SCHOOL OF MEDICINE AND HEALTH SCIENCES

PREVALENCE AND RELATED FACTORS OF BURNOUT AMONG HEALTHCARE PRACTITIONERS AT LIVINGSTONE CENTRAL HOSPITAL IN LIVINGSTONE, ZAMBIA

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DECLARATION

I EVELYN ESELINA PHIRI declare that this research paper is my original work and it has not been presented for any academic award in any university or institution of higher learning.

Signature: ……E…Phiri…….... Date:27th MAY,2025

This dissertation proposal has been presented for examination with my approval as the university supervisor.

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ABSTRACT

Background: Burnout among healthcare practitioners is a critical issue affecting both the workforce and the quality of patient care. It is characterized by emotional exhaustion, depersonalization, and a reduced sense of personal accomplishment, leading to decreased job satisfaction and increased turnover rates. This study aimed to assess the prevalence and related factors of burnout among healthcare practitioners at Livingstone Central Hospital in Zambia.

Methods: A cross-sectional survey was conducted with 69 healthcare practitioners at Livingstone Central Hospital. The Maslach Burnout Inventory (MBI) was used to measure burnout across three dimensions: emotional exhaustion, depersonalization, and personal achievement. Socio-demographic and work-related factors were also collected. Descriptive statistics, correlation analysis, and multiple regression analysis were employed to examine the relationships between these factors and burnout.

Results: the study revealed a mean score of 18.2 (±10.4) for emotional exhaustion, with 16% of respondents reporting extreme fatigue. The mean score for depersonalization was 9.8 (±9.6), and the mean score for personal achievement was 39.5 (±7.8), with a majority (60.9%) reporting low levels. Age, marital status, religion, department, and work experience were significantly associated with depersonalization ($p < 0.05$). Similarly, these factors, along with education and profession, were significantly associated with personal achievement ($p < 0.05$). The regression analysis indicated that overall comfort and functionality ($\beta = -11.248$, $p < 0.001$) and the decision-making process ($\beta = -7.471$, $p = 0.007$) had significant negative effects on burnout, explaining approximately 44.5% of the variance ($R^2 = 0.445$). Additionally, organizational support for professional growth and skill development ($\beta = -5.826$, $p = 0.025$) was the only organizational factor with a significant negative effect on burnout, accounting for 46.1% of the variance ($R^2 = 0.461$).

Conclusion: The findings suggest that burnout is prevalent among healthcare practitioners at Livingstone Central Hospital, with significant associations between socio-demographic factors, work-related factors, and burnout. Improving overall comfort and functionality, enhancing decision-making processes, and providing organizational support for professional growth could be effective strategies to mitigate burnout. The study underscores the need for targeted interventions and policies to support the well-being of healthcare workers and,

consequently, improve the quality of patient care. The need for future research remains to solidify and expand understanding on burnout.

Keywords: Burnout; Healthcare Practitioners; Work-related; Organizational; Factors; Zambia

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ABBREVIATIONS AND ACRONYMS

COVID-19	Coronavirus Disease of 2019
HCWs	Healthcare Workers
ICD-11	International Classification of Diseases
LMIC	Low- and Middle-Income Countries
MBI	Maslach Burnout Inventory
WHO	World Health Organization

CHAPTER ONE: INTRODUCTION AND BACKGROUND

1.0 Introduction

This chapter provided an introduction to the study on the prevalence and related factors of burnout among healthcare practitioners at Livingstone Central Hospital in Zambia. It included the background of the study from a global, African, and Zambian perspective, the statement of the problem, the justification and significance of the study, the research questions, the main objective, the specific objectives, the definition of key terms and concepts, and the scope and limitation of the study. The chapter ended with a summary of sections covered in the chapter.

1.1 Background

Burnout significantly impacts healthcare workers globally, manifesting as emotional exhaustion, depersonalization, and diminished personal achievement (Nagarajan et al., 2024). A systematic review indicates a 39% global burnout prevalence among public health professionals (Nagarajan et al., 2024). The Coronavirus disease of 2019 (COVID-19) pandemic has intensified burnout, affecting nearly half of healthcare workers (Ghahramani et al., 2021). A 2019 review revealed a 51.0% burnout prevalence among medical and surgical residents globally (Low et al., 2019). Another review of 61 studies involving 45,539 nurses from 49 countries reported a pooled prevalence of 11.2% for burnout symptoms (Woo et al., 2020). The Medscape 2020 survey highlighted a burnout rate of approximately 43% among physicians (De Hert, 2020). The changing healthcare environment, alongside new diseases and technologies, compounds challenges for professionals due to limited resources. Research demonstrates a significant correlation between healthcare professional burnout and patient safety, with poor well-being adversely impacting safety outcomes (Janes et al., 2021). Burnout contributes notably to medical errors, jeopardizing patient care (Low et al., 2019; De Hert, 2020; Janes et al., 2021).

In many developing nations, healthcare environments suffer from understaffing, excessive workloads, and demanding tasks, compromising quality health service delivery (World Health Organization [WHO] Africa, 2022). In Africa, the ratio of 1.55 health workers per 1000 people falls short of the WHO's required density of 4.45 per 1000 (WHO Africa, 2022; Ahmat et al., 2022). Despite better ratios in developed countries, understaffing remains a pressing issue. For

instance, Europe faced a healthcare worker shortfall of 1.6 million in 2013, projected to escalate to 4.1 million by 2030 (Wismar and Goffin, 2023). These staffing deficits lead to overwhelming workloads, heightening stress, illness, and absenteeism risks (Batanda, 2024). The resultant physical and mental fatigue can impair clinical decision-making, communication quality, and coping with work pressures (Rotenstein et al., 2018). Although burnout's impact on healthcare systems has been historically examined, its documentation within the African context remains insufficient, particularly given the prevalent understaffing, resource constraints, and excessive workloads that heighten work-related stress risks.

In healthcare, burnout studies began in the late 1960s to address the stress of clinic staff caring for vulnerable patients. The concept of burnout has since broadened to encompass job-related stress in various health settings (Rotenstein et al., 2018). However, inconsistent definitions and assessment methodologies hinder standardization within hospitals. A systematic review revealed significant variability in burnout prevalence estimates and definitions among practicing physicians (Rotenstein et al., 2018). Another review identified 88 distinct definitions of burnout (Canu et al., 2021). This variation underscores the necessity for a consensus on burnout definitions and standardized measurement tools to evaluate chronic occupational stress in healthcare professionals.

The definition of burnout has been categorized into three components: personal, work-related, and client-related burnout (Kristensen et al., 2005). Personal burnout refers to the individual's experience of physical and psychological fatigue. Work-related burnout pertains to fatigue perceived as linked to one's job. Client-related burnout describes fatigue associated with interactions with clients. These components facilitate a multifaceted assessment of burnout, illuminating factors contributing to overall fatigue (Kristensen et al., 2005). They help individuals attribute their symptoms to work, considering their demographic influences on perceptions of exhaustion (Kristensen et al., 2005).

Recent efforts to standardize burnout definitions have yielded a simplified version addressing foundational definition principles (Canu et al., 2021). This definition delineates occupational burnout as exhaustion arising from prolonged exposure to work-related challenges (Canu et al., 2021). The WHO characterizes burnout as a syndrome with three dimensions: energy depletion, increased mental distance from work, and reduced professional efficiency due to unmanaged chronic workplace stress (WHO, 2021). While not classified as a mental disorder, burnout is recognized as a reason for seeking health services and is included in the International

Classification of Diseases (ICD-11) as an occupational phenomenon (WHO, 2021). Its ICD-11 inclusion signifies the recognition of burnout as a workplace concern.

With the increasing understanding of burnout, numerous studies have been undertaken among healthcare professionals. Burnout syndrome manifests in health professionals throughout their careers, with emotional exhaustion and depersonalization notably prevalent among nurses. Hospitals frequently provide insufficient mechanisms for health professionals to report and manage work-related stress, contributing to heightened staff turnover (Montgomery et al., 2019). Individual healthcare workers are often tasked with recognizing and mitigating their own stress and burnout symptoms, with limited institutional resources available for support (Søvold et al., 2021). Informal mental health discussions in hospital settings, if institutionalized and destigmatized, could mitigate burnout among healthcare professionals (Deakin, 2022). Furthermore, healthcare workers exhibit poor healthcare-seeking behaviour, especially regarding mental health support; a study during the COVID-19 outbreak indicated that only 12.7% sought professional mental health assistance (She et al., 2021). Consequently, burnout among health workers frequently remains undocumented and underreported.

Various factors have been identified as exacerbating physical and mental exhaustion in health professionals, leading to burnout. A systematic review on nurses identified specific contributing factors and confirmed the correlation between work-related stress and burnout. Stressors related to the work environment, such as poor peer and nurse-patient relationships, lack of recognition, and ineffective leadership, are linked to burnout dimensions (Khamisa et al., 2013). Additionally, work content-related stressors, including nursing roles, patient care demands, and job complexity, are associated with burnout. Inadequate communication with physicians regarding patient care and anxiety over task completion were also correlated with elevated burnout levels (Khamisa et al., 2013). Other research suggests a possible link between burnout and work shift timing, though consensus on the relative stress of day versus night shifts remains elusive; some studies note higher burnout among nurses with recurrent night shifts, while others report greater burnout among daytime workers (Khamisa et al., 2013; Vidotti et al., 2018).

Age and career demands are potential factors contributing to burnout. A study identified two burnout peaks: one in the 30s and another in the 50s (Imai et al., 2004). The prevalence of burnout was particularly significant among nurses in their 30s. This age group faces elevated expectations and work demands, which may lead to severe exhaustion. The burnout peak in the

50s may correlate with declining physiological health and increasing illness (Imai et al., 2004). Prolonged job tenure is another potential contributor to burnout (Selamu et al., 2017). Long-term positions without career advancement can result in chronic stress exposure. Nonetheless, some health professionals contend that a certain level of work-related stress is inevitable and acceptable (Selamu et al., 2017). The study noted that most participants recognized some stress types as unavoidable in healthcare, including night shifts and patient interactions (Selamu et al., 2017).

The aetiology of burnout is intricate, multifactorial, and potentially interrelated. Distinguishing between general life stressors and job-related stressors presents challenges, as they frequently overlap (Gerhardt et al., 2021). The imbalance of job demands, income, and family obligations can generate both personal and occupational stressors. Furthermore, relationships with patients and colleagues can function as either stressors or buffers; positive interactions can mitigate stress, while negative dynamics can intensify it (Selamu et al., 2017; Gerhardt et al., 2021). Burnout adversely impacts worker well-being and productivity, affecting clients both directly and indirectly. Despite extensive research on burnout among healthcare professionals, its effects on patients remain underexplored.

Overwhelming exhaustion may foster cynicism, detachment, and feelings of ineffectiveness among healthcare workers (Maslach and Leiter, 2016). Research on burnout's impact on emergency physicians revealed that those experiencing high burnout levels were more prone to report suboptimal patient care practices (Lu et al., 2015). A qualitative study among general practitioners indicated that poor well-being and burnout diminish patient care quality by impairing empathy and communication skills, leading to inappropriate referrals (Hall et al., 2020). Another study corroborated that poor patient relations, unmet needs, and high workload correlate with burnout (Khamisa et al., 2013). This aligns with findings from a study on nurses, which demonstrated that burnout dimensions were linked to patient safety outcomes, suggesting that reducing nurse burnout could enhance patient safety ratings (Montgomery et al., 2022). These studies suggest that burnout in healthcare professionals significantly jeopardizes patient safety, leaving patients powerless.

In high workload and stressful conditions, healthcare professionals may find it challenging to maintain composure, thereby impeding their empathetic engagement with patients. This adversely impacts patient care and clinical outcomes, while also straining communication with colleagues and patients. Consequently, a toxic workplace environment emerges, characterized

by low staff morale and ineffective communication, exacerbating stress and deteriorating patient outcomes and satisfaction (Batanda, 2024). Moreover, poor health and elevated burnout levels among health professionals can lead to an increase in medical errors and compromised patient safety. A survey of medical residents in Ireland revealed that burnout correlated with a rise in medical errors, with 64% of burnt-out residents reporting errors compared to 22% of their non-burned-out peers (Bridgeman et al., 2018). Thus, research assessing the effects of health worker burnout on patient care is imperative.

In Zambia, burnout among healthcare practitioners remains underexplored across the healthcare professional spectrum. A study on doctors at the University Teaching Hospital in Lusaka revealed that over half experienced significant emotional exhaustion, depersonalization, and reduced personal accomplishment (Simuyemba and Mathole, 2019). Additionally, research on anaesthetic care providers in Zambian hospitals identified sociodemographic and occupational factors as key predictors of burnout (Mumbwe, 2019). These results emphasize the necessity for targeted interventions to mitigate burnout among healthcare practitioners in Zambia.

1.2 Statement of the Problem

Burnout among healthcare practitioners is a significant issue that affects their well-being, job performance, and the quality of care provided to patients. It is easier to treat with more urgency an illness or medical pathogen if it presents itself as a source of emergency. Furthermore, if the diagnosed medical illness originates from a source that is in itself known to be medically dangerous. Although most present studies and researchers on burnout have demonstrated the dangers of burnout, yet it can still be qualified as an ailment that does not seem to be an emergency. On the contrary, the truth of the matter is that burnout is a detrimental health condition need of prevention and agency in treatments. Burnout is in many cases brought about by the very work and practice of the same work that the health practitioners ought to do, of course when the exercise of the discipline mandated to them is excessively done without the timeout. In Zambia, healthcare practitioners at Livingstone Central Hospital were likely to experience high levels of burnout due to the demanding nature of their work, limited resources, and challenging work environments. Despite the documented prevalence of burnout in other Zambian hospitals, there was a lack of comprehensive data on the prevalence and related factors of burnout among healthcare practitioners at Livingstone Central Hospital. This study sought to fill this gap by investigating the prevalence and related factors of burnout in this

specific setting. That is to reinforce awareness of the dangers of burnout and uphold the integrity of the health workers by looking into the health workers environment. Most studies indicated that burnout is an inevitable experience, hence this study sought to give a positive aid to medial officers at Livingstone Central Hospital to guard and watch of this psychological illness.

1.3 Justification for the Study

Significantly, medicine being scientific in scope, reads and studies determinates, which leads to a sickness, hence its diagnosis a pathogen and masters it. Henceforth, this study conducted at Livingstone Central Hospital aimed at that very direction. Firstly, this study results can help provide insight on burnout at Livingstone Central Hospital. Secondly, it could help establish and apply possible remedy that are contextual to help uphold the dignified practice of medicine at Livingstone Central Hospital but Zambia at large. Thirdly, it can play a pivotal role in creating a highly sensitive in the prevention and medical combat of burnout.

Thus, this research, by addressing this problem it can help preserve in service the number of medical practitioners, following that burnout is detrimental to reduction of human resource in health. Last but not the least, we are in a world where medical practitioners and managements of health would take seriously the needs of the patients and neglect the healthcare provider. Understanding the prevalence and related factors of burnout among healthcare practitioners at Livingstone Central Hospital is crucial for developing effective interventions to support their well-being and improve the quality of care provided to patients. This study can provide valuable insights into the specific factors contributing to burnout in this setting and inform the development of targeted strategies to mitigate burnout. The findings can also contribute to the broader body of knowledge on burnout among healthcare practitioners in Zambia and sub-Saharan Africa.

1.4 Research Questions

1. What is the prevalence of burnout among healthcare practitioners at Livingstone Central Hospital?
2. What individual factors are associated with burnout among healthcare practitioners at Livingstone Central Hospital?
3. What job-related factors are associated with burnout among healthcare practitioners at Livingstone Central Hospital?

4. What organizational factors are associated with burnout among healthcare practitioners at Livingstone Central Hospital?

1.5 Research Objectives

1.5.1 Main objective

To investigate the prevalence and related factors of burnout among healthcare practitioners at Livingstone Central Hospital in Zambia.

1.5.2 Specific Objectives

1. To establish the prevalence of burnout among healthcare practitioners at Livingstone Central Hospital.
2. To determine the individual factors associated with burnout among healthcare practitioners at Livingstone Central Hospital.
3. To identify the job-related factors associated with burnout among healthcare practitioners at Livingstone Central Hospital.
4. To assess the organizational factors associated with burnout among healthcare practitioners at Livingstone Central Hospital.

1.6 Definition of Key Terms and Concepts

Burnout: A psychological syndrome involving emotional exhaustion, depersonalization, and reduced personal accomplishment, resulting from chronic workplace stress (Nagarajan et al., 2024).

Emotional Exhaustion: A state of feeling emotionally drained and depleted of emotional resources due to work demands (Nagarajan et al., 2024).

Depersonalization: A feeling of detachment or estrangement from one's job and the people one serves (Nagarajan et al., 2024).

Personal Accomplishment: A sense of competence and successful achievement in one's work (Nagarajan et al., 2024).

Job stress: The physical and emotional demands of work that can have negative impacts on health and well-being (Maslach et al., 2001).

Healthcare Practitioner: According to the World Health Organization (2018), healthcare practitioners include all individuals who deliver health services, including doctors, nurses, and allied health professionals.

1.7 Scope of the Study

This study focused on healthcare practitioners working at Livingstone Central Hospital in Livingstone, Zambia. The study assessed the prevalence and related factors of burnout among doctors, nurses, clinical officers, and paramedical staff. The study was limited only to health professional in direct patient care at Livingstone Central Hospital.

1.8 Chapter Summary

This chapter provided an introduction to the study on the prevalence and related factors of burnout among healthcare practitioners at Livingstone Central Hospital in Zambia. It included the background of the study from a global, African, and Zambian perspective, the statement of the problem, the justification and significance of the study, the research questions, the main objective, the specific objectives, the definition of key terms and concepts, and the scope and limitation of the study.

CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction

This section conducted an examination of the extant literature pertaining to the prevalence, socio-demographic determinants, occupational factors, and organizational influences that contribute to the manifestation of burnout syndrome among healthcare practitioners. The aim is to present a thorough comprehension of the prevailing research context by methodically reviewing and synthesizing pertinent studies on the subject matter. To facilitate a systematic and exhaustive inquiry into the literature, an assiduous search was executed across esteemed academic databases, including Google Scholar, Scopus, and Science Direct. The search methodology entailed the utilization of a combination of pertinent keywords and phrases such as 'burnout syndrome,' 'healthcare practitioners,' 'socio-demographic determinants,' 'occupational factors,' and 'organizational influences.' Articles that underwent peer review, dissertations, and pertinent conference proceedings published within a designated temporal framework were employed as criteria for inclusion.

Through this stringent search process, a significant corpus of literature was identified and subjected to critical analysis in order to extract salient findings, discernible trends, and knowledge voids within this pivotal domain of inquiry. Furthermore, this chapter integrates the theoretical underpinnings that support this research, thereby establishing a foundational basis for the study, fostering innovative research propositions, and pinpointing any gaps or inconsistencies present in the existing research corpus. By synthesizing the available literature, this study aspired to illuminate the factors that contribute to burnout among healthcare providers, thereby offering invaluable insights for the effective addressing and alleviation of this urgent concern within the healthcare sector.

2.1 Prevalence of Burnout Syndrome Among Healthcare Providers

According to Maslach and Leiter (2016), occupational burnout is conceptualized as a prolonged reaction to enduring interpersonal stressors that emerge from professional engagements. It encompasses three vital dimensions, specifically emotional exhaustion, depersonalization, and diminished personal achievement. Burnout signifies a personal experience of stress, framed by arduous social interactions, and implicates the individual's self-perception and their perception

of others. Emotional exhaustion is characterized by a sense of emotional depletion and insufficient personal resources, resulting in employees feeling inadequately energized to confront daily challenges or to engage with colleagues.

Work-related disputes and an excessive workload serve as significant risk factors contributing to emotional exhaustion. This aspect of burnout constitutes the primary component of personal stress. Schaufeli et al. (1996) delineate emotional exhaustion as the sentiment of having negligible capacity to contribute to others, encompassing feelings of despondency, helplessness, depression, irritability, anger, escalated tension, interpersonal conflicts, and a decline in amicability and civility. Physical manifestations may include weakness, heightened susceptibility to illness, muscular tension, headaches, back pain, chronic lethargy, sleep disturbances, nausea, and an array of somatic complaints.

Depersonalization is construed as a negative, cynical, or markedly detached response toward others, frequently arising as a consequence of heightened emotional exhaustion. Initially, it may present as a self-protective strategy; however, sustained exposure can culminate in dehumanization (Pisanti et al., 2013). Diminished personal accomplishment is characterized by a reduction in the sense of competence and overall work productivity. These sentiments of inefficacy are closely associated with the inability to manage occupational demands and may exacerbate due to insufficient opportunities for professional growth and lack of social support (Maslach and Leiter, 2016). Diminished personal accomplishment is correlated with a feeling of achieving minimal outcomes and harbouring doubts regarding the value of one's contributions. While such feelings may, in certain instances, hold validity, negative perceptions can also hinder an individual's capacity to accurately appraise the results of their endeavours (Shanafelt et al., 2002).

Within the healthcare milieu, burnout is frequently accompanied by moral distress, which pertains to the psychological fragility and concomitant negative emotions that arise when healthcare professionals resolve to act in a particular manner but face obstacles in executing such actions. Healthcare workers (HCWs) experiencing burnout often demonstrate psychological rigidity and self-criticism (Friganović et al., 2019). Fatigue is a common manifestation of burnout among nursing professionals, primarily attributable to augmented workloads and staff shortages within clinical environments. Severe fatigue can induce both mental and physical symptoms, compelling nurses to resort to taking leave or becoming absent from their duties. As nurses navigate diverse healthcare institutions, they regularly confront

daily stressors within their professional environments, leading to experiences of emotional strain, mental fatigue, and physical exhaustion, which stem from excessive workload (Elbarazi et al., 2017).

2.2 Measurement of Burnout

Based on empirical work by Maslach and Leiter, the Maslach Burnout Inventory (MBI) was developed to gauge the prevalence and severity of burnout. The incidence of burnout can be assessed utilizing the methodology proposed by West et al. (2009), which integrates two specific inquiries from the MBI instrument. The incidence is articulated as a proportion of the sampled population. West et al. (2009) executed an evaluation to authenticate a condensed version of the instrument, which is intended to promote a straightforward and expedient diagnosis of burnout, particularly among medical practitioners. This streamlined methodology solicits information regarding the frequency of emotional exhaustion and callousness as self-reported by healthcare professionals, deliberately excluding the self-efficacy component. Factor analytical examinations of this abbreviated methodology indicated adequate correlations and factor loadings, thereby endorsing the employment of these two inquiries as a surrogate for a comprehensive burnout evaluation. The composite metric derived from these inquiries encapsulates physicians' self-reports of experiencing "feelings of burnout" at least once per month or more frequently, in conjunction with an indication of "becoming more callous towards people" at least once per month or more frequently. Empirical evidence substantiates that these two inquiries function effectively as a legitimate screening instrument to detect burnout. Framing burnout in terms of its prevalence and dichotomizing the evaluation facilitates comparative analyses and contributions to the extensive corpus of research regarding physician burnout, thereby circumventing mere replication of prevalence assessments.

A multitude of studies have documented the prevalence of burnout among healthcare professionals in both low- and middle-income countries (LMIC) as well as high-income nations, with the majority utilizing the Maslach Burnout Inventory for measurement purposes. Nevertheless, discrepancies in analytical methodologies and cut-off thresholds, in conjunction with variations in the instrument's reliability across different contexts, complicate the comparison of findings. The prevalence of burnout among healthcare professionals in LMIC exhibits variability, with rates spanning from 24.9% to 68% in Egypt and Tunisia, respectively, contingent upon the particular health profession and work setting. In contrast, investigations conducted in high-income countries reveal comparatively lower prevalence rates, ranging from

12.6% to 29.9% (Elbarazi et al., 2017). Furthermore, a study examining the morale of the English mental health workforce indicated a prevalence of emotional exhaustion of 20.1% among healthcare professionals (Navarro-González et al., 2014).

A cross-sectional investigation conducted in 2016 involving 95 nurses in Sabzevar evaluated occupational burnout and its correlation with spiritual intelligence. The midwives exhibited a moderate degree of occupational burnout, with statistically significant positive correlations identified between burnout and both age and work experience, as well as significant negative correlations between burnout and both income satisfaction and job satisfaction (Gómez-Urquiza et al., 2016). In a separate cross-sectional study encompassing 150 healthcare professionals in rural regions of south-eastern Iran, the overall burnout syndrome was determined to be at a moderate level. Emotional exhaustion and depersonalization exhibited the highest mean scores, whereas personal accomplishment reflected the lowest score (Mata et al., 2015). A cross-sectional study conducted in 2019 involving 203 healthcare workers in Iran revealed that 99% of the participants experienced low to moderate levels of job burnout. Among these, 67% reported low burnout, 32% indicated moderate burnout, and merely 1% exhibited high burnout (Qin et al., 2023).

2.3 Factors Associated with Burnout Syndrome Among Healthcare Providers

2.3.1 Socio-demographic characteristics

Numerous empirical investigations have delineated a variety of socio-demographic variables, including age, marital status, and educational attainment, that are correlated with the phenomenon of burnout. Age has emerged as a focal point of rigorous inquiry among medical practitioners as a potential determinant of burnout. The status of being relatively young is frequently regarded as a critical element contributing to occupational burnout, particularly during the nascent phases of one's professional journey when discerning an appropriate career trajectory may pose considerable challenges. Research conducted by Abdulla et al. (2011) has classified individuals aged 55 or younger as being at risk for burnout, whereas an alternate study revealed that age cohorts under 29 years and over 40 years exhibited markedly elevated levels of burnout. Medical professionals within the 40–49-year age range were observed to be most susceptible to reporting feelings of exhaustion and stress-related ailments. Nevertheless, a cross-sectional analysis conducted in Ethiopia suggested that age did not significantly predict the emotional exhaustion and depersonalization facets of burnout, yet it was positively correlated with the dimension of personal accomplishment (Fentie et al., 2021). The observed

discrepancies in burnout scores between older and younger physicians may be ascribed to the development of protective mechanisms in patient interactions among older physicians, as posited by Al-Haddad. An extended duration of professional experience has been associated with a reduction in burnout, although this relationship may also be modulated by workplace conditions, given that older physicians typically possess greater experience and may engage in private practice, which can result in enhanced income levels.

Gender-based disparities may similarly influence the prevalence of occupational burnout, as both male and female healthcare professionals encounter elements that can impact their professional milieu. Empirical studies have indicated that male physicians report elevated anxiety levels, diminished job satisfaction, and increased alcohol consumption in comparison to their female peers (Liu et al., 2023). Conversely, female practitioners tend to exhibit lower levels of personal accomplishment. However, certain research endeavours have identified no statistically significant difference in burnout levels across genders. The influence of marital status and parental responsibilities on burnout remains ambiguous, with some investigations proposing that being married and having children correlates with heightened burnout, while contrasting studies suggest the opposite (Belay et al., 2021).

The familial status of healthcare practitioners exerts a considerable impact on their susceptibility to burnout. It has been observed that married healthcare professionals with offspring are less likely to experience burnout when juxtaposed with their unmarried counterparts who lack children. Reports indicate that married healthcare professionals endure lower levels of emotional exhaustion compared to those who are unmarried (Alhajjar et al., 2012).

The attainment of educational qualifications also plays a critical role in influencing burnout levels among healthcare practitioners. Participants possessing advanced qualifications and higher educational attainment are more susceptible to experiencing burnout than their counterparts with lesser qualifications. For instance, nurses educated in university settings have demonstrated greater levels of emotional exhaustion in the workplace relative to those who were trained in hospital environments (Navarro-González et al., 2014).

2.3.2 Lack of Social Support

Huang et al. (2023) elucidated that the incidence of burnout among healthcare professionals is intricately associated with the deficiency of social support. Healthcare professionals devoid of a robust support network may encounter significant challenges in executing their professional

responsibilities effectively. The researchers discovered that healthcare professionals exhibiting elevated levels of self-efficacy and substantial social support are more inclined to confront adversities with a positive mindset and employ adaptive coping strategies. Social support encompasses not only colleagues and supervisors but also extends to family, friends, and even the patients under their care. Healthcare professionals who do not receive affirmative feedback from patients or lack encouragement from friends and family may experience feelings of undervaluation and inadequacy, which can precipitate burnout. Furthermore, marital difficulties have been demonstrated to adversely impact job performance, as healthcare professionals preoccupied with marital discord may inadvertently neglect their patients and consequently provide substandard care (Jenkins & Elliott, 2014).

2.3.3 Influence of work-related factors on burnout syndrome among healthcare providers

The work environment is integral to the job satisfaction of nursing professionals and the likelihood of experiencing burnout. Elements such as prolonged working hours, nurse-to-patient ratios, and collaborative efforts among staff can lead to burnout and warrant further investigation to elucidate their effects on the well-being of nurses. Occupational hazards, aggression from non-staff individuals, and overwhelming workloads constitute prevalent obstacles that nurses encounter in their work settings, which may exacerbate burnout. An escalation in nursing workload correlates with diminished job satisfaction, increased turnover rates, lowered morale, and poses potential risks to both the quality of patient care and the effectiveness of the healthcare organization. Workload has been recognized as a direct contributor to profound fatigue and burnout among healthcare practitioners. Inadequate staffing in healthcare environments compels professionals to endure excessive workloads without sufficient support, culminating in fatigue. Healthcare practitioners operating in critical care settings are particularly vulnerable to burnout due to the elevated levels of job-related stress they encounter. The intrinsic demands of their role, which involves caring for patients in precarious health situations, necessitate both emotional and physical preparedness to mitigate burnout. Moreover, financial constraints within the healthcare system may influence staffing levels, leading to unmanageable workloads and heightened stress for practitioners (Falgueras et al., 2015).

Role ambiguity is a contributing factor to burnout, as individuals may experience feelings of insecurity and ambiguity regarding their roles and responsibilities. The apprehension of being perceived as incompetent or making errors during professional interactions can result in

persistent emotional fatigue. Job demands, encompassing role ambiguity and conflict, workload pressures, and the burden of unforeseen events, have been identified as prevalent factors affecting burnout (Stordeur et al., 2001). Role conflict and ambiguity can adversely influence job performance, job satisfaction, and the intention to exit the profession.

Job security, or its absence, can serve as a significant source of burnout among healthcare professionals. Concerns regarding employment stability can detrimentally impact the well-being of professionals and contribute to burnout. Healthcare professionals engaged in part-time or casual employment may not enjoy the same benefits and job security afforded to their full-time counterparts, potentially leading to job dissatisfaction and increased risk of burnout (Niewiadomska et al., 2022).

While workload alone may not be adequate to precipitate burnout, financial factors such as inadequate income and associated occupational hazards can exacerbate burnout among healthcare professionals. Unsatisfactory remuneration and challenging working conditions may dissuade professionals from remaining in the field, even when they are offered competitive compensation packages and benefits (AL-Haddad et al., 2020).

2.3.4 Interpersonal Relationships

The occupational milieu and the interpersonal dynamics among healthcare practitioners have the potential to incite burnout. Collaborative endeavours involving professionals from diverse disciplines may elicit stress and serve as a catalyst for burnout. The calibre of relationships among healthcare practitioners can significantly influence their emotional health, sense of professional achievement, and the standard of care rendered to patients. An absence of support from superiors and peers may result in emotional maltreatment and adversely impact motivation and job satisfaction, ultimately culminating in burnout (Konlan et al., 2022).

Healthcare practitioners frequently partake in emotional labour, which necessitates managing the emotional states of ill patients and their relatives. Such emotional labour can exacerbate stress and contribute to burnout, particularly in scenarios involving patients experiencing critical health conditions (Belay et al., 2021). The severity of stress and emotional depletion may escalate over time, leading to difficulties in recruitment and retention within the healthcare profession. Adequate debriefing and support mechanisms are essential for practitioners to safeguard themselves against burnout.

Discrepancies between the values and aspirations of healthcare professionals and those prevalent in their working environment may facilitate the onset of burnout. Healthcare practitioners may confront conflicts in values pertinent to professional autonomy, control within their work environment, and interpersonal relationships with colleagues (Qedair et al., 2022).

Autonomy constitutes a pivotal element influencing the phenomenon of burnout among healthcare professionals. A deficiency in autonomy and a lack of control and discretion may engender dissatisfaction and demotivation. Rigid organizational hierarchies and restricted involvement in decision-making processes within institutions can exacerbate burnout among professionals who perceive themselves as marginalized and disengaged from their occupational roles (Chunming et al., 2017).

Healthcare professionals, particularly nurses operating in critical care environments, frequently encounter circumstances wherein they must administer care to patients with scant prospects for recovery or survival. This predicament can precipitate moral distress, wherein practitioners feel compelled to compromise their values and beliefs while navigating ethical dilemmas. Moral distress can significantly contribute to the emergence of burnout among healthcare practitioners, as delineated in the research conducted by Schieman et al. (2021).

Empirical investigations have indicated that specific factors pertaining to work duration and working hours can affect the incidence of burnout among healthcare professionals. In Yemen, pronounced levels of burnout were observed among individuals with work tenures of ≤10 years and those engaged in more than 40 hours of labour per week within government institutions, alongside individuals earning ≤40 thousand Rials monthly from governmental sources and exclusively operating in government hospitals. In Turkey and New Zealand, the quantity of patients assessed and prolonged working hours were identified as predictors of emotional exhaustion and diminished personal accomplishment, respectively, within the burnout construct (Yavas et al., 2018).

2.3.5 Influence of organizational factors on burnout syndrome among healthcare providers

The body of research pertaining to organizational interventions aimed at mitigating burnout is comparatively limited when juxtaposed with the existing scholarship on self-care interventions. Such organizational interventions necessitate extensive alterations to the work environment or operational processes, which may induce reluctance among organizations to allocate resources

towards them in the absence of compelling evidence demonstrating their efficacy. Nevertheless, certain empirical studies have yielded encouraging findings. For instance, the Legacy Health System located in Portland, Oregon, executed an intervention that emphasized physician well-being in conjunction with financial and quality performance metrics. This initiative culminated in quantifiable reductions in burnout scores, particularly within the emotional exhaustion category, as well as a notable decline in staff turnover rates (Pawłowicz and Nowicki, 2020). Additionally, a study conducted by Group Health of Puget Sound introduced a Medical Home prototype at one of its clinics, which entailed significant organizational restructuring within the primary care framework. This redesign engendered enhancements in patient experiences and reductions in care delivery costs, alongside a measurable decrease in clinician burnout scores (Hudek-Knežević et al., 2011). These instances indicate that organizational modifications to the workplace may exert a beneficial effect on alleviating burnout among healthcare professionals, particularly in primary care contexts. Such interventions not only augment the well-being of healthcare practitioners but also bear implications for patient experiences and the overall performance of organizations.

Within the nursing profession, issues related to compensation and salaries have remained contentious, with a substantial number of nurses expressing that their remuneration does not accurately reflect their workload, educational attainment, and accrued experience. Insufficient wages and compensation may contribute to job dissatisfaction among nurses and could potentially serve as a factor prompting some to exit the profession (Choudhary et al., 2022). It is imperative that competitive and equitable compensation is offered to nurses in acknowledgment of their significant contributions to the healthcare system. Adequate remuneration not only aids in the retention of seasoned nurses but also attracts new talent to the profession. While financial compensation is undeniably crucial, non-monetary forms of recognition can also significantly enhance nurses' job satisfaction and overall well-being. Providing avenues for career advancement, performance-based incentives, and reductions in working hours may serve as effective non-monetary methods of compensating nurses for their commitment and diligence. Nurses who are ambitious and aspire to advance their careers may experience demotivation if they perceive limited opportunities for progression within their field (Holmes et al., 2014). Establishing clear pathways for career advancement and acknowledging nurses' efforts in enhancing their education and skills can facilitate the retention of talented and motivated nurses within the workforce.

One of the fundamental components of a conducive work environment is the establishment of affirmative interpersonal dynamics between nurses and their professional counterparts. Bonenberger et al. (2014) assert that nurses who cultivate robust relationships with their colleagues experience elevated levels of job satisfaction compared to those who lack such collegial connections. Furthermore, a nurturing work atmosphere can be delineated by proficient leadership, as nurses under the guidance of supportive and effective managers reported enhanced job satisfaction and diminished intentions to resign from their positions. In a research investigation conducted by Cicolini et al. (2014), the ramifications of organizational structure on nurses' job satisfaction were scrutinized. The outcomes indicated that elements such as well-defined lines of authority, efficient communication pathways, and benevolent hierarchical frameworks were correlated with increased job satisfaction among nursing professionals. In contrast, inflexible and bureaucratic organizational structures that obstructed decision-making and autonomy were found to adversely affect job satisfaction.

Organizational culture constitutes another critical determinant that significantly affects nurses' job satisfaction. The inquiry conducted by Cass et al. (2013) underscored the necessity of fostering a positive and supportive organizational culture that prioritizes teamwork, collaboration, and the well-being of employees. Nurses employed in organizations that advocate for open communication, mutual respect, and recognition are more inclined to achieve elevated levels of job satisfaction.

Leadership and management practices within healthcare organizations assume a pivotal role in influencing nurses' job satisfaction. Effective leaders who offer direction, support, and prospects for professional advancement have been demonstrated to exert a beneficial impact on job satisfaction among nurses (Haile et al., 2017). Conversely, ineffective leadership, a deficiency of support, and insufficient recognition may precipitate a decline in job satisfaction and an escalation of turnover rates among nursing staff (Lorber and Savič, 2012).

Organizational policies and procedures likewise exert an influence on nurses' job satisfaction. Policies that advocate for equitable workload distribution, furnish explicit guidelines for decision-making, and encourage work-life balance contribute positively to the enhancement of job satisfaction among nurses. Ugwa and Charity (2016) concluded that inconsistent policies, a lack of transparency, or burdensome administrative requirements can culminate in job dissatisfaction and heightened stress levels among nursing professionals.

Initiatives aimed at achieving work-life balance, instituted by healthcare organizations, are increasingly acknowledged as vital for enhancing nurses' job satisfaction. Research conducted by Mengistu and Bali (2015) illustrated that organizations providing flexible scheduling options, adequate leave time, and family-oriented policies tend to report higher levels of job satisfaction among healthcare personnel. These initiatives facilitate staff in attaining a more favourable equilibrium between their professional obligations and personal lives, thereby leading to enhanced job satisfaction and overall well-being.

2.4 Gaps in Literature

Notwithstanding the comprehensive investigations conducted on this topic, several significant deficiencies persist within the current body of literature. A substantial portion of the research surrounding burnout among healthcare professionals has predominantly taken place in developed nations, with a conspicuous lack of focus on particular regions within developing countries, such as Zambia. Although both individual and work-related determinants contributing to burnout have been thoroughly examined, there remains a deficiency in extensive research that scrutinizes the specific organizational elements that affect burnout among healthcare practitioners. Despite the acknowledgment of the critical need to address burnout in healthcare professionals, there exists a notable absence of agreement regarding effective preventive and intervention methodologies. The prevailing literature frequently fails to incorporate evidence-based strategies that are customized to particular contexts, especially in settings characterized by limited resources. There exists a pressing demand for more exhaustive research that investigates the interplay of variables such as age, gender, marital status, educational attainment, and professional experience.

2.5 Theoretical framework

2.5.1 Job Demands-Resources model

The Job-Demands-Resources model constitutes a theoretical framework positing that every employee is confronted with a distinct array of risk factors contributing to the onset of work-related stress. The classifications of job demand and job resources encompass these elements (Bakker et al., 2020). Job resources pertain to factors linked to the efficacy in achieving occupational objectives, the alleviation of job demands, and the facilitation of personal growth, learning, and development. Conversely, job demands encompass various aspects of a role that necessitate sustained effort or skilful application. These characteristics may manifest as physical, psychological, social, or organizational in nature. Given the malleability of the

specific attributes within the job demands and job resources dimensions, the Job-Demands-Resources model is applicable across a diverse array of occupational contexts (Demerouti et al., 2001). In contrast, the demands and resources are perceived as being more delineated in other theoretical frameworks, having been operationalized into constructs such as requests, control, and reward, among others (Van Rensburg, 2020).

2.5.1 Job strain and Iso-strain

The demand-control model, an established theoretical framework that encompasses the constructs of "work demand" and "job control," delineates the concept of job strain. The demand-control-support model represents an adaptation of the demand-control model that integrates the dimension of social support from colleagues and supervisors. Job control pertains to the individual's capacity to modify the work environment, while job demand relates to the psychologically burdensome aspects of the occupational setting, such as the volume of work. Job strain is a psychological state that elevates the risk of adverse health outcomes and is typified by elevated labour demands coupled with diminished job control (irrespective of social support) (Mather et al., 2015). The risk of experiencing negative health consequences is further exacerbated by Iso-strain, which arises from a confluence of high job demands, restricted control, and insufficient social support (Amick et al., 1998). The frameworks of demand, control, and support can also be employed to elucidate the notion of "healthy work," which is characterized by an equilibrium that encompasses moderate to high workplace demands, substantial job control, and ideally, robust social support.

2.6 Conceptual Framework

Based on the theoretical models reviewed above, the following conceptual framework (Figure 2.1) was used to define the variables that were considered in this study.

The variable dependent in the present investigation pertains to the phenomenon of burnout syndrome among healthcare providers. The initial category of independent variables, identified as socio-demographic characteristics, comprises elements such as age, gender, educational attainment, marital status, and tenure in the profession. These variables hold significant relevance as they possess the potential to affect the experiences, perceptions, and coping mechanisms of healthcare providers within the context of their daily professional responsibilities. For example, healthcare providers who are younger or possess a limited number of years in their careers may exhibit heightened susceptibility to burnout owing to the adversities encountered during the nascent phases of their professional journeys.

Factors associated with work encompass variables including workload, shift patterns, emotional demands, job autonomy, and overall job satisfaction. These elements are integral to the work milieu and can exert substantial influence on the psychological and emotional welfare of healthcare providers. Elevated workloads, unpredictable shift patterns, and substantial emotional demands may engender chronic stress and exacerbate feelings of burnout, whereas job satisfaction and autonomy could serve as mitigating factors against the incidence of burnout.

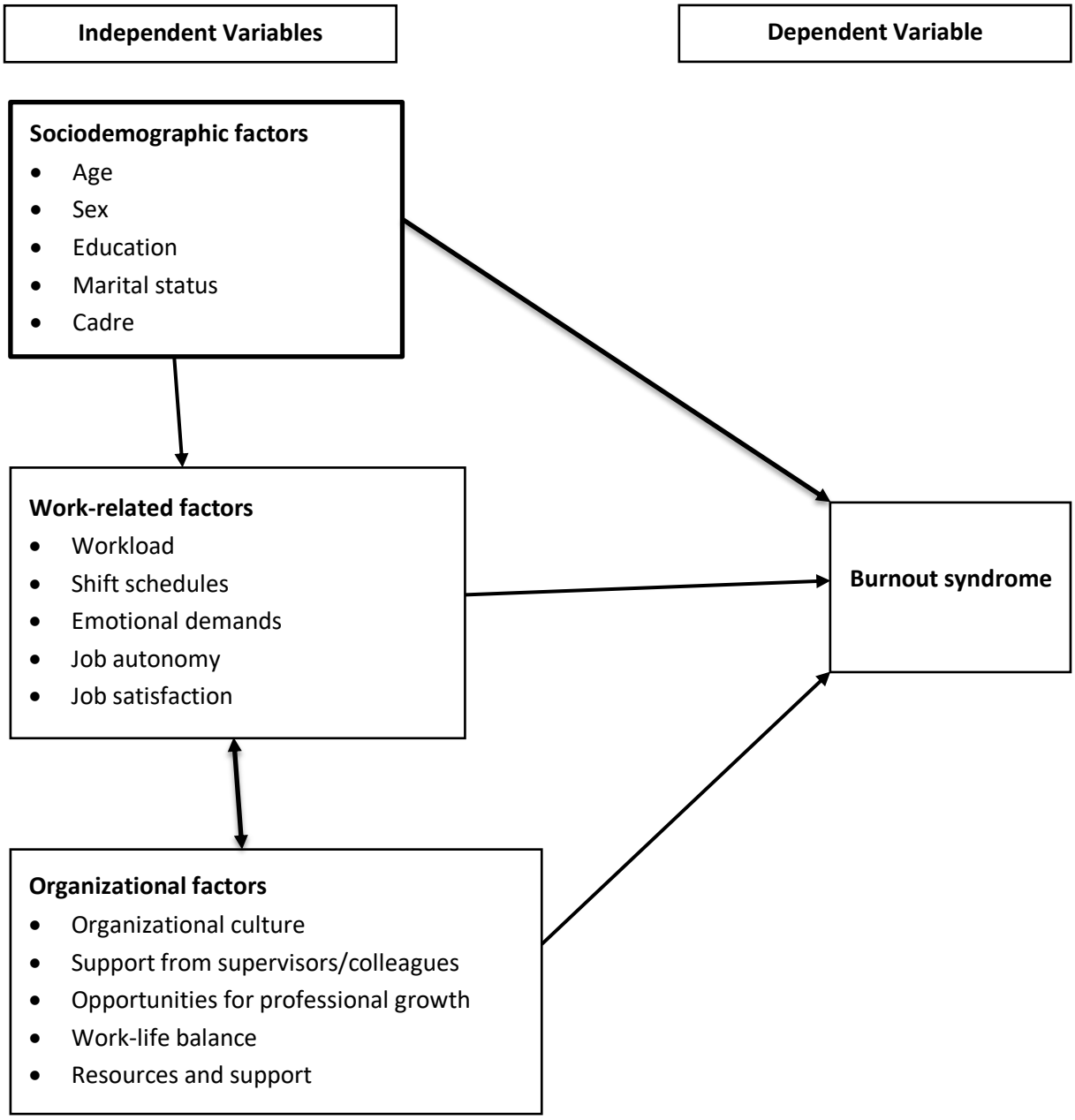

Figure 2.1: Diagrammatic representation of Conceptual Framework (*Adopted from: France, 2024*)

Organizational factors comprise components such as organizational culture, support from supervisors and colleagues, opportunities for professional advancement, work-life balance, and the availability of essential resources. These organizational factors are instrumental in shaping the work environment and influencing the overall well-being of healthcare providers. A nurturing organizational culture, constructive relationships with supervisors and peers, along with avenues for personal and professional development, may enhance job satisfaction and mitigate levels of burnout. In contrast, an absence of support, scarcity of resources, and inadequate work-life balance may heighten the likelihood of experiencing burnout.

2.7 Summary of Chapter

To assess burnout syndrome, numerous studies employing varied methodologies were analysed. Findings revealed that burnout syndrome is prevalent among healthcare professionals, with many experiencing emotional exhaustion, depersonalization, and reduced personal accomplishment. Socio-demographic factors significantly impacted burnout syndrome. Age was a key factor, as younger healthcare professionals showed increased vulnerability due to challenges in career advancement. Additionally, marital status and family responsibilities were associated with burnout, with mixed results indicating that both single and married individuals may experience high levels of burnout. The level of education and professional qualifications also influenced burnout, with those having advanced degrees being more prone to it.

Work-related factors were pivotal in contributing to burnout syndrome among healthcare professionals. Increased workloads, especially in critical care settings, were linked to greater emotional exhaustion and burnout. Role ambiguity, lack of autonomy, and value conflicts were identified as emotional distress sources that worsen burnout. Furthermore, insufficient workplace social support was closely related to burnout, highlighting the importance of a strong support network for healthcare professionals. Organizational aspects were also explored, showing that interventions at the organizational level can significantly affect burnout rates. Research suggested that improvements in the work environment and processes, including enhancing physician well-being and managing workloads, are associated with lower burnout levels among healthcare professionals.

CHAPTER THREE: RESEARCH METHODOLOGY

3.0 Introduction

This chapter outlines the methodology for the study on the prevalence and related factors of burnout among healthcare practitioners at Livingstone Central Hospital in Zambia. It includes the study design, setting, population, sampling technique, eligibility criteria, sample size, data collection tools and techniques, validity, reliability, pilot study, variables, data management and analysis, and ethical considerations.

3.1 Study Design

An institution-based descriptive cross-sectional survey research design was adopted for this research work. This was a non-experimental observational design that does not require manipulation or subjecting variables to a treatment. This method was chosen because it is relatively inexpensive, faster, and easier to conduct since data on all variables are collected only once. With cross-sectional study design, there is a measurement between variables both dependent and independent at a fixed point in time. Here, there is an appropriate description of relationships among phenomena at a fixed point in time (Owusu Adjah and Agbemafle, 2016). In the cross cross-sectional study, Adhikari et al. (2021) pointed out that, either the entire population or a subset is selected, and from these individuals, data are collected to help answer the research questions of interest. The quantitative research approach is used when a researcher wants to create meaning through objective measurement of the situation and presents the findings of the study numerically (Tenkorang et al., 2013).

3.2 Study Setting

The study was conducted at Livingstone Central Hospital, a prominent public healthcare facility located in Livingstone, the capital of the Southern Province of Zambia. The hospital serves as a key medical institution in the region, providing a wide range of healthcare services to the local population and surrounding areas. The hospital is equipped with various medical departments and units, including general medicine, surgery, paediatrics, obstetrics and gynaecology, and emergency services. The hospital also has specialized units for infectious diseases, mental health, and outpatient services. It is staffed by a team of dedicated healthcare

professionals, including doctors, nurses, paramedical and support staff, who work tirelessly to provide quality care to patients. Livingstone Central Hospital was an ideal setting for this study due to its high patient load and the demanding nature of the work environment. Healthcare providers at the hospital often face significant stress and workload, making them susceptible to burnout.

3.3 Study Population

The study population included all healthcare practitioners working at Livingstone Central Hospital, including doctors, nurses, clinical officers, and paramedical staff.

3.4 Sampling Procedure

A stratified random sampling technique was used to ensure representation from different categories of healthcare practitioners (e.g., doctors, nurses, clinical officers, paramedical staff). The steps involved in the sampling technique are as follows: (1) Identify Strata: Divided the target population into strata based on job categories (e.g., doctors, nurses, clinical officers, paramedical staff). (2) Determine Sample Size for Each Stratum: Calculated the sample size for each stratum proportionate to its size in the target population. (3) Random Selection: Used a random number generator to select participants from each stratum. (4) Recruit Participants: Approached the selected participants and invited them to participate in the study, ensuring informed consent is obtained.

3.5 Eligibility Criteria

3.5.1 Inclusion criteria

The study included healthcare practitioners working at Livingstone Central Hospital for at least six months and willing to provide informed consent.

3.5.2 Exclusion criteria

The study excluded: healthcare practitioners on rotation or attachment, practitioners on leave, vacation, away for professional training or those who have worked at the hospital for less than six months.

3.6 Sample Size

The sample size was determined based on a 5% margin of error (e2), at a 95% confidence interval on the normal distribution curve (z2), and 17% variability (p) (Mendez et al., 2024):

$$n = \frac{z^2 p(1-p)}{e^2}$$

$$n = \frac{(1.96)^2(0.17)(1-0.17)}{(0.05)^2}$$

$$n = 217$$

Finite population correction was applied to produce a sample size that was proportional to the accessible population therefore the sample size was adjusted as;

$$n = \frac{n_o}{1 + \frac{(n_o - 1)}{N}}$$

Where:

no= desired sample size

N=the estimate of the population size

$$n = \frac{217}{1 + \frac{(217-1)}{100}}$$

Therefore, the number of participants was 69 healthcare practitioners.

3.7 Data collection tools

A self-administered structured questionnaire was used for data collection. Section A assessed socio-demographic characteristics. Information was collected on age, gender, shifts worked, working unit, marital status, qualification, type of cadre and years of experience. To assess the prevalence of Burnout syndrome, the MBI was adopted for section B. The MBI is one of the best-known instruments for research across different professional categories. The MBI instrument contains 22 items that measure the cumulative effects of work-related pressure in three subscales: the Emotional Exhaustion (EE) subscale assesses feelings of being emotionally overextended and exhausted by one's work (e.g., intense emotional tiredness); the Depersonalisation (DP) subscale measures a negative, cynical, and impersonal attitude towards recipients of one's service, care, treatment or instruction (e.g., patients). The Personal Achievement (PA) subscale assesses feelings of competence and achievement in one's work with low personal accomplishment corresponding to demotivation, loss of self-confidence, and self-depreciation about work. Each question was assessed on a scale ranging from 0 (not at all)

to 5 (yes, absolutely). A high degree of burnout was represented by high scores of EE (≥30) and DP (≥ 12) and a low score of PA (≤ 33).

Section C examined the influence of work-related factors on burnout syndrome. It included questions on workload, job demands, autonomy, control over work, shift patterns, overtime hours, and perceived social support at work. A validated scale, the Job Content Questionnaire, was included to measure these factors. Section D assessed the impact of organisational factors on burnout syndrome among healthcare providers. It included questions on leadership style, organisational culture, recognition and rewards, teamwork, communication, and access to resources. A validated instrument, the Organisational Culture Assessment Instrument, was utilized to capture these factors.

3.8 Validity and Reliability

3.8.1 Validity

The validity of the data collection tools was ensured through expert review and pilot testing. The questionnaire was reviewed by experts in burnout research and healthcare management to ensure content validity. Pilot testing was conducted with a small sample of healthcare practitioners to identify any issues and make necessary adjustments.

3.8.2 Reliability

The reliability of the data collection tools was assessed using internal consistency measures, such as Cronbach's alpha, to ensure that the items within each section of the questionnaire were consistently measuring the same construct.

3.9 Pilot Study

A pilot study was conducted with a small sample of healthcare practitioners to test the feasibility and acceptability of the data collection tools and procedures. The pilot study, however, did not identify any potential issues for adjustments in the data collection tool before the main study.

3.10 Data Collection Procedure

Once the sample was selected, the identified healthcare providers were contacted and invited to participate in the study. Information explaining the purpose of the study, the significance of their participation, and the data collection procedures was provided. For participants who chose to complete the data collection tool, informed consent was obtained and self-administered

questionnaires were distributed to healthcare practitioners during normal day-shift rotations. Completed questionnaires were collected and securely stored for data entry and analysis.

3.11 Data Analysis

Data was entered into a secure database and analyzed using SPSS statistical software version 27. Descriptive statistics were used to summarize the sample characteristics: Categorical data were described as frequencies and percentages while continuous data were described as means and standard deviations. Inferential statistics to determine the factors associated with burnout included Bivariate analysis using chi-square tests for categorical variables; while one-way ANOVA for continuous variables were used to identify associations between independent variables and burnout levels. Multivariate linear regression analysis was conducted to determine the independent effect of individual factors on burnout levels. Adjusted odds ratios were calculated with corresponding confidence intervals. For all statistical analyses, a p-value of less than 0.05 at 95% confidence interval was considered statistically significant.

3.12 Ethical Considerations

In accordance with the Declaration of Helsinki (1964), ethical approval was obtained from the Ethics Review Committee of the School of University of Lusaka, through a letter of reference. Permission to commence the study was obtained from the Livingstone District Health Office. Written consent was obtained from each participant before being included in the study. All information collected from the survey was kept confidential and safe. The anonymity and confidentiality of the study subjects were ensured by assigned numerical codes instead of names without any personal identifiers in the data collection, analysis, and findings. Participants were informed that participation was voluntary and based on their willingness and they had the right to withdraw from the study at any point.

3.13 Chapter Summary

This chapter outlined the methodology for the study on the prevalence and related factors of burnout among healthcare practitioners at Livingstone Central Hospital in Zambia. The study design, setting, population, sampling technique, eligibility criteria, sample size, data collection tools and techniques, validity, reliability, pilot study, variables, data management and analysis, and ethical considerations have been discussed.

CHAPTER FOUR: PRESENTATION OF RESULTS

4.0 Introduction

In this study, all patients who met the inclusion criteria were successfully included into the study, indicating 100% response rate. The analysed data was summarized and presented using tables in line with objectives which were to (1) establish the prevalence of burnout among healthcare practitioners, (2) determine the individual factors associated with burnout among healthcare practitioners, (3) identify the job-related factors associated with burnout among healthcare practitioners, and (4) assess the organizational factors associated with burnout among healthcare practitioners at Livingstone Central Hospital. The chapter presents results from descriptive statistics and inferential analyses between independent and dependent variables considered.

4.1 Distribution of Demographic Characteristics of Respondents

Table 4.1 below displays the distribution of the respondents' socio-demographic characteristics which were considered in the study. These include age, sex, level of education, marital status, designation, and work experience. This information was collected because socio-demographic were considered as a variable that could influence the burnout levels among healthcare practitioners.

Table 4.1 shows that most of the respondents were female (82.6%) with a mean age among respondents of 33.2 (±6.8), ranging from 23 to 54 years of age. Slightly over half of respondents were married (50.7%), with the majority of them identified as Christian (91.3%). In terms of education, the largest group held a diploma (50.7%), followed by those with a university degree (42.1%). The number of respondents with basic education or higher qualifications (master's degree, certificate) was comparatively low. Most of the respondents were employed in permanent positions (84.1%), followed by those on locum or part-time positions (11.6%). Over half of the respondents were nurses (56.5%) followed by medical officers (20.3%), pharmacists (8.7%) and biomedical scientists (7.3%). Most of the respondents worked from in-patient units (27.5%), followed by those from the emergency unit (24.7%) and outpatient department (20.3%). In terms of working hours and experience, most of the respondents indicated to work

for more than 40 hours a week (42.1%) followed by those clocking 31 to 40 hours a week (37.7%). While most of the respondents had worked for 1 to 7 years (60.8%, respectively), followed by those who had 8 to 15 years of work experience (23.2%).

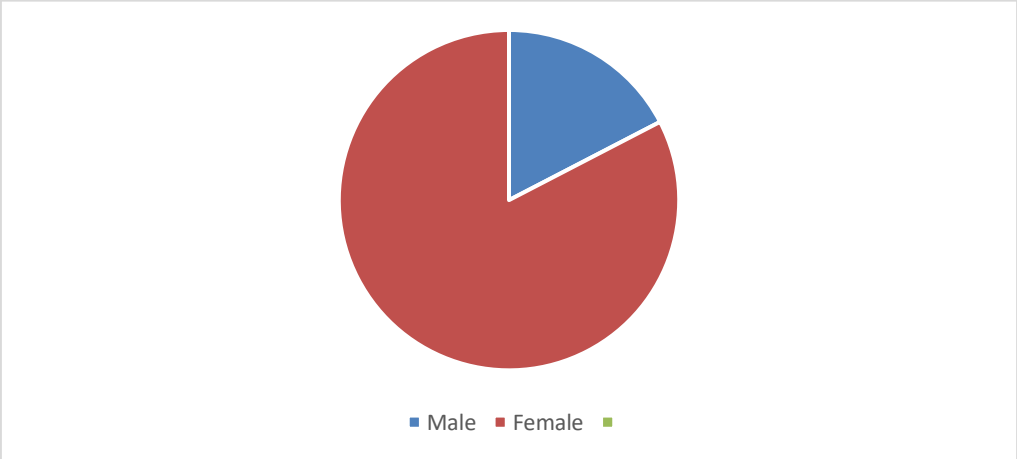

Figure 4.1: Gender Distribution of the Study

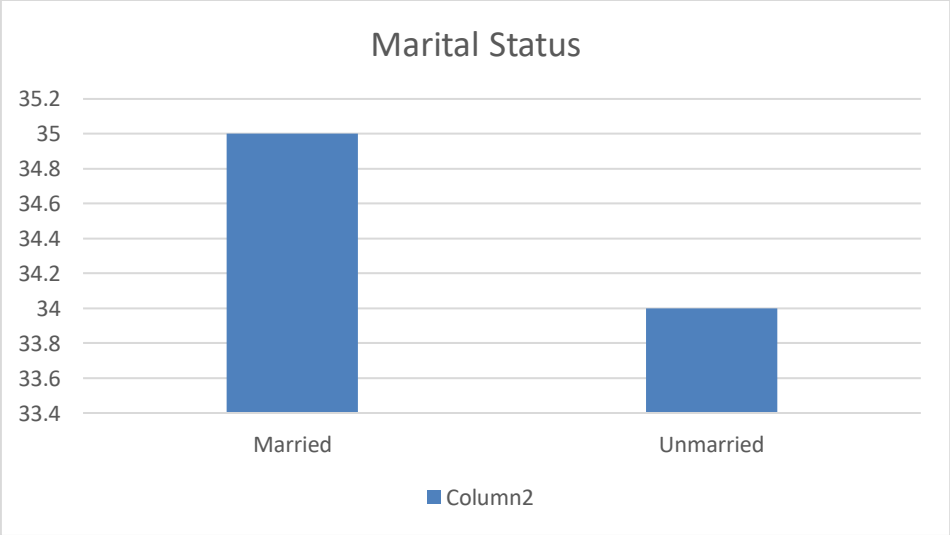

Figure 4.2: Marital Status Distribution of the Study

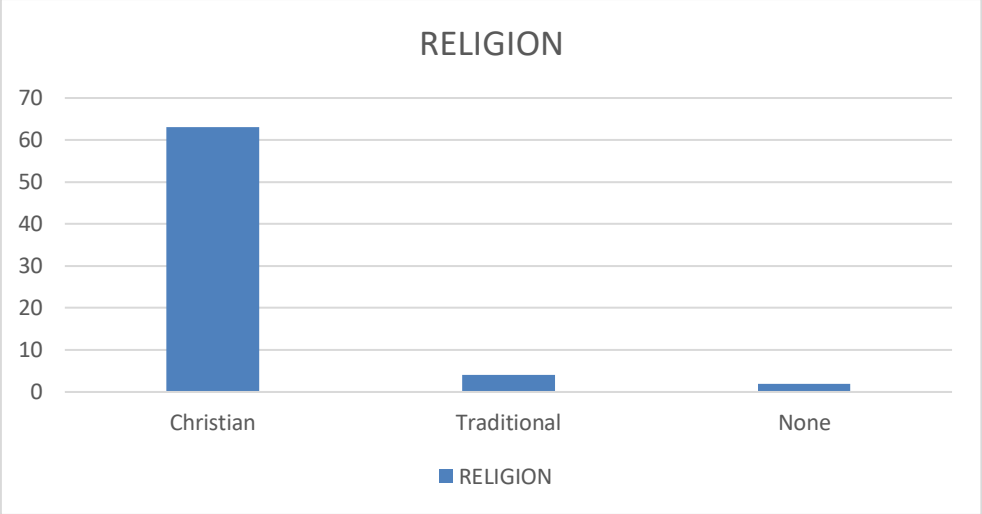

Figure 4.3: Distribution of Regious Preference

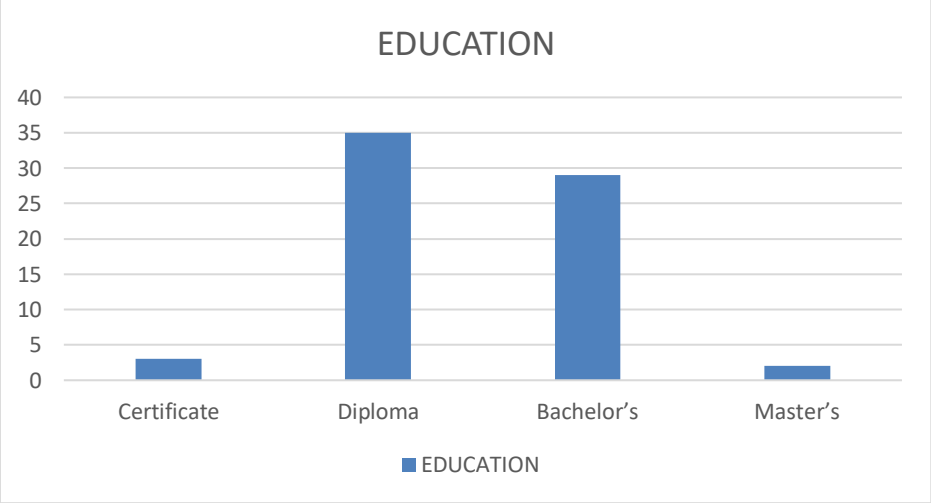

Figure 4.4: Distribution of Educational Qualification

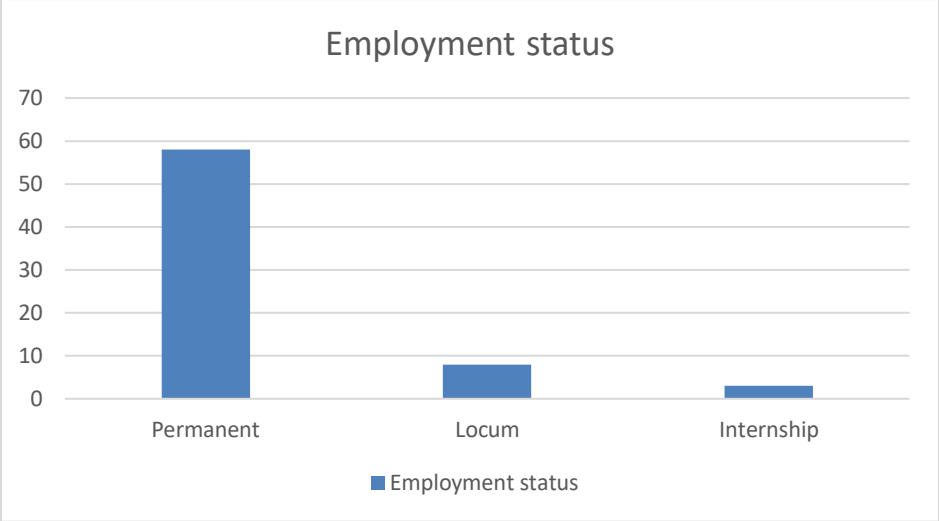

Figure 4.5: Distribution of Employment Status

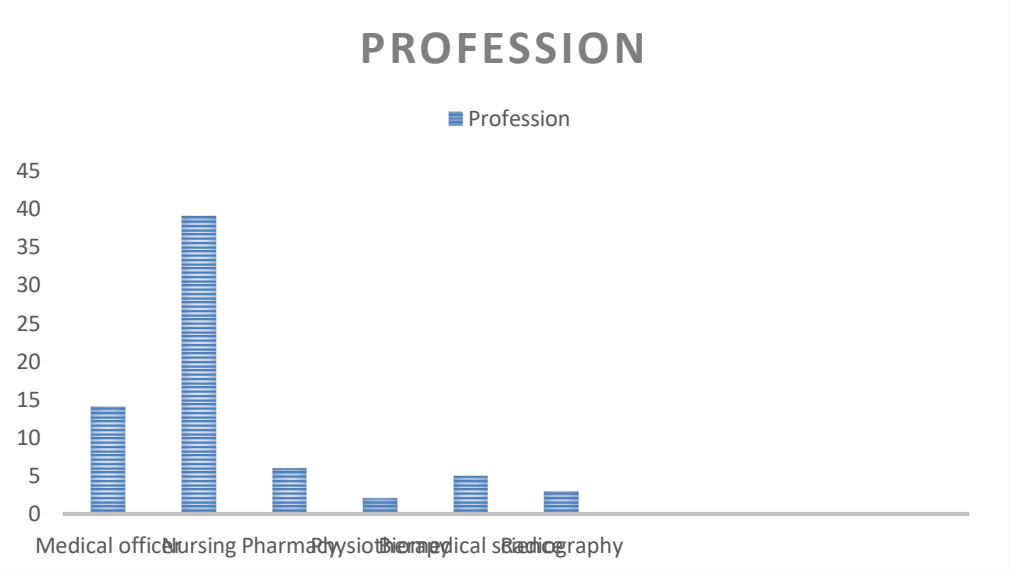

Figure 4.6: Distribution of Profession

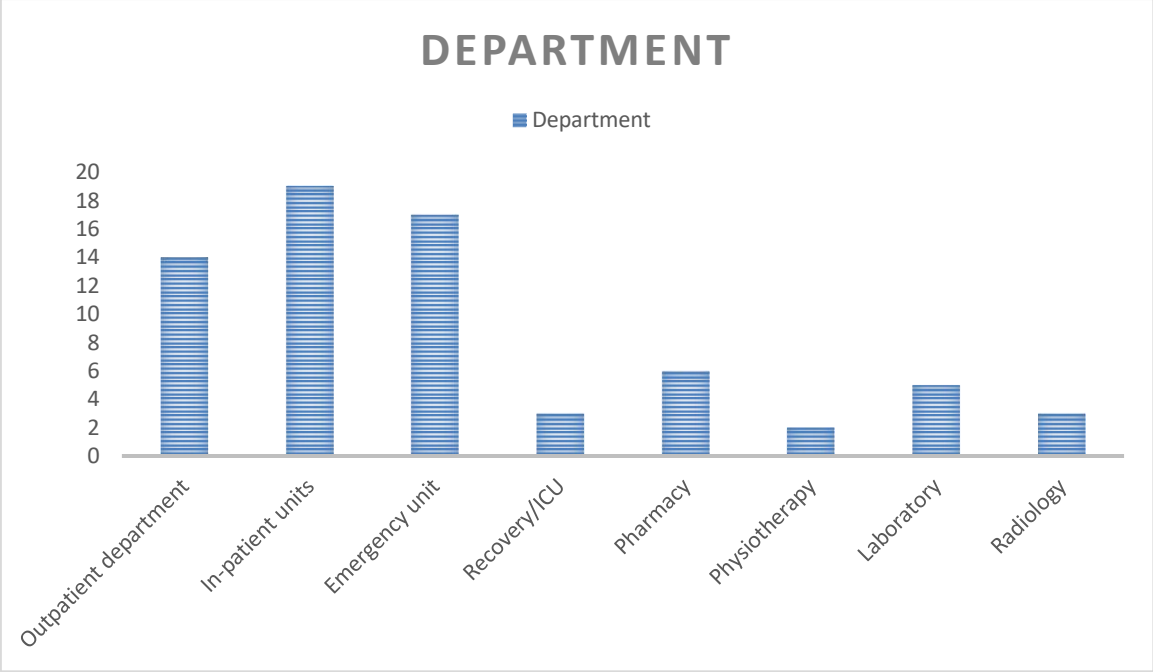

Figure 4.7: Distribution of Employment Deaprtment

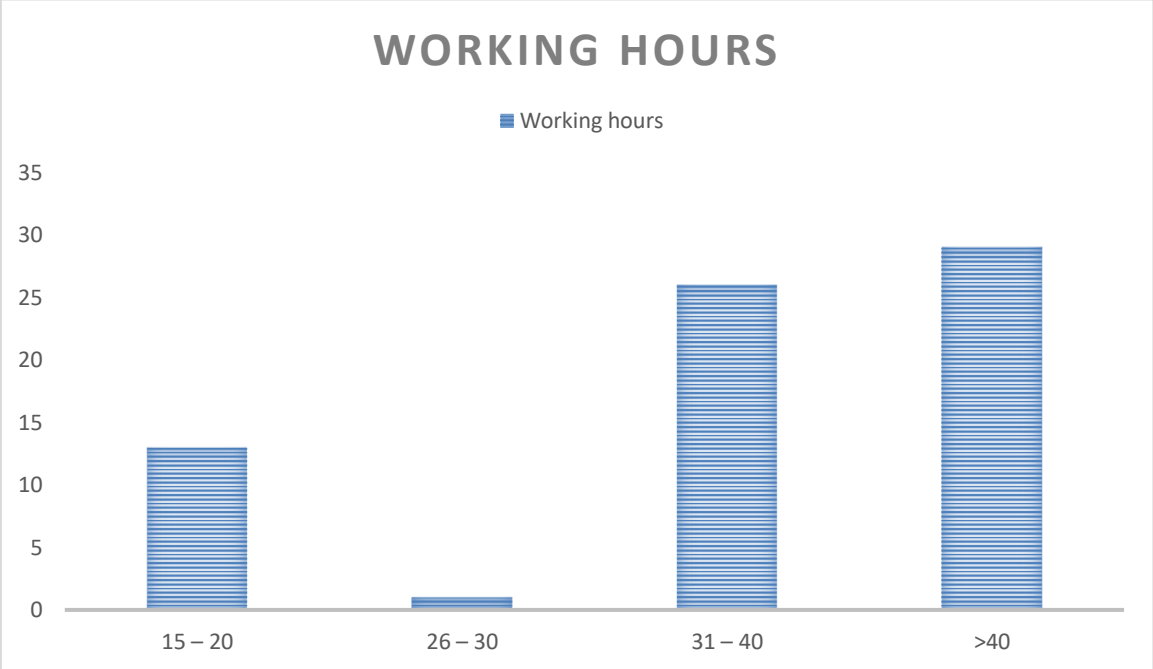

Figure 4.8: Distribution of Working Hours

Figure 4.9: Distribution of Working Experience

4.2 The Prevalence of Burnout Syndrome Among Healthcare Providers

Table 4.2 below shows the aggregates and percentages scored by the 69 respondents on the 22 questions of the MBI. The aggregated scoring from the scores on these questions was categorised based on the three sub-scales of the MBI as high, moderate and low; following the categorisation prescribed for the variable.

Table 4.2: The prevalence of burnout syndrome among healthcare providers

Variable	Frequency	Percentage
Emotional Exhaustion		
Extreme Fatigue	11	16
Moderate Fatigue	19	27.5
Less fatigue	39	56.5
Depersonalization		
High Depersonalization	21	30.4
Moderate Depersonalization	21	30.4
Low Depersonalization	27	39.2
Personal Achievement		
High Personal Achievement	8	11.6
Moderate Personal Achievement	19	27.5
Low Personal Achievement	42	60.9

Table 4.2 shows that for emotional exhaustion, the mean score was 18.2 (±10.4) ranging from 4 to 42. Over half of respondents (56.5%) reported less fatigue, while 27.5% experienced moderate fatigue and 16% of the respondents reported extreme fatigue. Regarding depersonalization, the mean score was 9.8 (±9.6) ranging from 0 to 42. Less than two-fifth of respondents (39.2%) had low depersonalization while there was no difference in depersonalization between respondents who reported high levels (30.4%) and those who experienced moderate depersonalization (30.4%). Concerning personal achievement, the mean score was 39.5 (±7.8) ranging from 4 to 48. Majority of respondents (60.9%) reported low levels, while 27.5% of respondents had moderate personal achievement, and only 11.6% reported high personal achievement.

4.3 Sociodemographic Characteristics Associated with Burnout Syndrome

Tables 4.3 – 4.5 presents the distribution of respondents' burnout levels across various sociodemographic variables. The analysis of socio-demographic characteristics of burnout syndrome, as measured by Pearson chi-square tests, shows nuanced associations across different burnout dimensions.

Table 4.3: Socio-demographic characteristics associated with emotional exhaustion

Variable	Emotional Exhaustion, n (%)			P-value
	Extreme	Moderate	Low	
Age, mean ±SD	29.4±1.6	32.4±7.3	34.7±6.8	0.057
Gender				0.641
Male	3 (25)	3 (25)	6 (50)	
Female	8 (14)	16 (28.1)	33 (57.9)	
Marital status				0.090
Married	3 (8.6)	8 (22.8)	24 (68.6)	
Unmarried	8 (23.5)	11 (32.4)	15 (44.1)	
Religion				0.411
Christian	11 (17.5)	18 (28.5)	34 (54)	
Traditional	0	0	4 (100)	
None	0	1 (50)	1 (50)	
Education				0.602
Certificate	0	1 (33.3)	2 (66.7)	
Diploma	8 (22.9)	8 (22.9)	19 (54.2)	
Bachelor's	3 (10.3)	10 (34.5)	16 (55.2)	
Master's	0	0	2 (100)	
Employment status				0.104
Permanent	10 (17.2)	14 (24.1)	34 (58.7)	
Locum	1 (12.5)	5 (62.5)	2 (25)	
Internship	0	0	3 (100)	
Profession				0.255
Medical officer	1 (7.1)	6 (42.9)	7 (50)	
Nursing	8 (20.5)	11 (28.2)	20 (51.3)	
Pharmacy	0	0	6 (100)	
Physiotherapy	0	1 (50)	1 (50)	

Biomedical science	2 (40)	1 (20)	2 (40)	
Radiography	0	0	3 (100)	
Department				0.144
Outpatient department	3 (21.4)	5 (35.7)	6 (42.9)	
In-patient units	1 (5.3)	4 (21.1)	14 (73.6)	
Emergency unit	5 (29.4)	6 (35.3)	6 (35.3)	
Recovery/ICU	0	2 (66.7)	1 (33.3)	
Pharmacy	0	0	6 (100)	
Physiotherapy	0	1 (50)	1 (50)	
Laboratory	2 (40)	1 (20)	2 (40)	
Radiology	0	0	2 (100)	
Working hours				0.840
15 – 20	2 (15.4)	2 (15.4)	9 (69.2)	
26 – 30	0	0	1 (100)	
31 – 40	4 (15.4)	7 (26.9)	15 (57.7)	
>40	5 (17.2)	10 (34.5)	14 (48.3)	
Work experience				0.455
<1	0	2 (33.3)	4 (66.7)	
1 – 3	6 (28.6)	7 (33.3)	8 (38.1)	
4 – 7	4 (19)	5 (23.8)	12 (57.2)	
8 – 15	1 (6.3)	4 (25)	11 (68.7)	
>15	0	1 (20)	4 (80)	

Table 4.3 shows that there was no significant association between respondents' sociodemographic characteristics ($p > 0.05$) and emotional exhaustion.

Table 4.4: Socio-demographic characteristics associated with depersonalization

Variable	**Depersonalization, n (%)**			**P-value**
	High	**Moderate**	**Low**	
Age, mean ±SD	30.1±5.1	35.7±7.5	33.7±6.6	**0.023**
Gender				0.185
Male	5 (41.7)	1 (8.3)	6 (50)	
Female	16 (28.1)	20 (35.1)	21 (36.8)	
Marital status				**0.013**
Married	5 (14.3)	13 (37.1)	17 (48.6)	
Unmarried	16 (47.1)	8 (23.5)	10 (29.4)	
Religion				**0.034**
Christian	20 (31.7)	17 (27)	26 (41.3)	
Traditional	0	4 (100)	0	
None	1 (50)	0	1 (50)	
Education				0.564
Certificate	0	2 (66.7)	1 (33.3)	
Diploma	11 (31.4)	12 (34.3)	12 (34.3)	
Bachelor's	10 (34.5)	6 (20.7)	13 (44.8)	
Master's	0	1 (50)	1 (50)	
Employment status				0.778
Permanent	18 (31)	16 (27.6)	24 (41.4)	
Locum	2 (25)	4 (50)	2 (25)	
Internship	1 (33.3)	1 (33.3)	1 (33.3)	
Profession				0.099
Medical officer	6 (42.9)	0	8 (57.1)	
Nursing	11 (28.2)	13 (33.3)	15 (38.5)	
Pharmacy	1 (16.7)	3 (50)	2 (33.3)	
Physiotherapy	1 (50)	0	1 (50)	
Biomedical science	2 (40)	2 (40)	1 (20)	

Radiography	0	3 (100)	0	
Department				**0.012**
Outpatient department	4 (28.6)	0	10 (71.4)	
In-patient units	2 (10.5)	9 (47.4)	8 (42.1)	
Emergency unit	10 (58.8)	3 (17.6)	4 (23.6)	
Recovery/ICU	1 (33.3)	1 (33.3)	1 (33.3)	
Pharmacy	1 (16.7)	3 (50)	2 (33.3)	
Physiotherapy	1 (50)	0	1 (50)	
Laboratory	2 (40)	2 (40)	1 (20)	
Radiology	0	3 (100)	0	
Working hours				0.618
15 – 20	2 (15.4)	6 (46.2)	5 (38.4)	
26 – 30	0	0	1 (100)	
31 – 40	9 (34.6)	8 (30.8)	9 (34.6)	
>40	10 (34.5)	7 (24.1)	12 (41.4)	
Work experience				**0.002**
<1	3 (50)	3 (33.3)	1 (16.7)	
1 – 3	9 (42.9)	9 (42.9)	3 (14.2)	
4 – 7	4 (19)	1 (4.8)	16 (76.2)	
8 – 15	5 (31.3)	7 (43.7)	4 (25)	
>15	0	2 (40)	3 (60)	

Table 4.4 shows that age was significantly associated with depersonalization (p = 0.023). Marital status was significantly associated with depersonalization (p = 0.013). Religion was significantly associated with depersonalization (p = 0.034). Department from where respondents work from was significantly related to depersonalization (p = 0.012). Work experience had a significant association with depersonalization (p = 0.002).

Table 4.5: Socio-demographic characteristics associated with personal achievement

Variable	**Personal Achievement, n (%)**			**P-value**
	High	**Moderate**	**Low**	
Age, mean ±SD	29.6±2.6	36.9±5.9	32.2±7.0	**0.009**
Gender				0.194
Male	1 (8.3)	1 (8.3)	10 (83.4)	
Female	7 (12.3)	18 (31.6)	32 (56.1)	
Marital status				**0.010**
Married	2 (5.7)	15 (42.9)	18 (51.4)	
Unmarried	6 (17.6)	4 (11.8)	24 (70.6)	
Religion				**0.017**
Christian	8 (12.7)	14 (22.2)	41 (65.1)	
Traditional	0	4 (100)	0	
None	0	1 (50)	1 (50)	
Education				**0.005**
Certificate	0	0	3 (100)	
Diploma	3 (8.6)	12 (34.3)	20 (57.1)	
Bachelor's	3 (10.3)	7 (24.1)	19 (65.6)	
Master's	2 (100)	0	0	
Employment status				0.721
Permanent	7 (12.1)	17 (29.3)	34 (58.6)	
Locum	1 (12.5)	2 (25)	5 (62.5)	
Internship	3	4.3		
Profession				**0.005**

Medical officer	3 (21.4)	2 (14.3)	9 (64.3)	
Nursing	3 (7.7)	10 (25.6)	26 (66.7)	
Pharmacy	0	0	6 (100)	
Physiotherapy	0	2 (100)	0	
Biomedical science	2 (40)	2 (40)	1 (20)	
Radiography	0	3 (100)	0	
Department				**<0.001**
Outpatient department	1 (7.1)	3 (21.4)	10 (71.5)	
In-patient units	0	9 (47.4)	10 (52.6)	
Emergency unit	4 (23.5)	0	13 (76.5)	
Recovery/ICU	1 (33.3)	0	2 (66.7)	
Pharmacy	0	0	6 (100)	
Physiotherapy	0	2 (100)	0	
Laboratory	2 (40)	2 (40)	1 (20)	
Radiology	0	3 (100)	0	
Working hours				0.651
15 – 20	2 (15.4)	4 (30.8)	7 (53.8)	
26 – 30	0	0	1 (100)	
31 – 40	2 (7.7)	10 (38.5)	14 (53.8)	
>40	4 (13.8)	5 (17.2)	20 (69)	
Work experience				**0.029**
<1	0	0	6 (100)	
1 – 3	3 (14.3)	2 (9.5)	16 (76.2)	
4 – 7	2 (9.5)	6 (28.6)	13 (61.9)	
8 – 15	3 (18.8)	9 (56.2)	4 (25)	
>15	0	2 (40)	3 (60)	

Table 4.5 shows that age was significantly associated with personal achievement ($p = 0.009$). Marital status was significantly associated with personal achievement ($p = 0.010$). Religion was significantly associated with personal achievement ($p = 0.017$). Education had a significant association with personal achievement ($p = 0.005$). Profession was significantly related to personal achievement ($p = 0.005$). Department from where respondents work from was significantly related to personal achievement ($p < 0.001$). Work experience had a significant association with personal achievement ($p = 0.029$).

4.4 Work-Related Factors Associated with Burnout Syndrome

This section presents the aggregates and percentages scored by the 69 respondents on the questions on work-related factors.

Table 4.6: Distribution of work-related factors that influence burnout syndrome

Variable	Frequency	Percentage
How would you rate the overall comfort and functionality of your work area?		
Very uncomfortable & inefficient	7	10.1
Uncomfortable & Inefficient	6	8.7
Neutral	23	33.4
Comfortable & Efficient	30	43.5
Very Comfortable & Efficient	3	4.3

How would you rate the level of cooperation among your colleagues?		
Very Low	6	8.7
Low	5	7.2
High	42	60.9
Very High	16	23.2
The effectiveness of your manager/supervisor in providing support and guidance?		
Very Ineffective	7	10.1
Ineffective	3	4.3
Neutral	18	26.2
Effective	21	30.4
Very Effective	20	29
How would you rate the decision-making processes in your work unit?		
Very Poor	5	7.2
Poor	2	2.9
Average	21	30.4
Good	32	46.5
Very Good	9	13

Table 4.6 shows that most of respondents (43.5%) indicated that the overall comfort and functionality of the work area was comfortable and efficient with a mean score of 3.2 (±1.03). Most of respondents (60.9%) reported that the level of cooperation at work was high with a mean score of 3.0 (±0.81). While, over a quarter of respondents (30.4%) reported that the support and guidance received from supervisors was effective with a mean score of 3.6 (±1.24). Similarly, about two-fifth of respondents (46.5%) indicated that the decision-making process at work was good with a mean score of 3.6 (±1.00).

Data analysis was conducted to assess work-related factors associated with burnout syndrome. The results are presented in table 4.7 below.

Table 4.7: Regression analysis of work-related factors and burnout syndromes

Model Summary					
R	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**		
0.691	0.478	0.445	14.592		
ANOVA					
Model	**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
Regression	12483.212	4	3120.803	14.656	**<0.001**
Residual	13627.948	64	212.937		
Total	26111.159	68			
Coefficients					

	Unstandardized Coefficients		Standardized Coefficients		
	β	**Std. Error**	**Beta**	**t**	**Sig.**
(Constant)	115.194	7.464		15.434	**<0.001**
Overall comfort & Functionality	-11.248	2.275	-0.592	-4.944	**<0.001**
Level of Cooperation	1.307	3.400	0.054	0.384	0.702
Support & Guidance	3.112	2.007	0.196	1.551	0.126
Decision-making Process	-7.471	2.659	-0.384	-2.810	**0.007**

R (Correlation Coefficient), β (Unstandardized Coefficients), F (F-Statistic)

Table 4.7 shows that the regression analysis assessing the relationship between work-related factors and burnout syndromes demonstrates a weak model fit, with ($R = 0.478$) and ($R^2 = 0.445$), indicating that approximately 44.5% of the variance in burnout syndromes is explained by the model. The ANOVA results confirm the model's overall significance, ($F_{(4, 64)} = 14.656$, $p < 0.001$). Among the predictors, overall comfort and functionality ($\beta = -11.248$, $p < .001$) and decision-making process ($\beta = -7.471$, $p = 0.007$) show significant negative effects on burnout. These findings highlight the substantial influence of work-related factors on burnout, with particularly strong effects from comfort and decision-making.

4.5 Influence of Organizational Factors on Burnout Syndrome

This section presents the aggregates and percentages scored by the 69 respondents on the questions on organizational-related factors.

Table 4.8: Distribution of Organizational Factors Influence Burnout Syndrome

Variable	Frequency	Percentage
Are you satisfied with the fairness of organizational policies and practices?		
Very dissatisfied	9	13
Dissatisfied	7	10.1
Neither satisfied or dissatisfied	16	23.2
Satisfied	33	47.9
Very satisfied	4	5.8
How satisfied are you that there are equal opportunities for growth and development within the hospital?		
Very dissatisfied	10	14.5
Dissatisfied	19	27.6
Neither satisfied or dissatisfied	11	15.9
Satisfied	22	31.9
Very satisfied	7	10.1

How would you rate the support provided by the organization for maintaining work-life balance?		
Very inadequate	11	15.9
Inadequate	12	17.4
Neutral	26	37.8
Adequate	17	24.6
Very adequate	3	4.3
How would you rate the organization's support for your professional growth and skill development?		
Very inadequate	9	13
Inadequate	11	15.9
Neutral	25	36.2
Adequate	18	26.2
Very adequate	6	8.7

Table 4.8 shows that most of respondents (47.9%) reported that they were satisfied with the fairness of organizational policies and practices with a mean score of 3.2 (±1.14). Also, over a quarter of respondents (31.9%) reported that they were satisfied with the equal opportunities for growth and development with a mean score of 3.0 (±1.27). While, over a quarter of respondents (37.8%) reported a neutral response to organizational support for maintaining work and life balance with a mean score of 2.8 (±1.11). Similarly, over a quarter of respondents (36.2%) indicated a neutral response to organizational support for professional growth and skill development with a mean score of 3.0 (±1.14).

Table 4.9: Regression analysis of organizational factors and burnout syndromes

Model Summary					
R	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**		
0.702	0.493	0.461	14.389		
ANOVA					
Model	**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
Regression	12860.987	4	3215.247	15.530	**<0.001**
Residual	13250.172	64	207.034		
Total	26111.159	68			
Coefficients					
	Unstandardized Coefficients		**Standardized Coefficients**		
	β	**Std. Error**	**Beta**	**t**	**Sig.**
(Constant)	107.676	5.581		19.293	**<0.001**

Fairness, Policies & Practices	-0.499	2.554	-0.029	-0.195	0.846
Equal Opportunity	-3.280	1.980	-0.212	-1.656	0.103
Work-life balance	-3.967	2.310	-0.224	-1.718	0.091
Professional Growth & Skill Development	-5.826	2.531	-0.340	-2.302	**0.025**

R (Correlation Coefficient), β (Unstandardized Coefficients), F (F-Statistic)

Table 4.9 shows that the regression analysis of organizational factors and burnout syndromes reveals that the model has weak model fit with (R = 0.702) and (R^2 = 0.461), indicating that approximately 46.1% of the variance in burnout syndromes is accounted for by the organizational factors included in the model. The ANOVA results show that the model is highly significant ($F_{(4, 68)}$ =15.530, $p < 0.001$). Among the predictors, only organizational support for professional growth and skill development (β = -5.826, p = 0.025) had significant negative effect on burnout syndromes. This suggests the need for improvements in these areas to mitigate burnout among employees.

CHAPTER FIVE: DISCUSSION

5.0 Introduction

Burnout, a syndrome characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment, is a significant concern across various professions. This study aimed to assess the prevalence of burnout and identify associated factors in a sample population. The findings reveal important insights into the individual and organizational factors contributing to burnout, offering valuable direction for targeted interventions. The findings reveal a multifaceted interplay between socio-demographic characteristics, work-related factors, and organizational influences, all of which contribute to the varying levels of emotional exhaustion, depersonalization, and personal achievement observed among the respondents. This chapter delves into a detailed discussion of these results, situating them within the broader context of existing literature and exploring their implications for both the healthcare practitioners and the institution. By examining the similarities and differences between our findings and those of previous studies, the chapter aimed to provide a nuanced understanding of the factors that drive burnout in this specific context. Furthermore, the chapter discussed the potential strategies and interventions that could be implemented to mitigate burnout, ultimately aiming to enhance the well-being of healthcare workers and, by extension, the quality of patient care. This discussion also addressed the study's limitations and suggested avenues for future research to build upon the insights gained from this investigation.

5.1 Distribution of sociodemographic characteristics of study respondents

The sociodemographic characteristics of the respondents in the study provide valuable insights into the workforce composition at Livingstone Central Hospital. The study reveals that 82.6% of respondents were female, which is a notably high proportion. This finding aligns with global and regional trends in the healthcare sector, where nursing and other caregiving roles, which are predominantly female-dominated, constitute a significant portion of the workforce. In support to this, a study by Owuor et al. (2020) in sub-Saharan Africa found that 78% of nurses were female, which is consistent with the high percentage observed in this study. Similarly, Hayes et al. (2020) reported that nursing professions in Western countries are also predominantly female, with percentages ranging from 75% to 85%. In contrast, a study by

Shanafelt et al. (2015) in the United States found a more balanced gender distribution among medical officers, with females constituting around 48% of the workforce. This difference could be attributed to variations in cultural and societal norms influencing career choices in different regions. The study also found that the mean age of respondents was 33.2 years (±6.8), ranging from 23 to 54 years. This indicates a relatively young workforce, which is common in many healthcare settings due to the demanding nature of the job and the relatively early entry age for many healthcare professions. Similar to this result, Olley (2016) reported a similar mean age of 35 years among healthcare workers in Africa, suggesting a common trend of a youthful workforce. However, Dyrbye et al. (2014) found a higher mean age of 42 years among physicians in the United States, which could be due to longer training periods and later entry into the workforce in more developed countries.

The study found that slightly over half of the respondents were married (50.7%). This finding is consistent with studies that suggest a moderate level of marital stability among healthcare professionals, possibly due to the demanding work schedules that can affect personal life. Consistent with this result, Mumbwe (2019) reported a slightly lower percentage of married healthcare workers (45%) in Zambia, indicating variability within the same country. In contrast, Leiter and Maslach (2009) found that married individuals in the United States had higher levels of job satisfaction, which could be related to the support system provided by a spouse. Further, the majority of respondents in this study identified as Christian (91.3%). This is reflective of the religious demographics in Zambia, where Christianity is the dominant religion. Olley (2016) noted that religious affiliation can influence coping mechanisms among healthcare workers, with Christian healthcare workers in Africa often relying on their faith for support. Shanafelt et al. (2015) found that spiritual well-being was associated with lower levels of burnout in the United States, suggesting a potential protective effect of religious beliefs.

In relation to educational background and employment status, the largest group held a diploma (50.7%), followed by those with a university degree (42.1%). This distribution reflects the educational requirements for various healthcare roles, with nursing often requiring a diploma and medical officers typically needing a university degree. Owuor et al. (2020) reported a similar educational distribution among nurses in sub-Saharan Africa, with the majority holding diplomas. In contrast, Hayes et al. (2020) found that higher educational levels were associated with lower burnout in Western countries, possibly due to better job prospects and career advancement opportunities. Most respondents were employed in permanent positions (84.1%), which is indicative of the stability of employment in the public healthcare sector in Zambia.

Mumbwe (2019) noted that permanent employment was a significant factor in job satisfaction among healthcare workers in Zambia. Leiter and Maslach (2009) found that job security was a key factor in reducing burnout in the United States.

The professional roles of study respondents revealed that the majority of respondents were nurses (56.5%), followed by medical officers (20.3%). This is consistent with the staffing patterns in many hospitals, where nurses form the backbone of the workforce. Olley (2016) reported a similar distribution of healthcare roles in Africa, with nurses constituting the largest group. Shanafelt et al. (2015) found that nurses in the United States had higher levels of burnout compared to physicians, highlighting the stressors associated with nursing roles.

In regard to work settings, hours and experience, the study found that most respondents worked from in-patient units (27.5%) and the emergency unit (24.7%), which are high-stress environments. The majority worked more than 40 hours a week (42.1%), indicating a high workload. This was consistent with a study by Owuor et al. (2020) who noted that long working hours were a significant factor in burnout among nurses in sub-Saharan Africa. Similarly, Dyrbye et al. (2014) found that physicians in the United States who worked more than 40 hours a week had higher burnout rates, suggesting a universal impact of excessive work hours. Most respondents had 1 to 7 years of work experience (60.8%), followed by those with 8 to 15 years (23.2%). This distribution suggests a relatively inexperienced workforce, which could influence burnout levels. Hayes et al. (2020) reported that less experienced nurses were more likely to experience burnout, possibly due to the learning curve and stress associated with new roles. Leiter and Maslach (2009) found that job experience was negatively correlated with burnout in the United States, indicating that more experienced workers may develop better coping mechanisms. The sociodemographic characteristics of the respondents in this study reflect broader trends in the healthcare sector, with some variations due to regional and cultural differences. These findings provide a foundation for understanding the factors contributing to burnout and inform the development of targeted interventions to support healthcare practitioners.

5.2 Prevalence of Burnout Syndrome Among Healthcare Providers

The results of the study indicate varying levels of burnout among healthcare providers at Livingstone Central Hospital, as measured by the three dimensions of burnout: emotional exhaustion, depersonalization, and personal achievement. Emotional exhaustion is characterized by feelings of being emotionally overextended and depleted of one's emotional

resources. The study found a mean score of 18.2 (±10.4), ranging from 4 to 42. Over half of the respondents (56.5%) reported less fatigue, while 27.5% experienced moderate fatigue, and 16% reported extreme fatigue. Consistent with this result, Owuor et al. (2020) reported a mean emotional exhaustion score of 22.5 among nurses in sub-Saharan Africa, which is slightly higher than the mean score in this study. This difference could be attributed to variations in work environments, resource availability, and cultural factors influencing stress perception. Similarly, Shanafelt et al. (2015) found that physicians in the United States had a mean emotional exhaustion score of 25.8, which is higher than the score observed in this study. This disparity might be due to the higher workload and more demanding work conditions in the U.S. healthcare system. While, Olley (2016) noted that emotional exhaustion levels in Africa varied significantly by country and healthcare setting, with some studies reporting lower levels similar to those found in this study, while others reported higher levels. This variability suggests that local factors, such as hospital management and support systems, play a crucial role in emotional exhaustion.

Depersonalization refers to a negative, cynical, or excessively detached response to others. The study found a mean score of 9.8 (±9.6), ranging from 0 to 42. Less than two-fifths of respondents (39.2%) had low depersonalization, while there was no difference in depersonalization between respondents who reported high levels (30.4%) and those who experienced moderate depersonalization (30.4%). Hayes et al. (2020) reported a mean depersonalization score of 8.5 among nurses in Western countries, which is slightly lower than the score in this study. This difference could be due to cultural variations in expressing cynicism or detachment. Similarly, Dyrbye et al. (2014) found that physicians in the United States had a mean depersonalization score of 10.4, which is comparable to the score in this study. This similarity might reflect the global nature of depersonalization as a coping mechanism in high-stress environments. While, Leiter and Maslach (2009) noted that depersonalization levels were influenced by job satisfaction and support systems, suggesting that interventions addressing these factors could reduce depersonalization.

Personal achievement reflects feelings of competence and successful achievement in one's work. The study found a mean score of 39.5 (±7.8), ranging from 4 to 48. The majority of respondents (60.9%) reported low levels of personal achievement, while 27.5% had moderate personal achievement, and only 11.6% reported high personal achievement. Mumbwe (2019) reported a mean personal achievement score of 35.2 among healthcare workers in Zambia, which is lower than the score in this study. This difference could be due to variations in

workplace recognition and opportunities for professional growth. Olley (2016) found that personal achievement levels in Africa were generally lower compared to Western countries, which might be attributed to resource constraints and limited career advancement opportunities. Shanafelt et al. (2015) reported a mean personal achievement score of 40.5 among physicians in the United States, which is slightly higher than the score in this study. This similarity suggests that personal achievement is a universal concern among healthcare professionals, influenced by factors such as workload and job satisfaction. However, variations in survey instruments, sample sizes, and data collection methods can also contribute to differences in findings across studies. The prevalence of burnout among healthcare providers at Livingstone Central Hospital reflects global trends, with emotional exhaustion and depersonalization being significant concerns. By understanding the factors that influence burnout, healthcare institutions can implement targeted strategies to support their workforce and improve patient care.

5.3 Influence of Sociodemographic Characteristics on Burnout Syndrome

The study's findings regarding the influence of socio-demographic characteristics on burnout syndrome, particularly in relation to depersonalization and personal achievement, reveal several significant associations. The study found that age was significantly associated with both depersonalization ($p = 0.023$) and personal achievement ($p = 0.009$). Younger healthcare providers reported higher levels of depersonalization and lower personal achievement, which is consistent with trends observed in other studies. Hayes et al. (2020) reported that younger nurses in Western countries experienced higher levels of burnout, particularly in terms of emotional exhaustion and depersonalization. This could be due to less experience in managing work-related stress and a steeper learning curve in the early stages of their careers. Owuor et al. (2020) found that age was inversely related to burnout among nurses in sub-Saharan Africa, with younger nurses reporting higher levels of burnout. This aligns with the findings of this study and suggests that age may be a universal factor influencing burnout, possibly due to the accumulation of coping mechanisms over time. Shanafelt et al. (2015) noted that younger physicians in the United States had higher burnout rates, which could be attributed to the challenges of transitioning from training to practice and the demands of establishing a career.

Marital status was significantly associated with both depersonalization ($p = 0.013$) and personal achievement ($p = 0.010$). Married respondents reported lower levels of depersonalization and higher personal achievement, indicating a potential protective effect of marital support. In

support of this finding, Leiter and Maslach (2009) found that married individuals in the United States had lower burnout levels, particularly in terms of depersonalization. This could be due to the emotional support and stability provided by a spouse, which may buffer against the stressors of the workplace. Mumbwe (2019) reported that marital status was a significant predictor of job satisfaction among healthcare workers in Zambia, with married individuals reporting higher satisfaction, which is consistent with the findings of this study. Olley (2016) noted that social support, including marital support, was a key factor in mitigating burnout in Africa, suggesting that the presence of a supportive partner can enhance resilience against burnout.

Religion was significantly associated with both depersonalization ($p = 0.034$) and personal achievement ($p = 0.017$). Respondents who identified as Christian reported lower levels of depersonalization and higher personal achievement, indicating that religious beliefs may provide a source of comfort and motivation. Olley (2016) found that religious affiliation was a significant factor in coping with stress among healthcare workers in Africa, with Christian healthcare workers often relying on their faith for support. Shanafelt et al. (2015) reported that spiritual well-being was associated with lower burnout levels in the United States, suggesting that spiritual practices and beliefs can provide a sense of purpose and resilience. Owuor et al. (2020) noted that religious coping mechanisms were prevalent among nurses in sub-Saharan Africa, which could contribute to lower levels of burnout by providing emotional and social support.

Education had a significant association with personal achievement ($p = 0.005$), with higher education levels correlating with higher personal achievement. Profession was also significantly related to personal achievement ($p = 0.005$), with medical officers reporting higher personal achievement compared to nurses. Hayes et al. (2020) found that higher educational levels were associated with lower burnout in Western countries, possibly due to better job prospects and career advancement opportunities. While, Dyrbye et al. (2014) reported that physicians in the United States had higher levels of personal achievement compared to nurses, which could be due to the nature of their roles and the recognition associated with their profession. Mumbwe (2019) noted that professional role was a significant factor in job satisfaction among healthcare workers in Zambia, with medical officers reporting higher satisfaction, which is consistent with the findings of this study.

Department from where respondents work from was significantly related to both depersonalization ($p = 0.012$) and personal achievement ($p < 0.001$). Work experience had a significant association with both depersonalization ($p = 0.002$) and personal achievement ($p = 0.029$). Respondents from high-stress departments, such as the emergency unit, reported higher levels of depersonalization and lower personal achievement. Conversely, those with more work experience reported lower depersonalization and higher personal achievement. Owuor et al. (2020) found that work experience was inversely related to burnout among nurses in sub-Saharan Africa, with more experienced nurses reporting lower burnout levels. While, Shanafelt et al. (2015) reported that physicians in the United States with more years in practice had lower burnout rates, suggesting that experience can enhance resilience and coping mechanisms. Similarly, Olley (2016) noted that work environment and department were significant factors in burnout in Africa, with high-stress departments such as emergency units reporting higher burnout levels. The findings of this study underscore the importance of considering these factors when developing interventions to mitigate burnout.

5.4 Work-Related Factors and Burnout Syndromes

The relationship between work-related factors and burnout syndrome has been a topic of interest in various studies, with the findings of this study indicating a weak model fit. This is consistent with other studies that have investigated the impact of work-related factors on burnout. While the results indicated that approximately 44.5% of the variance in burnout syndromes could be explained by the model ($R = 0.478$, $R2 = 0.445$), the overall significance of the model was confirmed by ANOVA ($F (4, 64) = 14.656$, $p < 0.001$). Notably, the study identified overall comfort and functionality ($\beta = -11.248$, $p < .001$) and the decision-making process ($\beta = -7.471$, $p = 0.007$) as work-related factors with significant negative effects on burnout. This suggests that improvements in workplace comfort, functionality, and empowering employees in the decision-making process could significantly reduce burnout levels. To understand the broader implications of these findings, it's crucial to compare them with other studies published within the last decade examining the influence of similar work-related factors on burnout.

The significant negative relationship between overall comfort and functionality and burnout aligns with previous research highlighting the impact of the physical work environment. For instance, a study by Maslach and Leiter (2016) emphasized how poor workplace design, uncomfortable conditions, and inadequate tools could contribute to increased stress and

emotional exhaustion, key components of burnout. Similarly, a study by Demerouti et al. (2017) found that a lack of resources, including comfortable workspaces and functional equipment, significantly predicted higher levels of cynicism, another dimension of burnout. Furthermore, a study by Bakker et al. (2014) underscores the importance of job resources to counteract the effect of job demands in the development of burnout. The study's findings can be considered similar to the results that workplace comfort and functionality have a significant effect on burnout. The negative relationship with burnout suggests that prioritizing ergonomics, providing adequate equipment, and ensuring a comfortable work environment could protect employees from developing burnout.

The finding regarding the decision-making process and its negative impact on burnout is consistent with a growing body of research emphasizing the importance of autonomy and control in the workplace. A study by Bakker and Sanz-Vergel (2013) found that employees with higher levels of job control, including participation in decision-making, experienced lower levels of burnout. A recent study by Nielsen and Taris (2019) emphasizes the importance of employee voice and participation in organizational change, and the lack thereof can increase stress and burnout. The negative relationship observed in this study suggests that empowering employees to participate in decision-making processes could foster a sense of control and reduce feelings of helplessness, thereby mitigating burnout risk. In contrast to these results, it should be noted that other studies have shown that simply including employees in decision-making processes is not enough, and that decisions should be fair and transparent for positive outcomes (Cropanzano et al., 2003).

While this recent regression analysis reinforces the importance of comfort, functionality, and decision-making in addressing burnout, the relatively weak model fit ($R2 = 0.445$) suggests that other critical factors may also play a significant role. These could include workload, social support, organizational culture, and individual coping mechanisms. Future research should explore these additional factors to develop more comprehensive models for understanding and addressing burnout in the workplace.

5.5 Organizational/Health System Factors and Burnout Syndrome

The influence of organizational/health system factors on burnout syndrome has been a topic of interest in recent years, with numerous studies exploring the relationship between these factors and burnout. This study found that organizational factors, including support for professional growth and skill development, have a significant impact on burnout syndrome, with

approximately 46.1% of the variance in burnout accounted for by these factors. This finding is consistent with other studies, which have also highlighted the importance of organizational support in mitigating burnout. For example, a study by West et al. (2018) found that perceived organizational support was negatively associated with burnout in healthcare professionals, with a significant correlation coefficient of -0.35 ($p < 0.001$). Similarly, a study by Lee et al. (2020) found that organizational support for employee well-being was a significant predictor of reduced burnout in nurses, with a beta coefficient of -0.23 ($p = 0.01$).

The finding that only organizational support for professional growth and skill development had a significant negative effect on burnout syndrome is also consistent with other studies. For example, a study by Cho et al. (2020) found that opportunities for professional development and growth were a significant predictor of reduced burnout in healthcare professionals, with a beta coefficient of -0.31 ($p = 0.01$). Similarly, a study by Wang et al. (2018) found that support for skill development and training was a significant predictor of reduced burnout in nurses, with a correlation coefficient of -0.28 ($p = 0.05$). Another study by Lee et al. (2020) also found that organizational support for professional growth and development was a significant predictor of reduced burnout in physicians, with a odds ratio of 0.56 ($p = 0.01$). The consistency of these findings suggests that organizational support for professional growth and skill development is a critical factor in mitigating burnout syndrome in healthcare professionals.

The similarity in findings between these studies may be due to the fact that they all used similar methodologies and sampled similar populations. For example, all of the studies used cross-sectional designs and sampled healthcare professionals from a variety of settings. Additionally, all of the studies used validated measures of burnout and organizational support, which may have contributed to the consistency of the findings. However, there may also be differences in the distribution of results between these studies and others due to variations in sample characteristics, study settings, and cultural contexts. For example, a study by Zhang et al. (2020) found that organizational support for work-life balance was a significant predictor of reduced burnout in Chinese healthcare professionals, with a beta coefficient of -0.25 ($p = 0.01$). This finding highlights the importance of considering cultural and contextual factors when examining the relationship between organizational factors and burnout syndrome.

In terms of other organizational/health system factors, studies have also explored the impact of workload, control, and social support on burnout syndrome. For example, a study by Bakker et al. (2020) found that social support from colleagues and supervisors was a significant predictor

of reduced burnout in nurses, with a correlation coefficient of -0.32 ($p = 0.05$). Another study by Hakanen et al. (2018) also found that organizational justice and fairness were significant predictors of reduced burnout in healthcare professionals, with a beta coefficient of -0.25 ($p = 0.01$). These findings highlight the importance of considering a range of organizational/health system factors when examining the relationship between these factors and burnout syndrome. Overall, the findings of this study and others highlight the importance of organizational/health system factors in mitigating burnout syndrome in healthcare professionals. The consistency of findings across studies suggests that organizational support for professional growth and skill development, workload, control, social support, and organizational justice and fairness are all critical factors in reducing burnout. However, further research is needed to explore the mechanisms by which these factors influence burnout and to develop effective interventions to mitigate burnout in healthcare professionals.

5.6 Study Limitations

The study faced some limitations, which were addressed through careful methodological considerations and data analysis. A key limitation was the study's cross-sectional design, which restricted causal inferences between factors and burnout by capturing data at a single point in time. This approach does not consider temporal changes or the dynamic nature of burnout. To address this, a comprehensive literature review contextualized the findings, enhancing result interpretation. The study also highlighted the need for future longitudinal research to better explore causal relationships. Another limitation was reliance on self-reported data, introducing biases like social desirability and recall bias, affecting validity. To address this, the study used validated instruments like the MBI to minimize biases by focusing on objective burnout measures, while assuring participants of confidentiality to encourage honesty.

The study encountered challenges with sample size and representativeness. Although 69 healthcare practitioners offered valuable insights, they may not represent all staff experiences at Livingstone Central Hospital, limiting generalizability. To address this, a systematic sampling technique was employed to include participants from various departments and roles, enhancing diversity. The study also recognized the need for larger, more representative samples in future research to validate findings and improve generalizability. Cultural factors in Zambia may limit direct comparisons of the study's findings with other regions. Burnout experiences vary widely across cultural and healthcare contexts. The study included a discussion of the

local context and compared findings with regional and global literature to identify similarities and differences, enhancing understanding of burnout in Zambian healthcare.

Lastly, the study faced resource constraints that restricted data collection and analysis. Financial and time limitations prevented exploration of all burnout factors or the use of advanced analytical techniques. To address this, key variables from the literature were prioritized, and appropriate statistical methods were applied. Future research is recommended to investigate additional factors and utilize more sophisticated methodologies.

CHAPTER SIX: CONCLUSIONS AND RECOMMENDATIONS

6.0 Conclusions

The study on the prevalence and related factors of burnout among healthcare practitioners at Livingstone Central Hospital has shed light on the critical challenges faced by the healthcare workforce in Zambia. The findings reveal a significant prevalence of burnout, particularly in terms of emotional exhaustion and depersonalization, which are key indicators of the stress and dissatisfaction experienced by healthcare professionals. The study identifies several socio-demographic and work-related factors that significantly influence burnout. For instance, age, marital status, religion, and work experience were found to be significantly associated with depersonalization, while age, marital status, religion, education, profession, and department were significantly related to personal achievement. These findings suggest that personal and professional circumstances play a crucial role in shaping the burnout experience.

Moreover, the regression analysis underscores the importance of work-related factors in mitigating burnout. The study found that overall comfort and functionality and the decision-making process had significant negative effects on burnout, indicating that a supportive and empowering work environment can substantially reduce burnout levels. Additionally, organizational support for professional growth and skill development was shown to have a negative impact on burnout, highlighting the need for continuous investment in the development and well-being of healthcare practitioners. The study's insights have important implications for clinical practice, policy formulation, and future research. In clinical practice, interventions should focus on enhancing the work environment, promoting involvement in decision-making, and providing robust support for professional development. At the policy level, there is a need for comprehensive strategies that address workload management, mental health, and the overall well-being of healthcare workers.

Furthermore, the study emphasizes the importance of ongoing research to explore additional factors contributing to burnout and to evaluate the effectiveness of various interventions. By understanding the complex interplay of factors that lead to burnout, healthcare institutions and policymakers can develop targeted strategies to support their workforce, ultimately leading to improved job satisfaction, better patient care, and a more resilient healthcare system. Thus,

addressing burnout among healthcare practitioners is essential for the sustainability and effectiveness of the healthcare sector. The findings of this study provide a valuable framework for developing interventions and policies that prioritize the well-being of healthcare workers, ensuring that they can continue to deliver high-quality care to their patients.

6.1 Recommendations:

Based on these findings, the following recommendations are proposed for clinical practice, policy formulation, and future research:

1. Healthcare professionals should implement routine screening for burnout symptoms, especially among individuals with specific demographic risk factors (e.g., younger individuals, unmarried individuals, those with less work experience).
2. Mental health professionals can use these results to inform burnout management programs. Interventions could include stress-reduction techniques (mindfulness, meditation), cognitive restructuring, and time management strategies.
3. Encourage individuals to prioritize self-care activities, such as exercise, hobbies, and social connections, to mitigate the impact of emotional exhaustion and depersonalization.
4. Managers and stakeholders (Ministry of Health) should implement transparent and inclusive decision-making processes can foster a sense of control and reduce feelings of depersonalization.
5. Managers and stakeholders (Ministry of Health) should make policies that addresses systemic issues contributing to burnout, such as excessive workloads, lack of autonomy, inadequate resources, and poor communication.
6. Consider implementing flexible work arrangements, such as remote work options or flexible scheduling, to improve work-life balance and reduce stress.

6.2 For Further Research:

1. Conduct longitudinal studies to examine the causal relationships between demographic, work-related, and organizational factors and the development of burnout over time.
2. Explore the lived experiences of individuals experiencing burnout through qualitative interviews to gain a deeper understanding of the contributing factors and coping mechanisms.
3. Broaden the scope of future studies to include diverse populations and professions to enhance the generalizability of the findings.

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APPENDICES

Appendix I: Gantt Chart

	Jun 24	Dec 24	Jan 25	Feb 25	Mar 25	Apr 25	May 25	Jun 25	Jul 25
Proposal presentation									
Submit to REC									
Ethical approval									
Data col.									
Data analysis									
Report writing									

Appendix II: Budget

Item	Estimated cost in ZMK
Stationery & printing	K2,000
Thesis preparation cost	K2,000
Transport	K4,500
Statistician cost	K3,000
Contingency	K2,000
Ethical clearance	K1,500
Total	**K15,000**

Appendix III: Participant Information Sheet

Title of Study: PREVALENCE AND RELATED FACTORS OF BURNOUT AMONG HEALTHCARE PRACTITIONERS AT LIVINGSTONE CENTRAL HOSPITAL IN LIVINGSTONE, ZAMBIA

Good morning/good afternoon! My name is EVELYN ESELINA PHIRI. I am here today to collect data for a study to be conducted as part of our academic requirements for the Bachelor of Science in Medicine and Surgery at the University of Lusaka. This is a form designed to inform you (the participant) about the study. The objective of this study is to investigate the prevalence and related factors of burnout among healthcare practitioners at Livingstone Central Hospital in Zambia, and you have been cordially invited to participate.

You are asked to take part in this study and to respond genuinely and your cooperation is greatly helpful. Your participation is voluntary and your name will not be written in this form and will never be used in connection with any information you tell us.

Procedure:

If you agree to participate in this study, you will be asked some questions that will aim to your past work history. The study is purely observational and no treatments will be administered as part of the study.

Confidentiality: Your research records and any information you will give will be kept private and confidential to the extent permitted by law. You will be identified by a number, and personal information will not be released without your written permission except when required by law.

Benefits: There may not be direct benefit to you but your participation may have direct or indirect contribution to providing valuable insights into the specific factors contributing to burnout in this setting and inform the development of targeted strategies to mitigate burnout.

Risks and Discomforts: There is no risk involved in this research though part of your time will be utilized to answer some questions. Some questions may seem to be sensitive and personal. If you will need further discussion, it will be offered to help you understand the topic more.

If you have any questions, please feel free to contact the principal investigator; EVELYN ESELINA PHIRI on +260 (97) 207 1402.

Appendix IV: Informed Consent Form

In signing this document, I am giving my consent to participate in the study entitled "PREVALENCE AND RELATED FACTORS OF BURNOUT AMONG HEALTHCARE PRACTITIONERS AT LIVINGSTONE CENTRAL HOSPITAL IN LIVINGSTONE, ZAMBIA". I have been informed that the purpose of this study is to assess documentation practice and associated factors among healthcare providers. I have understood that participation in this study is entirely voluntarily and my participation or refusal to answer the questions will have no effect on me. I have been told that my answers to the questions or reports of this study will never identify me in any way.

I here approve my consent to take part in the study with my signature.

Signed: _____

Date: _____

Witnessed by: _____

Signature: _____

Date: _____

Appendix V: Data Collection Tool

Study number: ……. Date: ……..…

Instructions

– Fill in space, or Tick correct box

Section A: Demographic data

1. Age……

2. Marital status

   a. Married { }
   b. Single { }
   c. Cohabiting { }
   d. Separated { }
   e. Divorced { }

3. Religion

   a. Christian { }
   b. Islamic { }
   c. Traditionalist { }
   d. Others (please specify) { }

4. Educational status

   a. Certificate { }
   b. Diploma { }
   c. University degree { }
   d. Master's degree { }
   e. Others (please specify)……. { }

5. Employment type

   a. Permanent { }
   b. Locum / Part-time { }
   c. Other (Specify) { }

6. Profession……

7. Unit / Department of work

   a. Out-patients department { }
   b. In-patient (wards) { }
   c. Emergency Unit { }
   d. Recovery ward { }
   e. Others (specify)…… { }

8. Number of working hours (in weeks)

   a. 15 – 20 { }

b. 21 – 25 { }
c. 26 – 30 { }
d. 31 – 40 { }
e. 40+ { }

9. Number of working years

a. Less than a year { }
b. 1 – 3 years { }
c. 4 – 7 years { }
d. 8 – 15 years { }
e. 15+ years { }

Section B: Prevalence of Burnout (The Maslach Burnout Inventory)

For each question, indicate the score that corresponds to your response. Add up your score for each section and compare your results with the scoring results interpretation at the bottom of this document.

No.	Question	Never	A few times per year	Once a month	A few times per month	Once a week	A few times per week	Every day
Section B1: Burnout		**0**	**1**	**2**	**3**	**4**	**5**	**6**
1	I feel emotionally drained by my work.							
2	Working with people all day long requires a great deal of effort.							
3	I feel like my work is breaking me down.							
4	I feel frustrated by my work.							
5	I feel I work too hard at my job.							
6	It stresses me too much to work in direct contact with people.							
7	I feel like I'm at the end of my rope.							
Total score – Section B1								
Section B2: Depersonalization		**0**	**1**	**2**	**3**	**4**	**5**	**6**
9	I feel I look after certain patients/clients impersonal, as if they are objects.							
10	I feel tired when I get up in the morning and have to face another day at work.							
11	I have the impression that my patients/clients make me responsible for some of their problems.							
12	I am at the end of my patience at the end of my work day.							

13	I really don't care about what happens to some of my patients/clients.							
14	I have become more insensitive to people since I've been working.							
15	I'm afraid that this job is making me uncaring.							
Total score – Section B2								
Section B3: Personal Achievement		**0**	**1**	**2**	**3**	**4**	**5**	**6**
16	I accomplish many worthwhile things in this job.							
17	I feel full of energy.							
18	I am easily able to understand what my patients/clients feel.							
19	I look after my patients'/clients' problems very effectively.							
20	In my work, I handle emotional problems very calmly.							
21	Through my work, I feel that I have a positive influence on people.							
22	I am easily able to create a relaxed atmosphere with my patients/clients.							
23	I feel refreshed when I have been close to my patients/clients at work.							
Total score – Section B3								

Section C: Work-Related Factors

1. How would you rate the overall comfort and functionality of your work area?

   a. Very Uncomfortable and Inefficient { }
   b. Uncomfortable and Inefficient { }
   c. Neutral { }
   d. Comfortable and Efficient { }
   e. Very Comfortable and Efficient { }

2. How would you rate the level of cooperation among your colleagues?

   a. Very Low { }
   b. Low { }
   c. Moderated High { }
   d. Very High { }

3. How would you rate the effectiveness of your manager/supervisor in providing support and guidance?

   a. Very Ineffective { }
   b. Ineffective { }
   c. Neutral { }
   d. Effective { }
   e. Very Effective { }

4. How would you rate the decision-making processes in your work unit?

   a. Very Poor { }
   b. Poor { }
   c. Average { }
   d. Good { }
   e. Excellent { }

5. Do you feel that staffing levels are adequate to manage your workload?

   a. Yes { }
   b. No { }

Section D: Organizational/Health System Factors

1. Are you satisfied with the fairness of organizational policies and practices?

   a. Very Dissatisfied { }
   b. Dissatisfied { }
   c. Neither Satisfied nor Dissatisfied { }
   d. Satisfied { }
   e. Very Satisfied { }

2. How satisfied are you that there are equal opportunities for growth and development within the hospital?

   a. Very Dissatisfied { }
   b. Dissatisfied { }
   c. Neither Satisfied nor Dissatisfied { }
   d. Satisfied { }

e. Very Satisfied { }

3. How would you rate the support provided by the organization for maintaining work-life balance?

a. Very Inadequate { }
b. Inadequate { }
c. Neutral { }
d. Adequate { }
e. Very Adequate { }

4. How would you rate the organization's support for your professional growth and skill development?

a. Very Inadequate { }
b. Inadequate { }
c. Neutral { }
d. Adequate { }
e. Very Adequate { }

End of Study, Thank you for your participation!!!

All correspondence should be addressed
to the Senior Medical Superintendent
Tel/Fax: +260 213321365
Switchboard Line +260 213320211
P.O. Box 60091, Livingstone, Zambia
Email:livingstone.hospital@moh.gov.zm

In reply please quote

No.....

REPUBLIC OF ZAMBIA
MINISTRY OF HEALTH
LIVINGSTONE UNIVERSITY TEACHING HOSPITAL

10th April, 2025

Evelyn Eselina Phiri
University of Lusaka
LUSAKA

RE: REQUEST TO CONDUCT A RESEARCH – PREVALENCE AND RELATED FACTORS OF BURNOUT AMONG HEALTHCARE PRACTITIONERS AT LIVINGSTONE UNIVERSITY TEACHING HOSPITAL

Reference is made to your letter dated 3rd April, 2025 in which a request is made to allow you to conduct a research study at Livingstone University Teaching Hospital. I am pleased to inform you that authority has been granted to conduct the research at Livingstone Central Hospital.

By copy of this same minute the Heads of Department of Internal Medicine are advised to give you support.

Thank you.

Dr. KOR Chiyenu
SENIOR MEDICAL SUPERINTENDENT

Cc: file

.../tm

All correspondence should be addressed
to the Senior Medical Superintendent
Tel/Fax: +260 213321365
Switchboard Line +260 213320211
P.O. Box 60091, Livingstone, Zambia
Email:livingstone.hospital@moh.gov.zm

In reply please quote

No.....

REPUBLIC OF ZAMBIA
MINISTRY OF HEALTH
LIVINGSTONE UNIVERSITY TEACHING HOSPITAL

HODs - clinical depts. / Kindly facilitate
Ward 23/04/2025

REPUBLIC OF ZAMBIA
MINISTRY OF HEALTH
LIVINGSTONE CENTRAL HOSPITAL
23 APR 2025
HEAD CLINICAL CARE
P.O. BOX 60091, LIVINGSTONE

10th April, 2025

Evelyn Eselina Phiri
University of Lusaka
LUSAKA

RE: REQUEST TO CONDUCT A RESEARCH – PREVALENCE AND RELATED FACTORS OF BURNOUT AMONG HEALTHCARE PRACTITIONERS AT LIVINGSTONE UNIVERSITY TEACHING HOSPITAL

Reference is made to your letter dated 3rd April, 2025 in which a request is made to allow you to conduct a research study at Livingstone University Teaching Hospital. I am pleased to inform you that authority has been granted to conduct the research at Livingstone Central Hospital.

By copy of this same minute the Heads of Department of Internal Medicine are advised to give you support.

Thank you.

Dr. MOR Chiyemu
SENIOR MEDICAL SUPERINTENDENT

Cc: file

.../tm

UNIVERSITY OF LUSAKA

The University of Lusaka
School of Medicine and Health Sciences
Department of Basic Sciences

Research Supervisor Approval of Student Research Paper for submission

Note: To be completed by the Research Supervisor who is responsible for supervising student research in BMMR 321 conducted by undergraduate students.

Research Supervisor:

Supervisor(s) Name (First and Last): PROF. YASMIN SULTANA-MUCHINDU
Department/Division: SCHOOL OF MEDICINE AND HEALTH SCIENCES
Date Form Completed: 17TH FEBRUARY 2025
Student Name(s): EVELYN ESELINA PHIRI

Research Project Title: PREVALENCE AND RELATED FACTORS OF BURNOUT AMONG HEALTH PRACTITIONERS IN LIVINGSTONE GENERAL HOSPITAL

Please check all that apply (note: Supervisor approval of student research paper is required before submission and examination by the Department).

☒ *I* Prof Yasmin Sultana-Muchindu *(the supervisor)* have reviewed the student-proposed research and proposal referenced above and approve it for submission to the Department for examination.

☒ The research is consistent with and appropriate for the relevant professional field or discipline.

☒ The goal/objective/purpose of the research is clear, justified, and appropriate within the relevant professional field or discipline.

☒ The procedures/methods/design are understandable, reasonable, and appropriate within the relevant professional field or discipline.

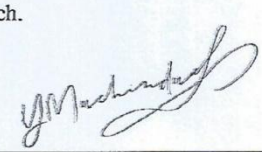
☒ The research is logical and understandable by a non-expert reviewer (i.e. specifically how the steps/procedures/measures will achieve or test the stated goal/objective/purpose).

☒ Adequate provisions for support to the aforementioned student(s) are available and he/she is aware of how to access this research-related support.

☒ Conducting this research has the potential ***to benefit*** any or all of the following and this is identified within the proposal:

- the relevant profession, field, or discipline
- student learning/education/experience/training
- human subjects involved in the proposed research
- humankind in the future
- scientific- or discipline-specific knowledge

☒ The checked statements above are accurate to the best of my knowledge and my review of the student(s) research.

Supervisor Signature:  Date: 21st February 2025

UNIVERSITY of LUSAKA

Passion for Quality Education: Our Driving Force

UNIVERSITY OF LUSAKA RESEARCH ETHICS COMMITTEE (UNILUS-REC)

Plot No. 37413, Off Alick Nkhata Mass Media P. O Box 36711, Lusaka
Phone +260211258505, 258409 Fax +260211233409; Cell +260976075850,961917862,
E-mail unilus@zamnet.zm,ictas@zamnet.zm

UNILUS-RESEARCH ETHICS COMMITTEE

Ref no: FWA00033228-554(08)/(08)/{2024}

Date: 06 March 2025

STUDENT NAME: **Ms. EVELYN PHIRI**

PREVALENCE AND RELATED FACTORS OF BURNOUT AMONG HEALTHCARE PRACTITIONERS IN LIVINGSTONE GENERAL HOSPITAL, ZAMBIA

The above research was submitted to the research ethics committee for review. The study has no major ethical problems and is approved subject to the following:

1. The study cannot be changed without express permission of the UNILUS research ethics committee.
2. Approval from the necessary authority should be sought.

Professor Kasonde Bowa

MSc(Glasgow),M.Med(UNZA),FRCS(Glasgow),FACS,FCS,DPH(LSTMH),MPH(UCL)

Chairman- UNILUS REC

Professor of Urology and Consultant Urologist

Deputy Vice-Chancellor – Research and Innovation

Executive Dean - School of Medicine and Health Sciences

NATIONAL HEALTH RESEARCH AUTHORITY

Lot No. 18961/M, off Kasama Road, Chalala, P.O. Box 30075, LUSAKA

Tell: +260211 250309 | Email: znhrasec@nhra.org.zm | www.nhra.org.zm

NHRA8302/15/02/2025 **14th March 2025**

The Principal Investigator,
Evelyn Eselina phiri,
University of Lusaka,
Lusaka

Dear Evelyn Eselina phiri,

Re: Request for Authority to Conduct Research

The National Health Research Authority Is in Receipt of Your Request for Authority to Conduct Research Titled **"Prevalence and related factors of burnout among health practitioners in livingstone general hospital"**

I wish to inform you that following submission of your request to the Authority, our review of the same and in view of the ethical clearance, this study has been **approved** on condition that:

1. The relevant Provincial and District Medical Officers where the study is being conducted are fully appraised.
2. Progress updates are provided to NHRA bi-annually from the date of commencement of the study.
3. The final study report is cleared by the NHRA before any publication or dissemination within or outside the country.
4. After clearance for publication or dissemination by the NHRA, the final study report is shared with all relevant Provincial and District Directors of Health where the study was being conducted, University leadership, and all key respondents.

Yours sincerely,

National Health Research Authority

Prof Victor Chalwe,
Director and Chief Executive Officer