a significant predictor for PA, and the area of values is a predictor for PA, DP, and EE (Leiter & Maslach, 1999; Maslach & Leiter, 2005). Du Plessis, Visagie & Mji (2014) found a statistical relationship between the area of workload (having large patient loads, and hard to reach deadlines) to DP. Further occupational therapy burnout literature suggests that the area of reward (low-income earnings) can significantly impact a persons' reported levels of PA (low level of PA) (Du Plessis, Visagie & Mji, 2014; Pavlakis, 2010).

The absence of relationships for the results of the other areas of work-life and EE, DP, and PA could be attributed to various factors such as self-report bias.

Furthermore, the sample from this study might not be experiencing difficulties in the other areas of work-life. It is also possible that the COVID-19 pandemic and the stress and uncertainty associated with it during the time of data collection could have contributed to no link being found, especially considering many participants in private practice had their livelihood taken away due to not being classed as essential and participants in public sectors were not doing their usual job descriptions.

5.7. Conclusion

Using the three domains of burnout and Innstrands et al. (2002) theory of how burnout is experienced (first stage emotional exhaustion, second stage depersonalisation and finally low levels of personal accomplishment), it can be hypothesized that novice South African occupational therapist in this study can be described as experiencing high levels of first (emotional exhaustion) and second stage burnout (depersonalisation). With participants experiencing relatively low levels of the last stage (personal accomplishment).

Interestingly, occupational therapists appear to have a higher EE, DP, and PA level than the normative data found in the fourth edition of the MBI manual and international occupational therapy studies. It is possible that due to the COVID-19 pandemic and South Africa's health care system has contributed to why participants in this study experienced higher levels of burnout than international health care workers (Colby et al., 2018; Rajan & Engelbrecht, 2018).

Like other studies, high levels of workload were found to be directly correlated to high EE levels. The AWS factors and job satisfaction indicators are subjective experiences, which are embedded in context. Therefore, the exact influence the six areas of work-life have on the South African novice occupational therapy profession would be better understood by an in-depth study on this given population and its specific working environments.

The literature on the MBI and AWS suggests that control is the central concept that shapes an individual's work-life (Gascón et al., 2013, Leiter and Maslach, 2004, Leiter and Maslach, 2009, Leiter and Shaughnessy, 2006). It is believed that control is related to workload, reward, fairness, and community (Gascón et al., 2013, Leiter and Maslach, 2004, Leiter and Maslach, 2009, Leiter and Shaughnessy, 2006). It is theorised that individuals who have autonomy and freedom to make decisions within

their workplace will experience less burnout (Gascón et al., 2013, Leiter and Maslach, 2004, Leiter and Maslach, 2009, Leiter and Shaughnessy, 2006). At the same time, values are believed to integrate a person's relationship of control, fairness, reward, and community within their workplace (Gascón et al., 2013, Leiter and Maslach, 2004, Leiter and Maslach, 2009, Leiter and Shaughnessy, 2006). This theory of how the six areas of work-life directly relate to burnout within the MBI could be explored further in future research. Moreover, since high EE and DP levels were found amongst the South African novice occupational therapy participants in this study. It is essential to understand why a relationship was not found between the other five areas of the AWS and EE and DP, and possibly explore alternative reasons (possibly COVID-19 pandemic) for the experienced EE and DP.

No research could be found on the AWS and occupational therapist profession; thus, this study is one of the first to capture normative AWS data on the occupational therapy profession. Therefore, the researcher recommends that future studies include a qualitative section that allows participants to express why they answered the way they did for the six areas of work-life factors to determine what precisely other than workload in the South African context is affecting burnout.

CHAPTER 6: CONCLUSION

This chapter will provide a summary of the main research findings and answer the research question. Then, this chapter will outline the influence the results have on occupational therapy practice. Lastly, this chapter will highlight this study's limitations and recommend future research directions related to this topic.

6.1. Summary of main research findings:

This research study used a mixture of quantitative content analysis and deductive approach to answering the following two research questions:

- To what extent do South African novice occupational therapists experience burnout?
- What work-life factors influence their work stress levels and contribute to burnout?

It is essential to remember that this study's data collection took place during the height of the COVID-19 pandemic between March to June 2020.

This study was the first to use the MBI-HSS and AWS with novice South African occupational therapists found in published research and dissertations, addressing a gap in the occupational therapy literature. Furthermore, this research study was also one of the first studies to attempt to understand burnout within the novice South African occupational therapy population, addressing a significant research gap within the context of South Africa. The four core findings of this study highlight a few critical factors which should be taken into consideration.

Firstly, high levels of EE and DP were found in participants. Emotional Exhaustion is seen as the first stage of burnout and can cause DP and low self-efficacy to occur. Further to these high levels of burnout have been associated with intentions to leave one’s profession within the literature. This means that South African occupational therapists in this population must be educated on early burnout identification and possible prevention measures so that complete burnout cycle does not occur because South Africa has already been identified as one of the many countries with a shortage of occupational therapists.

Secondly, this study’s mean EE score of 3.98 (SD of 1.20) is higher than the normative data found in the MBI-HSS 4th edition manual, and all international and

local studies. Moreover, this study's DP mean score of 2.60 (SD of 1.10) was higher than the normative data and local and international studies besides Balogun et al. (2002) study. Therefore, we must understand South Africa's unique work contextual factors further to understand exactly how these influence burnout rates among our health care professionals.

When analysing the demographic information with EE, the following was found: (1) participants who were currently employed at their organisation for 3-4 years had the highest risk of burnout in the EE domain (92.31%), (2) participants who were self-employed reported experiencing the highest amount of EE (87.5%), followed by participants who worked full-time (79.68%). This finding can be explained by the COVID-19 pandemic, which limited self-employed practitioners' earnings due to the Disaster Management Act (South Africa, 2015). After exploring the reported levels of DP and the demographic information, participants working in mental health, physical rehabilitation, and medico-legal field were experiencing high DP levels. Furthermore, the results of this study indicated that, regardless of the sector participants were practising in, similar experienced levels of burnout in the three domains can be found. This could be because both sectors hold unique workplace challenges.

Thirdly, high PA (mean = 4.76 and SD = 0.74) were found in this study. This was found to be either higher or similar values to international studies. Furthermore, both public (57%) and private (60%) settings reported a high sense of PA. This finding could make an interesting research topic into the occupational therapy profession and what factors within the various fields and sectors of practices give a person a higher sense of PA than other professions.

Fourthly, workload was found to be correlated to EE at -0.50, which matches international studies findings. Therefore, human resource departments would be wise to implement workload balance strategies within their work environments to prevents EE from occurring in their employees. When analysing the six Areas of Work-life and sector of practice, the results suggested that working in the private sector could produce a more congruent relationship to a persons' workplace in the six AWS. However, a more transactional view that looks at the person within a specific context analysing more than one factor at a time could provide a better analysis of these findings.

Lastly, this study's recommendation and limitations can be used to inform future research studies. This will ensure a better understanding of burnout in South African occupational therapists so that the profession can better protect its health professionals as healthier health professionals will be able to offer better quality service to the South African population.

6.2. Limitations of this study:

The MBI-HSS and AWS within burnout literature are reported as valid and reliable measurement tools. In retrospect, adding more questions on participants' demographics and using open-ended questions could have been used to get more accurate demographic information. Additional explanations around the six areas of work-life would have helped understand why participants responded the way they did. This would lead to a better understanding of the unique contextual factors South Africa health care professionals are facing and what could be contributing to such a high burnout rate being found.

A further limitation to this study was the sampling method, which meant that it was unknown if this research study reached the entire novice occupational therapy population due to a lack of access to smart technology and social media platforms. Future studies unburdened by COVID-19 restrictions could make use of pen and paper surveys to various occupational therapy settings throughout the country. Therefore, this may have caused an under-coverage bias (Bhandari, 2020), which means the results could be skewed. For example, more burnout participants that answered this survey causing the results to look more harmful than they are. Further to this, this study was cross-sectional, which means that it was conducted at one point in time during a global pandemic; therefore, temporal bias could have been created (Thomas, 2009). Further to this many surveys came back unanswered which could be because many people open the information sheet to read about the study and realised it was not for them, and the system automatically returned it to the researcher. Additional to the above, the questionnaire was lengthy.

This study's survey made use of self-reported questionnaires. Self-reported questionnaires are subjective and create bias at times due to the environmental circumstances in which participants fill in the questionnaires may differ. For example, the time of day. Future studies might want to put in control measures such

as participants filling in the form at the same time of the day, to avoid subjective day fatigue from occuring.

This study was sent out electronically, and fortnightly reminders were sent on all electronic platforms. Literature also suggests that web-based response rates can be improved using electronic and mail methods to respond to the survey (Millar and Dillman, 2011). If financial means allow it, this method should be considered in future studies to improve the number of responses for studies similar to this one.

6.3. Recommendations for future practices and research directions:

The following recommendations can be used to inform future research studies and practices within this field:

6.3.1. Profession:

- Employers (in private and public sector) and the professional body (OTASA) could look at providing support structures to young professional using mentorship programs and possibly screening for burnout for early identification.
- Universities and employers within South Africa could implement wellness and burnout management programmes to help young professionals manage their mental health and stress levels, which can be linked to professional development points with the HPCSA.

6.3.2. Education:

- Undergraduate occupational therapy curriculums would be wise to research possible resilience and stress management programs that could be implemented into their courses to assist new professionals with identification and prevention strategies to avoid high burnout rates.

6.3.3. Research:

- A collection of normative data using the MBI and AWS is recommended on occupational therapists. This will assist in making appropriate conclusions on global burnout rates and their effects.

- A study should be completed on students' level of stress and burnout within the profession of occupational therapy, to mitigate and implement burnout strategies in young professionals.
- An agreed-upon method of reporting MBI figures among researchers within burnout occupational therapy literature will produce a better interpretation of results.
- Further studies can be done on this same population to determine what effect burnout may have on a person's short-term and long-term health.
- This study's data analysis was deductive and did not include qualitative information; therefore, duplication and improving this study's methodology may provide better quality and understanding of the results.
- Future studies should include other demographic information such as children, home life, and personal financial situations that may cause a person to be susceptible to burnout.
- International and local studies on job satisfaction of occupational therapists and health professionals have found strong correlations to job dissatisfaction and burnout. Therefore, this could make an interesting future research topic that can be explored in this study's population.
- The effects of COVID-19 have not yet been identified in this study's population and because this study took place during the global pandemic. A future study should aim to explore burnout rates in this population outside of a global pandemic to make accurate conclusions on the burnout rates in this novice population.
- It is recommended that a longitudinal study takes place in which novel occupational therapists are followed over their careers within an organisation. This will help determine if changes in work area affect burnout and what personal/organisational factors help them prevent burnout syndrome.
- A further suggestion would be to analyse the AWS using a work engagement model. Using an engagement model will allow researchers to look beyond the negative connection to burnout and gather insight into whether or not a professional such as occupational therapists are more engaged in a particular area of work-life.

- Furthermore, information using the AWS can be gathered on how organisations are working towards a positive work experience. For example, how are organisations maintaining a viable workload, how are employees being recognised within an organisation, or how are organisations fostering a positive community within the workplace. Using the AWS in this manner will allow researchers to understand burnout through a lens of engagement and provide a working theory for the human resource department.
- Lastly, burnout continues to be a critical factor in the loss of productivity, absenteeism, staff turnover, poor health outcomes, substance abuse, and mental illness (Maslach et al., 2001). Therefore, a further recommendation could be to understand the cost of burnout to an individual and its organisation within the occupational therapy field.

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Appendix A: Population calculation

Year	2018	2017	2016	2015
Number of OT's registered	5198	5021	4812	4534
Number of new OT registration between years	177	209	278	
Average of new OT	221 (estimate between 2018 and 2019)			
Estimated total population (n)	221 + 177 + 209 + 278 = 855			

Appendix B: Measurement tools

STUDY INFORMATION DOCUMENT

Study title: Burnout experienced by South African novice occupational therapists.

Introduction:

I, Morgann Bruce, am doing research on Burnout experienced by South African novice occupational therapists as part of my MSc OT degree at the university of the Witwatersrand. Research is a process used in seeking new knowledge. In this study we want to learn if novice occupational therapists are experiencing burnout. International studies have found that burnout exists among their occupational therapists, but there is a very limited amount of research about burnout in occupational therapists within the South African context.

Invitation to Participate: I am inviting all occupational therapists with 2-5 years working experience to participate in this research study.

What is involved in the study: This study will require you to fill in 3 questionnaires online, they will take approximately 20 minutes to complete:

1. The demographical questionnaire will appear first. This questionnaire will ask you questions about your age, gender, qualification and work experience. Kindly mark the appropriate box.
2. The second questionnaire to appear will be the Maslach Burnout Inventory. It will consist of 22 statement of job-related feelings. If the statement doesn't apply to you please select zero (0). If the statement does apply to you please indicate how often by selecting from 1 until 6 from the options provided.
3. The third questionnaire is the Areas of work-life survey. This survey consists of 28 statements, where you need to rate your agreement with the statement.

Please note by clicking agree you have consented to participate in this online study.

If you know of any other occupational therapists with 2-5 years' experience, I ask you kindly to please forward this study link.

Risks of being involved in the study: This research study has no anticipated risks.

Benefits of being in the study: There is no personal benefit to completing this study, but by you taking part it will help the occupational therapy profession to identify negative work life factors that increase the risk of experiencing burnout. This will then allow the profession to put in place the necessary measure in order to reduce the risk of burnout within human resources for example employee wellness programmes.

Participation is voluntary, you may choose to discontinue participating in the research at any time.

Confidentiality: This research study does not require you to share your personal identity.

All data collected in the course of the study will be securely retained for two (2) years, if a scientific publication arises from the study and six (6) years, if there is no publication. Thereafter it will be destroyed accordingly.

Anonymity is guaranteed. Your answers to this study are linked to a number. No personal information is used.

Contact details of researcher/s: if you have any questions, please feel free to contact me via email: burnoutresearch34@gmail.com or tel: 011 7173701

Contact details of HREC administrator and chair.

This study has been approved by the Human Research Ethics Committee (Medical) of the University of the Witwatersrand, Johannesburg ("Committee"). A principal function of this Committee is to safeguard the rights and dignity of all human subjects who agree to participate in a research project and the integrity of the research.

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

Thank you for reading this Study Information Sheet.

Demographical questionnaire:

Please fill in the following information. Please mark more than one box if appropriate.

Personal Information:						
Age (in years)	21-23	24-26	27-29	30-32	33-35	Other:
Gender	Male			Female		

Qualification:						
What year did you obtain your undergraduate degree in?	2018	2017	2016	2015	2014	2015
Where did you obtain your undergraduate degree from?						
Do you have any postgraduate qualifications?	Yes	No	If yes, please indicate year and degree obtained:			

Work experience:						
How many years have you been working?	2 years		3 years	4 years	5 years	
Where do you currently work:	Private practice		Private hospital	Rehabilitation centre		
	Government clinic	School	Government hospital	Other:		
What field are you currently in?	Paediatrics	Mental Health		Physical rehabilitation	Medicolegal / vocational rehabilitation	
On average how many hours a day do you work?	Less than 4 hours	4-6 hours		6-8 hours	8-10 hours	10 or more
How long have you worked at your current organisation?	Less than 6 months	6 months – 1 year	1-2 years	2-3 years	3-4 years	4-5 years
Employment status	Self-employed	locum	Part-time	Full-time	Other:	
What position do you currently hold?	Owner	Manager / HOD	Supervisor	General employee	Other:	

MBI Human Services Survey

MBI Human Services Survey

Christina Maslach & Susan E. Jackson

The purpose of this survey is to discover how various people working in human services or the helping professions view their job and the people with whom they work closely.

Because people in a wide variety of occupations will answer this survey, it uses the term *recipients* to refer to the people for whom you provide your service, care, treatment, or instruction. When answering this survey please think of these people as recipients of the service you provide, even though you may use another term in your work.

Instructions: On the following pages are 22 statements of job-related feelings. Please read each statement carefully and decide if you ever feel this way about *your* job. If you have *never* had this feeling, write the number "0" (zero) in the space before the statement. If you have had this feeling, indicate *how often* you feel it by writing the number (from 1 to 6) that best describes how frequently you feel that way. An example is shown below.

Example:

How often:	0	1	2	3	4	5	6
	Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

How often 0-6	Statement:
1. _____	I feel depressed at work.

If you never feel depressed at work, you would write the number "0" (zero) under the heading "How often." If you rarely feel depressed at work (a few times a year or less), you would write the number "1." If your feelings of depression are fairly frequent (a few times a week but not daily), you would write the number "5."

For Review Only

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Review Copy: MBI Human Services Survey

How often:	0	1	2	3	4	5	6
	Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

How often 0-6	Statements:
1. _____	I feel emotionally drained from my work.
2. _____	I feel used up at the end of the workday.
3. _____	I feel fatigued when I get up in the morning and have to face another day on the job.
4. _____	I can easily understand how my recipients feel about things.
5. _____	I feel I treat some recipients as if they were impersonal objects.
6. _____	Working with people all day is really a strain for me.
7. _____	I deal very effectively with the problems of my recipients.
8. _____	I feel burned out from my work.
9. _____	I feel I'm positively influencing other people's lives through my work.
10. _____	I've become more callous toward people since I took this job.
11. _____	I worry that this job is hardening me emotionally.
12. _____	I feel very energetic.
13. _____	I feel frustrated by my job.
14. _____	I feel I'm working too hard on my job.
15. _____	I don't really care what happens to some recipients.
16. _____	Working with people directly puts too much stress on me.
17. _____	I can easily create a relaxed atmosphere with my recipients.
18. _____	I feel exhilarated after working closely with my recipients.
19. _____	I have accomplished many worthwhile things in this job.
20. _____	I feel like I'm at the end of my rope.
21. _____	In my work, I deal with emotional problems very calmly.
22. _____	I feel recipients blame me for some of their problems.

For Review Only

(Administrative use only)

EE Total score: _____ DP Total score: _____ PA Total score: _____

EE Average score:_____ DP Average score:_____ PA Average score:_____

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Areas of Worklife Survey

Please use the following rating scale to indicate the extent to which you agree with the following statements. Please circle the number corresponding to your answer.

1	2	3	4	5
Strongly Disagree	Disagree	Hard to Decide	Agree	Strongly Agree

	Strongly Disagree	Disagree	Hard to Decide	Agree	Strongly Agree
Workload					
1. I do not have time to do the work that must be done.	1	2	3	4	5
2. I work intensely for prolonged periods of time.	1	2	3	4	5
3. I have so much work to do on the job that it takes me away from my personal interests.	1	2	3	4	5
4. I have enough time to do what's important in my job.	1	2	3	4	5
5. I leave my work behind when I go home at the end of the workday.	1	2	3	4	5
Control					
6. I have control over how I do my work.	1	2	3	4	5
7. I can influence management to obtain the equipment and space I need for my work.	1	2	3	4	5
8. I have professional autonomy /independence in my work.	1	2	3	4	5
9. I have influence in the decisions affecting my work.	1	2	3	4	5
Reward					
10. I receive recognition from others for my work.	1	2	3	4	5
11. My work is appreciated.	1	2	3	4	5
12. My efforts usually go unnoticed.	1	2	3	4	5
13. I do not get recognized for all the things I contribute.	1	2	3	4	5

Sample

Community	Strongly Disagree	Disagree	Hard to Decide	Agree	Strongly Agree
14. People trust one another to fulfill their roles.	1	2	3	4	5
15. I am a member of a supportive work group.	1	2	3	4	5
16. Members of my work group cooperate with one another.	1	2	3	4	5
17. Members of my work group communicate openly.	1	2	3	4	5
18. I don't feel close to my colleagues.	1	2	3	4	5
Fairness					
19. Resources are allocated fairly here.	1	2	3	4	5
20. Opportunities are decided solely on merit.	1	2	3	4	5
21. There are effective appeal procedures available when I question the fairness of a decision.	1	2	3	4	5
22. Management treats all employees fairly.	1	2	3	4	5
23. Favoritism determines how decisions are made at work.	1	2	3	4	5
24. It's not what you know but who you know that determines a career here.	1	2	3	4	5
Values					
25. My values and the Organization's values are alike.	1	2	3	4	5
26. The Organization's goals influence my day to day work activities.	1	2	3	4	5
27. My personal career goals are consistent with the Organization's stated goals.	1	2	3	4	5
28. The Organization is committed to quality.	1	2	3	4	5

Sample

Appendix C: Ethical clearance

UNIVERSITY OF THE WITWATERSRAND JOHANNESBURG

R14/49 Miss Morgann Bruce

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)

CLEARANCE CERTIFICATE NO. M190914

NAME: (Principal Investigator)	Miss Morgann Bruce
DEPARTMENT:	Occupational Therapy - School of Therapeutic Sciences Online Survey - REDCap
PROJECT TITLE:	Burnout experiences by South African novice occupational therapists
DATE CONSIDERED:	27/09/2019
DECISION:	Approved unconditionally
CONDITIONS:	
SUPERVISOR:	Prof Patricia De Witt and Mrs Marica Botha
APPROVED BY:	Dr CB Penny, Chairperson, HREC (Medical)
DATE OF APPROVAL:	24/10/2019

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

DECLARATION OF INVESTIGATORS

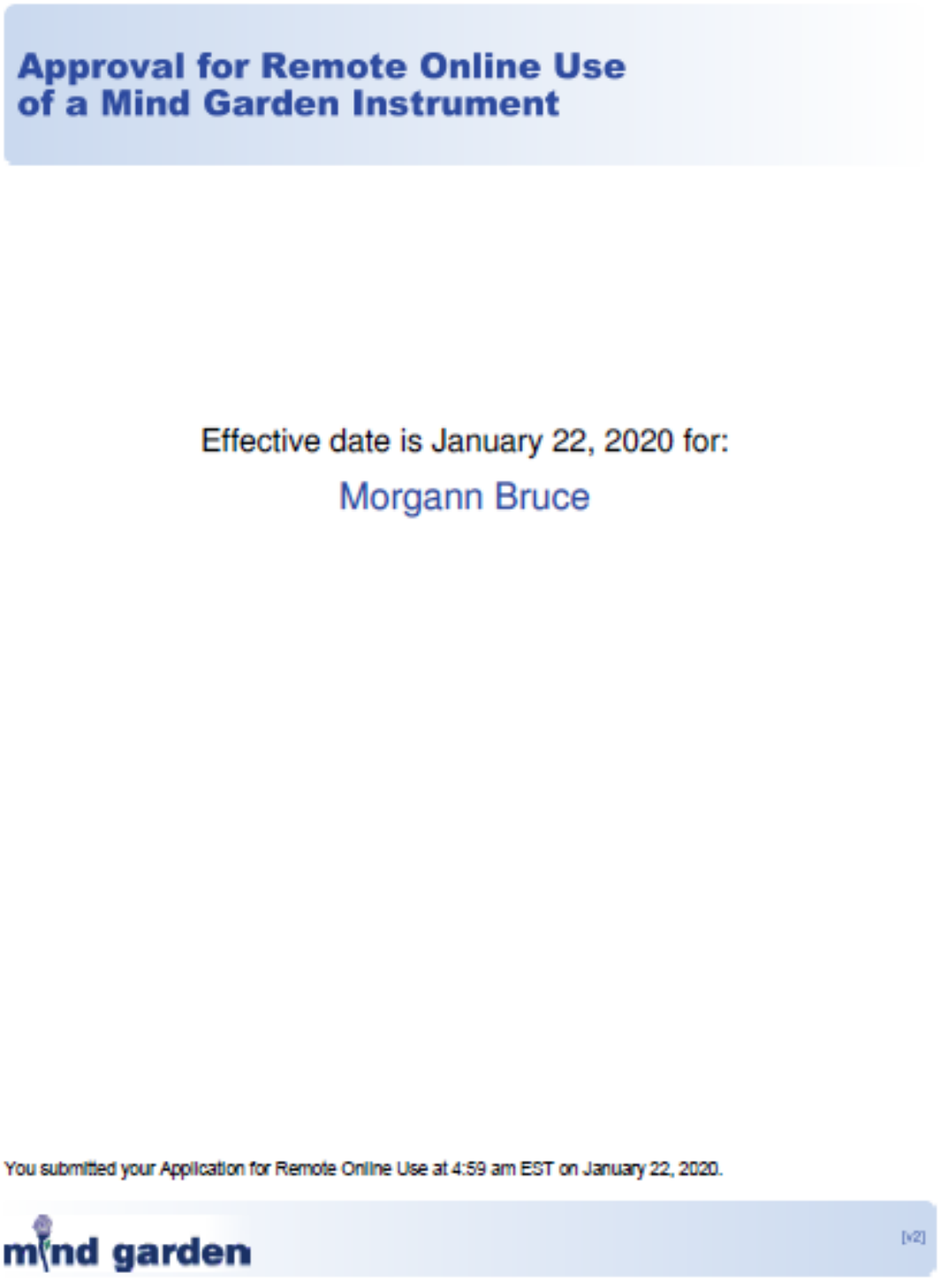
To be completed in duplicate and **ONE COPY** returned to the Research Office Secretary on the Third Floor, Faculty of Health Sciences, Phillip Tobias Building, 29 Princess of Wales Terrace, Parktown, 2193, University of the Witwatersrand. I/we fully understand the conditions under which I am/we are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

Principal Investigator Signature

Date 27/10/2019

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

Appendix D: MBI + AWS permission



Approval for Remote Online Use of a Mind Garden Instrument

Effective date is January 22, 2020 for:

Morgann Bruce

You submitted your Application for Remote Online Use at 4:59 am EST on January 22, 2020.

mind garden [v2]

Remote online use of the Mind Garden instrument stated below is approved for the person on the title page of this document.

Your name:

Morgann Bruce

Email address:

morgannb@live.co.za

Company/Institution:

University of Witwaterands

Mind Garden Sales Order or Invoice number for your license purchase:

DOGMMPBJC

The name of the Mind Garden instrument you will be using:

Maslach Burnout Toolkit™ - Remote Online Survey License: AWS + MBI

Please specify the name of and web address for the remote online survey website you will be using and describe how you will be putting this instrument online:

The instrument will be loaded onto RedCap. I will be loading the instrument along with my demographic questionnaire.

Please include any other comments or explanations you would like to provide about your remote online use of a Mind Garden instrument:

This study has been approved by the human ethic committee at my institution.

The Remote Online Survey License is a data license for research purposes only. This license grants one permission to collect and disclose (a) item scores and scale scores, (b) statistical analyses of those scores (such as group average, group standard deviation, T-scores, etc.) and (c) pre-authorized sample items only, as provided by Mind Garden, for results write-up and publication.

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I will send screenshots of my online survey to info@mindgarden.com so that Mind Garden can verify that the copyright statement appears.	I agree to this condition.
I will compensate Mind Garden, Inc. for each license use; one license is used when a participant first accesses the online survey.	I agree to this condition.
I will track my license use.	I agree to this condition.
Once the number of administrations reaches the number purchased, I will purchase additional licenses or the survey will be closed to use.	I agree to this condition.
I will remove this online survey at the conclusion of my data collection and I will personally confirm that it cannot be accessed.	I agree to this condition.

I agree to abide by each of the conditions stated above

Your name (as electronic signature): M. Bruce
Date: 22/01/2020

FAQ: Where do I find the copyright statement?

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Appendix E: Turnitin Report

Research report

ORIGINALITY REPORT

10%	8%	5%	2%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

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