RELATIONSHIP BETWEEN BURNOUT AND EMOTIONAL INTELLIGENCE AMONG HEALTHCARE WORKERS IN KENYATTA NATIONAL HOSPITAL IN KENYA

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MASTER OF ARTS DEGREE IN CLINICAL PSYCHOLOGY

UNITED STATES INTERNATIONAL UNIVERSITY – AFRICA

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HEALTHCARE WORKERS IN KENYATTA NATIONAL HOSPITAL IN KENYA

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A Thesis submitted to the School of Humanities and Social Sciences in partial fulfillment of
the Requirements for the Award of the Master of Arts Degree in Clinical Psychology

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FALL 2020
DECLARATION

I, the undersigned, declare that this is my original work and has not been submitted to any other institution, or university other than the United States International University – Africa in Nairobi for academic credit.

Signed__________________________ Date___________________

Student: Susan W. Ruturi (ID No. 600322)

This thesis has been presented for examination with my approval as the appointed supervisor.

Signed__________________________ Date___________________

Rachel Ngesa, Ph.D.

Signed__________________________ Date___________________

Prof. Martin C. Njoroge – Dean, School of Humanities and Social Sciences
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ABSTRACT

Burnout refers to extreme exhaustion, depersonalization and diminished accomplishment. Burnout can cause clinical symptoms like hypertension, neurocognitive changes on the brain, and can affect relationship hence undermine client care. Emotional intelligence on the other hand, creates personal and social awareness, and improves relationships. The self-administered questionnaire containing *Maslach Burnout Inventory* and *emotional intelligence self-assessment tool* was disseminated among the healthcare workers via Google form link ([https://forms.gle/Xbs9u1FYynyhCsvY7](https://forms.gle/Xbs9u1FYynyhCsvY7)). Complete enumeration was used. From the findings on the 120 responses received (76 females, 44 males), it was established that most healthcare workers did not engage in alcohol and substances abuse, a few used occasionally on weekly or daily basis. More than half had experienced burnout depicted by respondents reporting moderate and high on emotional exhaustion and depersonalization. There was high emotional intelligence with 74% having high self-awareness and 73% high social relationship management. There was positive association between age and self-awareness (p=0.040). A significant positive relationship between self-management competencies with personal accomplishment (r=0.306, p<0.001), and relationship management of the social competencies with personal accomplishment (r=0.419, p<0.001) were noted. There was significant negative correlation of their self-management (r= -0.192, p=0.036) and relationship management (r= -0.274, p=0.002) with depersonalization aspect of burnout. The conclusion while there was high burnout among healthcare workers, high emotional intelligence was recorded. It is recommended that an innocuous yet discreet exercise to identify and provide support for users of alcohol and substances, and programs to guard staff emotional intelligence and mitigate burnout are instituted. These interventions would improve their quality of life, subsequently lead to improved relationship with patients.

**Keywords:** Burnout, Emotional Intelligence, Emergency Departments, Healthcare Workers
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DEDICATION

To my brother, Dr. A. J. M. Ruturi: His unwavering support is unparalleled. I am deeply indebted to him. I dedicate this study to him.
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<td>KNH</td>
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<td>MBI</td>
<td>Maslach Burnout Inventory</td>
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<td>MRI</td>
<td>Magnetic Resonance Imaging</td>
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<td>NACOSTI</td>
<td>National Commission for Science Technology and Innovation</td>
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<td>NIDA</td>
<td>National Institute of Drug Abuse</td>
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<td>SPSS</td>
<td>Statistical Package for Social Sciences</td>
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CHAPTER ONE
INTRODUCTION AND BACKGROUND

1.1 Introduction

The aim of the study was to establish the relationship between burnout and emotional intelligence among healthcare workers (HCW) at emergency departments (ED) at Kenyatta National Hospital (KNH) – Kenya, a national referral hospital. This chapter highlights the background of burnout and emotional intelligence and also outlines the problem statement, purpose, and objectives of the study. The research questions, justification, and scope have been stated. A catalogue of the terminologies and concepts are also included in this chapter.

1.2 Background of the Study

Burnout is a condition that depletes an individual of physical and emotional energy and changes one’s outlook of professional work. The evidence of burnout is emotional exhaustion, depersonalization, and low professional accomplishment. The individual is naturally fatigued, mentally disconnected in exemplifying their line of duty – cynical and often inefficient, implying that their emotions have been affected.

Burnout has neurocognitive impairment implication (Morawetz, Bode, Baudewig, & Heekeren, 2017). Studies by Savic (2015) demonstrated amygdala enlargement on the Magnetic Resonance Imaging (MRI) scans of respondents who were identified through the Maslach Burnout Inventory self-report to have burnout and perceived stress. Further, burnout was negatively correlated to reduced connectivity between the amygdala, the anterior cingulate, and medial prefrontal cortex, hence weakening the emotional regulation (Morawetz, Bode, Baudewig, & Heekeren, 2017).
Although findings by Danhof-Pont, van Veen, and Zitman (2011) were non-conclusive on changes in biomarkers due to burnout, studies on the brain and salivary cortisol confirm that a physiological change occurs when individuals experience burnout (Savic, 2015). Savic (2015) noted that repeated activation and subsequent changes in the structure of the Amygdala, its connectivity to the prefrontal cortex interferes with the ability of the individual to modulate emotions, attention, and memory are affected; while unregulated cortisol levels lead to physiological illnesses. It is therefore evident that burnout as a phenomenon has a negative impact on individuals’ physical and psychological state (Dubale et al., 2019).

Burnout, work-related stress, and diminished resiliency have been associated with psychiatric symptoms like depression, and high-risk behaviors such as substance use or abuse. The presence of depression has been reported among health workers who had burnout (Lu, Dresden, McCloskey, Branzetti, & Gisondi, 2015; Smeds et al., 2020). Smeds et al. (2020) further records that the physicians they interviewed reported having burnout. It was noted that specialists, that included emergency room specialists had higher burnout levels than their counterparts. This was associated with substance use, relationship problems, and suicide.

A study done by Rath, Huffman, Phillips, Carpenter, and Fowler (2015) among members of the Society of Gynecologic Oncology demonstrated a correlation between burnout and depressive illness, substance abuse, and suicidal ideation. Healthcare workers who experienced compassion fatigue, which is related to burnout, were found to self-medicate. Ironically, medications that can be abused are accessible to HCW (Ross, Berry, Smye, & Goldner, 2018).

The World Health Organization categorizes substances of use or abuse, these include alcohol, tobacco, and other substances of abuse, under the broad classification of psychoactive substances that, when consumed in any form, affect the brain (World Health Organization [WHO], 2020).
Mainly the processes of basal ganglia, amygdala, and prefrontal cortex are affected among other areas of the brain. The National Institute on Drug Abuse posits that the limbic reward pathway hijacks an individual’s brain function whereby cognition, emotions, and affect are interfered with (National Institute on Drug Abuse [NIDA], 2020). Alcohol and substance use and burnout affect the brain. This interferes with objective clinical judgment (Pedersen, Sørensen, Bruun, Christensen, & Vedsted, 2016). Burnout interferes with patient care and interpersonal skills like active listening, patience, adaptability (Dubale et al., 2019; Kokonya et al., 2014; McKinley et al., 2020; Smeds et al., 2020).

Burnout also has considerable direct and indirect financial implications. It was cited in the Harvard Magazine that the cost of doctors’ burnout is $4.6 billion annually (Powell, 2019, para. 1). It costs Canada an approximate of $ 213.1 million in an early exit from active duty and limited clinical services (Dewa, Jacobs, Thanh, & Loong, 2014). Various studies in high-income countries identified burnout among various disciplines in the health sector (McKinley et al., 2020). Findings following an extensive review of studies involving doctors in 45 countries over the period between 1991 to 2018 reported a high burnout level of 67% among the respondents who completed the self-administered Maslach Burnout Inventory (Rotenstein et al., 2018). A Loera, Converso, and Viotti (2014) study showed that nurses also experience burnout. The cost to sub-Saharan Africa and particularly Kenya is a massive migration of healthcare workers to developed countries (Dubale et al., 2019).

Closely related to burnout is compassion fatigue described as tension and constant exhaustion at work (Kabunga, Anyolitho, & Betty, 2020). This study conducted by Kabunga et al. (2020) indicated that a total of 84% of the 220 participants among physiotherapists in Northern Uganda experienced an upsurge of compassion fatigue associated with working in a clinical setting.
A report by Kokonya et al. (2014) should be of great concern in Kenyatta National Hospital where “a crude prevalence rate of burnout syndrome was 95%”. Apparently, there is a growing body of evidence that suggests burnout and emotional intelligence are linked (Năstasă & Fărcaș, 2015; Szczygiel & Mikolajczak, 2018). Burnout is a product of workplace emotional pressures, leading to progressive emotional demoralization and diminishing self-confidence. This relegates efficiency and quality health care to poor services and staff demotivation. The authors relate the emotional feature of burnout to emotional intelligence (Năstasă & Fărcaș, 2015).

Emotional intelligence, a skill that involves perception of personal and individual emotions, also includes a complex ability to affect interactions with self and others (Ünal, 2014). According to Tripathy (2018), the evidence of emotional intelligence is the ability to demonstrate personal competences in self-awareness and self-management and competencies in social skills, namely social awareness and social relationships. These personal and social competencies of emotional intelligence involve the cognitive ability to interpret situations, critically analyze, and rationally address the situation at hand. The prefrontal cortex (the executive function that includes logical reasoning), and the amygdala, part of the limbic system of the brain specialized in emotions and memory are involved in this cognitive ability (Savic, 2015).

Healthcare services engage the cognitive skill of the provider and therefore require continual regulation of their emotions. The development and self-evaluation of emotions is emotional intelligence (Kabunga, Anyolitho, & Betty, 2020). Kabunga et al. (2020) noted that improving emotional intelligence led better psychological wellbeing of HCW and hence better workplace relationships. Emotional intelligence is an individual’s ability to maintain self-efficacy in every day. This involves being ability to constructively interpret one’s emotions while providing health services.
The HCW engage in a range of patient clinical presentation and emotions, including death (Kabunga et al., 2020). HCW who are conscious of their emotional intelligence have adaptive skills in face of emergencies and judiciously resolve work-related challenges (Ünal, 2014). Ünal (2014) argues that emotionally intelligent HCW engage in self-awareness ostensibly build emotional capital with their patients thereby relate better with one another. Subsequently, communication between them is improved leading to quality care (Năstasă & Fărcaş, 2015). Emotional intelligence influences efficient conflict management and effectively adjustment to emotionally charged work-related environment (Năstasă & Fărcaş, 2015). This includes an individual’s ability to calm themselves influencing others to self-regulate. They also display management skills and have positive work attitude. Emotional intelligence therefore improves the individual wellbeing and work performance (Kabunga et al., 2020). In the contrary, lower emotional intelligence leads to burnout and infective resolution of the effects of burnout.

In a study among Danish physicians, the researchers found an association between alexithymia (associated with low emotional intelligence), burnout, and alcohol use (Pedersen et al., 2016). Huang et al., (2019) postulated that emotional intelligence has a positive and protective factor against burnout and improves mental wellbeing. In Iran, emotional intelligence was found to positively influence lower perceived stress (Forushani, & Besharat, 2011). South African scholars found that emotional intelligence helped moderate chronic stress thereby reducing burnout (Görgens-Ekermans, & Brand, 2012). Similarly, Kabunga et al. (2020) in Uganda, demonstrated that social competency as an aspect of emotional intelligence lowered the rate of compassion fatigue. Emotional intelligence requires effective management of emotional reactions and daily improvement is fundamental (Bradberry & Greaves, 2009). The implication is that emotional intelligence in a clinical setting can be learned to alleviate the effects of burnout (Matthews, Zeidner, & Roberts, 2012).
In conclusion, there were positive implications where 1% improvement on aspects of personal emotional intelligence equaled a 1% reduction in health expenditure (Mikolajczak & Van Bellegem, 2017). These indicators therefore imply that continued investigation on relationship between burnout and emotional intelligence is beneficial to the healthcare system, and creates a better experience for patients and clients.

1.3 Statement of the Problem

There is paucity of journals and research articles on the relationship between burnout and emotional intelligence in Kenya or in the sub-Saharan region. KNH, being the national referral hospital and drop-in center for accident and emergencies, the HCW in the frontline emergency departments are exposed to elements of burnout. A previous study on burnout among 345 doctors and nurses at KNH reported a 95% prevalence rate of burnout syndrome (Kokonya et al., 2014). It has been established that burnout is associated with poor patient health outcomes. Clinicians with burnout are apathetic and lack empathy (Bentley, Kaplan, & Mokonogho, 2018; Lu, Dresden, McCloskey, Branzetti, & Gisondi, 2015; Montgomery, 2014; Smeds et al., 2020). Moreover, Raudenská et al. (2020) has already found high levels of burnout in China during the coronavirus disease 2019 (COVID-19) pandemic. It was therefore anticipated that the HCW would experience burnout during the COVID-19 pandemic in Kenya. Studies have shown that high emotional intelligence skills enhance health professionals’ resilience and protection against burnout. No research had been carried out in Kenyatta National Hospital on emotional intelligence before. The study therefore sought to identify the current levels, and the relationship between burnout and emotional intelligence among HCW.
1.4 **Purpose of the Study**

The purpose of the study was to establish the relationship between burnout and emotional intelligence among healthcare workers in emergency departments at Kenyatta National Hospital.

1.5 **Specific Objectives**

The specific objectives of the study were to:

1.5.1 Determine the levels of burnout among healthcare workers in emergency departments at the Kenyatta National Hospital.

1.5.2 Assess the levels of emotional intelligence among healthcare workers in emergency departments at KNH.

1.5.3 Evaluate the relationship between personal emotional intelligence competencies and burnout among healthcare workers in emergency departments at KNH.

1.5.4 Establish the relationship between social emotional intelligence competencies and burnout among healthcare workers in emergency departments at KNH.

1.6 **Research Questions**

This study was guided by the following research questions:

1.6.1 What were the levels of burnout among healthcare workers in the emergency departments at the Kenyatta National Hospital?

1.6.2 What were the levels of emotional intelligence of the healthcare workers in the emergency departments at KNH?

1.6.3 Is there a relationship between personal emotional intelligence competencies and burnout among healthcare workers in the emergency departments at KNH?
1.6.4 What is the relationship between social emotional intelligence competencies and burnout among healthcare workers working in the emergency departments at KNH?

1.7 Justification of the Study

Healthcare workers at the emergency departments operate in a demanding work environment characterized by high patient flow and turnover. Patients come with injuries ranging from minor bruises to major damage to body integrity. Others are gravely ill from medical conditions that render their physical bodies wasted with obvious evidence on long-standing illness including emaciation among other outward signs. There are numerous resuscitations, and several are unsuccessful leading to death. Though they are in pain, these patients can sometimes display aberrant behavior towards the clinical staff. Some accompanying persons can also be impolite (Kokonya et al., 2014). The noisy and loud equipment, shouts from wailing patients, chatter from the large number of patients and staff are a common feature in the ED at KNH. Findings by Kokonya et al. (2014) found out that burnout syndrome was present among HCW in the emergency department at Kenyatta National Hospital. It was anticipated that there would be an increase in the levels of burnout due to the novel corona disease (COVID-19) pandemic resulting from the upsurge of patients (Raudenská et al., 2020). This could affect the performance of emergency department workers and the medical fraternity in general. Cumulative exposure without psychological relieve or low emotional intelligence can lead to negative psychological residue. Research on emotional intelligence and its role in burnout among employees in the health sector, and Africa in particular is a nascent topic. Conversely, there is ambivalence in implementation of programs focused on alleviating burnout among healthcare workers in the Sub-Saharan Africa region (Morse, Salyers, Rollins, Monroe-DeVita, & Pfahler, 2012).
Investigating the presence of burnout at the emergency departments, Kenyatta National Hospital, and levels of emotional intelligence was intended to bring to light the levels and relationship between the variables with an aim that the findings and recommendations would benefit the staff wellbeing and improve patient care.

The study was therefore intended to benefit the following stakeholders:

1.7.1 Healthcare Workers

It was expected that role of emotional intelligence in clinical settings would be assessed. Recognition of emotional intelligence in alleviating levels of burnout would contribute to building resilience among the workers. This can enrich team experience, enhance interpersonal relationships and improve family and social relationships (Matthews, Zeidner, & Roberts, 2012).

1.7.2 Neuroscientists and Mental Health Researchers

Gradually scholars are presenting emotional intelligence as an important aspect to be included in skills development (Hammerly, Harmon, & Schwitzberg, 2014). This study was expected to contribute to knowledge for Mental Health specialists to levels and relationship between burnout and emotional intelligence. With this therefore, they can advance research on interventions needed to enhance emotional intelligence among HCW. Further, an assessment on how emotional intelligence mitigates burnout can be established.

1.7.3 Human Resources Departments in Hospitals

The study findings can provide facts to guide interventions that promote mental health wellbeing thus ensure better productivity. Occupational Health and Safety policies and Mental Health Act can be reviewed to include aspect of burnout and emotional intelligence. This will enhance the hospital’s quality healthcare mission to optimize patient experience achieved through among other values, improved performance culture.
1.8 Scope of the Study

The study was conducted in December 2020 to January 2021 targeted doctors, nurses, clinical officers, pharmacists and medical social workers in the emergency departments at Kenyatta National Hospital, a parastatal teaching and referral health institution with 1,800 bed capacity.

The hospital is situated in the Upperhill area of Capital city Nairobi – Kenya, at the Ngong Road/ Mbagathi Road intersection. The respondents were HCW who had worked for 6 months or longer in the emergency departments that is, the accident and emergency department and pediatric emergency unit. Those on leave or sick off, students on attachment and staff on preceptor or probation were excluded.

The researcher focused on specific clinical job description of staff working only in emergency departments, although the hospital has a wide range of employees and different sections. Due to the small population size, a complete enumeration of the available HCW was involved.

1.9 Limitations and Delimitations

This study coincided with the advent of the COVID-19 pandemic which placed additional demands in rolling out the associated infection control requirements. Additionally, work overload, anxieties, and required social distancing may influence sampling adequacy. Hence the quality of some data obtained online and having contact with respondents will equally be severed.

There was also the limitation of the duration to complete the three (3) part self-administered questionnaire. The respondents may have been subjective and could have been affected by their emotional state at the time of completing the survey. Similarly, generalization of the results to other sections in the hospital, and other ED in public and private establishments may be challenged based on institutional dynamics, work environment differences and uniqueness of patient workload.
The novelty of the terminology *emotional intelligence* may have been misperceived to be assessing individual’s intelligence quotient, and therefore participants may have viewed this negatively and/or provided modified responses. On the other hand, they may not have fully understood burnout and substance use or abuse status. The researcher engaged staff on various platforms in order to clarify these misperceptions with authentic responses being encouraged.

1.10 **Assumptions of the Study**

The study assumed that the Emotional Intelligence Tool and Maslach Burnout Inventory were culturally sensitive for the sub-Saharan region. The content of the self-administered questionnaire on emotional intelligence and burnout was assumed to be well understood.

1.11 **Operational Definition of Terms and Concepts**

**Affect** – Observable attributes of emotions or that which is deduced from a client’s unconscious expressions by a mental health practitioner.

**Burnout** – State of feeling constantly depleted of energy and emotions caused by extreme long-term occupational stress.

**Burnout Syndrome** – A constellation of symptoms describing burnout, often replaces the term burnout

**Compassion Fatigue** – Emotional and physical depletion, a negative experience common among individuals providing professional care for persons with medical illness

**Depersonalization** – Component of burnout that is characterized by distorted perception and lack of empathy

**Emergency Departments** – Departments in Kenyatta National Hospital that offer outpatient emergency services and they include the accident and emergency, and the pediatric emergency unit
Emotional Exhaustion – Component of burnout that is characterized by feelings of energy depletion or exhaustion, lethargy, emotional and cognitive fatigue

Emotional Intelligence – Individual ability to perceive, interpret and connect their personal emotions and that of others, being cognizant that the expression of their emotions has an impact and can influence their environment

Empathy – Ability of an individual to cognitively connect with another person’s experiences without being sympathetic and getting entangled with the actual emotions

Healthcare Worker – Refers to health professionals in the services clinical services including doctors, social workers, nurses, medical records officers

Personal Accomplishment – Component used in the description of burnout that describes self-appraisal of individual’s professional efficacy

Personal Competence – Individual’s self-awareness and self-management of emotional intelligence

Social Competence – Individual’s social-awareness and social-relationship in description of emotional intelligence

Substance Use or Abuse – Use or misuse of alcohol, tobacco, prescription medications, and illicit drugs that when consumed they interfere with an individual’s mood and behavior

1.12 Chapter Summary

This chapter outlines the background on burnout and details how emotional intelligence can potentially mitigate burnout. It also describes the study objectives, justification and scope of the study while the last section provides definition of terms. The next chapter delves into the review of relevant literature on burnout and emotional intelligence. It provides theoretical, empirical and conceptual perspectives of burnout and emotional intelligence.
CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter outlines the contextual review of literature. The first section presents theoretical literature and the conceptual framework of emotional intelligence and burnout. The latter section presents relevant empiricisms and the last section, an overview.

2.2 Theoretical Review

The theoretical literature focuses on the multidimensional model of burnout and the model of emotional intelligence.

2.2.1 Maslach’s Multidimensional Theory of Burnout

“Burned-out” was a largely acceptable phrase in psychology and in the workplace but its conceptualization draws back to Christina Maslach and Susan Jackson who established the Maslach Burnout Inventory (MBI). The multidimensional theory is encoded in the Maslach Burnout Inventory (Loera, Converso, & Viotti, 2014). The MBI has been revised to improve consistency and reliability, the fourth edition released in 2018 has been abridged to 22 items.

The MBI which forms the multidimensional theory identifies burnout as a psychological state exhibited by three (3) components namely, emotional exhaustion, depersonalization, and reduced personal accomplishment due to chronic work-related stress (Chemali et al., 2019; Maslach, 1998). As outlined in Figure 1, burnout is a consequence of a mismatch between expectations on employees and support provided, leading increased costs due to reduced employee productivity (Năstasă & Fărcaș, 2015).
Figure 1 illustrates the relationship between the variables in the MBI model.

![Mobility Model Diagram]

Emotional exhaustion, a component of burnout is described as physical lethargy, emotional, and cognitive fatigue. The individual loses energy as a result of overexertion at work and unrealistic obligations and is therefore chronically drained. The effect of emotional exhaustion is depersonalization typically characterized by disengagement and cynicism where the individual exhibits negative attitude and disinterest towards work, and becomes impersonal towards colleagues and clients (Dubale et al., 2019).

The final stage of burnout is lack of personal accomplishment at work. This is evidenced by individual’s lack of professional developments, worthiness, or productiveness at work. The lack of motivation leads to unsatisfactory work performance. The person is also doubtful of their competence, constantly anxious and consequently colleagues begin to observe inefficiency in them (Chemali et al., 2019; Maslach & Leiter, 2016).
There are two main yet conflicting criticisms of the MBI tool despite its extensive use. Critics have challenged the negatively phrased statements for “emotional exhaustion” and “depersonalization” facets. On the other hand, others have disparaged the inclusion of “personal accomplishment” in the inventory because it presents a positive appraisal while the other facets of the MBI are presented from a negative perspective (Maslach & Leiter, 2016).

Studies have predicted burnout in healthcare professionals (Dubale et al., 2019). Since HCWs are continually exposed to heavy workload and unsatisfactory administrative support. Burnout in the health sector can create a crisis and requires urgent interventions (Chemali et al., 2019).

2.2.2 Theories of Emotional Intelligence

Evolutionist Charles Darwin’s theory of evolution and social intelligence is the earliest record associated with the use of emotional intelligence albeit not the terminology. The interpretation of Darwin’s theory is that organisms use emotional intelligence in their process of natural selection as a productive process to survive. Howard Garden and Wayne Payne described emotional intelligence as a skill to handle emotions such as fear and desires. Other theorists mentioned in the field of emotional intelligence include Abraham Maslow who developed his propositions on the ability to acquire social skills. In his hierarchy of needs theory, relationships, and social belonging are highlighted. Psychologist Edward Thorndike in the 1930s first coined the term emotional intelligence to describe the importance of understanding and successfully relating with people (Fiori & Vesely-Maillefer, 2018). David Wechsler and Robert Sternberg are credited for featuring intelligence as an aspect of assessment tools (Matthews, Zeidner, & Roberts, 2012).

Emotional intelligence introduced by Salovey and Mayer (1990), is the ability to understand, appropriately interpret and manage intrapersonal and interpersonal relationships (Mayer, Caruso, & Salovey, 2016).
With David Caruso, Salovey and Mayer model is now an assessment of emotions in four aspects namely the ability to accurately perceive own and others emotions, the influence of emotions in the decision-making process, interpret different emotional ranges and outcomes, and authentically manage emotions (Fiori & Vesely-Maillefer, 2018; Matthews, Zeidner, & Roberts, 2012). Daniel Goleman, who’s 1995 publication “Emotional Intelligence: Why It can Matter More than IQ”, boosted this subject as competence-based that promotes the perception of self for one's appraisal (Fiori & Vesely-Maillefer, 2018).

The model of emotional intelligence as observed by Goleman (1998) is supported by the Emotional Competence Inventory (ECI) technical manual. It posits two main constructs as the personal competence and the social competence. The personal competencies refer to ability to understand and manage one’s own emotions while the premise of social competence is to understand and create meaningful encounters with people. Measures of abilities in emotional intelligence are not similar to scoring in intelligence quotient (Gorgas, Greenberger, Bahner, & Way, 2015). Bradberry and Greaves (2009) assert that unlike emotional quotient, emotional intelligence can be taught and improved with intention.

Emotions influence the way one views self and the world. Emotional intelligence influences how one interacts with the world. It requires proficiency in understanding emotions and their effect in life (Bradberry & Greaves, 2009). High emotional intelligence impacts individuals through own emotion growth, and direct bond and impact with human interactions, including work performance and leadership. Mental health and emotional intelligence has also been identified as an important aspect of enhancing leadership skills (Matthews et al., 2012). Matthews posited self-mood regulation, radiating wellness, and temperance as vital emotional intelligence leadership skills that mitigate against medical errors, malpractice, conflicts at the workplace and moderation of stress.
The personal competence comprises of emotional self-awareness and self-management. The former refers to the skill of internal exploration and self-reflection of emotions. Therefore, one requires to be skilled in recognizing own emotions and behaviors. These can be conscious, known to the individual, or unconscious which appear as triggers (Bradberry & Greaves, 2009). It is the ability to detect present and changes in emotion, an inclination towards some emotions and the avoidance of others. Self-awareness enhances the ability to communicate the emotions appropriately (Fiori & Vesely-Maillefer, 2018). This refers to the ability to identify one’s arousal: what causes one to get elated and excited, apathetic or disappointed. It includes the ability to show emotions appropriately.

The other construct of personal competence is self-management. It involves self-control where immediate expression of positive or negative emotion is regulated. This skill governs the individual from uncontrolled excitement or anhedonia which are opposite ends of the spectrum. Arousal is necessary in life, and managing the arousal is emotional intelligence (Bradberry & Greaves, 2009). Therefore in personal competence, whose components are self-awareness and self-management, one is able to wisely integrate emotional experiences, maintain a calm composure, radiate tranquility and on the hand avoid impacting negativity on others (Taylor, Farver, & Stoller, 2011).

The social-awareness, component of emotional intelligence’s social competence scale, comprises of sensitivity to how one’s actions affect others, recognition of the feelings and emotions of others. It is also the skill to anticipate other people’s reaction and being able to inspire progressive expression. This involves mastery with people skills (Bradberry & Greaves, 2009). The other aspect of social competence is social or relationship management and it involves a conscious and active mental awareness of others’ emotions and using this knowledge to facilitate cohesion and harmonious environment (Fiori & Vesely-Maillefer, 2018). It requires an interest and skill in providing support to family, co-workers and patients.
People skill demands for creativity and confidence in decision making (Mayer, Caruso, & Salovey, 2016). Skills in social management include offering criticism empathetically and facilitating constructive relationships. These are expressed through handling conflict to meaningful resolution, problem solving and effective communication (Matthews, Zeidner, & Roberts, 2012). Social management develops through active feedback, both inviting feedback and providing empathetic responses to others. This is both in verbal and non-verbal communication (Bradberry & Greaves, 2009).

Agnoli, Mancini, Andrei, and Trombini (2019) observed that emotional awareness is a cognitive component of emotional intelligence facilitating interpretation and expression of emotions. There is a divergent perspective where emotional intelligence is described as set of non-cognitive skills that enable one to navigate effectively within the environmental stressors and expectations (Arnone, Cascio, & Parenti, 2019).

Additionally, some scholars have discounted the effect of revamping resilience an aspect that improves emotional intelligence as a means to reduce effects of burnout and substance use or abuse among healthcare workers (McKinley et al., 2020). This study was therefore based on the premise that HCW can improve their personal and social competencies. Consequently, they would be more cognizant of emotions and the need to manage emotions constructively.

2.3 Literature Review

2.3.1 Burnout among Healthcare Workers

Burnout is a widespread phenomenon in almost all workforce. The description of burnout was extensively discussed in the early 1970’s by Herbert J. Freudenberg and Sigmund Ginsburg (Freudenberger, 1975).
Freudenberg described the symptoms that he and his working colleagues experienced while at work. These included changes of character, fatigue and feeling unenthusiastic. The National Institute of Mental Health indicates stress as a natural response to activities of daily living, called eustress. This is beneficial as it motivates and exerts positive pressure to engage in an activity. In the workplace, eustress provides the fuel to work and respond to patients’ needs. However, persistent stress and stressors can deplete the body of the natural resilience to respond to challenges (Kokonya et al., 2014; National Institute of Mental Health [NIH], 2020). Chronic stress is associated in physiological changes such as elevated heart rate and blood pressure, and changes in appetite etc., and also clinical manifestation such as high blood pressure and diabetes. Psychologically, individuals with chronic stress manifest anxiety symptoms such as nervous, easily startled, lack concentration, irritability, altered sleep patterns, and have a predisposition to depression, Anxiety Disorders, etc. (Dubale et al., 2019; NIH, 2020).

When the stressors are not ameliorated, the individual ceases to be in a positive state of empathy to being sympathetic and quickly develops apathy and loss of control of the circumstances (Prinz, Hertrich, Hirschfelder, & de Zwaan, 2012). Later there is disengagement and loss of professional enthusiasm which are characteristics of burnout. Healthcare workers have been found to experience burnout.

There has been unrelenting ambiguity in the definition of burnout and its identification as a disease (Heinemann & Heinemann, 2017). Probably due to its anecdotal reference, it has not yet made its way to the APA publications on criteria for mental disorders, including their current 5th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5). That notwithstanding, the International Classification of Diseases, 11th edition recognizes burnout as a syndrome. It is postulated that “as a clinical syndrome, burnout is characterized by emotional exhaustion, depersonalization, and a decreased sense of personal accomplishment” (WHO, 2020).
In the healthcare environment, burnout is characterized by lack of professional interest and empathy towards the patient’s needs (Loera, Converso, & Viotti, 2014). Burnout is as a result of chronic stress. Although there is a positive correlation of burnout to depression, empirical findings do not consider it as depression (Fitzpatrick, Biesma, Conroy, & McGarvey, 2019). Clinically, burnout is disparate from vicarious trauma, acute stress or posttraumatic stress disorder. However, burnout is closely related to compassion fatigue and burnout syndrome. According to Năstasă and Fărcaș (2015), burnout manifests as a gradual deterioration in attitude towards self, the work, and patient interest.

2.3.2 Emotional Intelligence among Healthcare Workers

It was established that emotional intelligence had a positive and protective aspect among nurses surveyed in China (Huang et al., 2019). Environmental changes, common in high patient turnover in ED, can create an emotion laden environment and ability to stay in control and communicate effectively was noted to be essential. Similarly, emotional intelligence was thought to influence compassion in nursing care (Nightingale, Spiby, Sheen, & Slade, 2018).

Emotional intelligence was identified as an important aspect to improve leadership skills among managers in the hospital theatres (Donnelly, 2017). Donnelly found that being sensitive to others’ emotional state created an environment that ensured teamwork. These individuals also, had the ability to mitigate behavior or actions that lead to medical errors, hence moderate exposure to malpractice and conflicts at the workplace. Emotional intelligence demands that one does not necessarily match the situation but be able to have fruitful reaction to others’ emotions (Bradberry & Greaves, 2009).

Matthews, Zeidner, and Roberts (2012) criticized and described the concept and theory of emotional intelligence as ill-defined. They also challenged the standardization of the various tools used in assessing emotional intelligence and that they lacked basic foundations.
Alegre, Pérez-Escoda, and López-Cassá (2019) refuted the cognitive perspective of emotional intelligence. However, emotional intelligence involves recognition of one’s emotions, competently interpreting and regulating one’s responses to the environment, and effective verbal and non-verbal communication requires cognitive ability. It requires a cognitive interpretation of emotions. This therefore means that an individual requires to acknowledge the present emotions, name the emotion, interact with it and recognize what it means to the individual.

Once an evaluation of the emotions is done, the individual who have emotional intelligence reacts by reaching an objective conclusion and handling the emotions in a way to influence the environmental positively. Individuals who regulated their own moods radiated wellness and were temperate, asserted Donnelly (2017).

It was established that emotional intelligence improves the personal capacity of healthcare professionals to handle stress and to provide clinical care compassionately (Năstasă & Fărcaş, 2015). Findings by Pedersen et al. (2016) in a study on risky alcohol use demonstrated a need for individuals to develop self-awareness. The participants in the Pedersen study who had burnout showed an inept aptitude to regulate their emotions. Self-awareness being a function of emotional intelligence therefore was a protective factor against substance use or abuse.

2.3.3 Burnout and Emotional Intelligence among Healthcare Workers

Researchers have found that there was a negative correlation between emotional intelligence and burnout among health workers. Emotional intelligence was compared to scaffolding for empowering individuals to manage their emotions and ensure emotions do not hijack the individuals performance and lead to burnout (Năstasă & Fărcaş, 2015). To minimize patient safety incidences among physicians and nurses researchers recommended improvement of programs that improve emotional intelligence (Yuguero, Ramon Marsal, Esquerda, Vivanco, & Soler-González, 2017).
Studies in the ED indicated that study participants experience overwhelming work demands like workload, working hours, and poor administrative support including unhealthy working environment. Due to high stress levels at work, burnout is inevitable among most staff however emotional intelligence facilitates one’s ability to influence perception of one’s environment (Nespereira-Campuzano & Vázquez-Campo, 2017). Emotions is the core – understanding one’s limits, being sensitive to read others’ emotions and communicating it effectively. Employees who are able to understand and control their emotions have better work ethics, less prone to burnout and create an conducive work environment. Their own wellbeing improves and are generally able to have judicious use of work resources (Nel, Jonker, & Rabie, 2013). Social-awareness and its constructive application among nurses was reported to lead to better management of workplace pressures, and greatly improved interpersonal relationships amongst staff and with their patients (Lawal & Idemudia, 2017).

Emotional intelligence has not received much attention in the health sector in Africa and journal reviews on emotional intelligence the low- or middle-income countries (LMICs) are scarce. There are very few studies in the region about the relationship between emotional intelligence and burnout. It is this observation gives this study the impetus.

2.4 Empirical Literature

2.4.1 Burnout among Healthcare Workers

A systemic study of 65 articles from sub-Saharan Africa which included South Africa, Ethiopia and Nigeria done by Dubale et al. (2019), sampled from 963 articles in which 45 applied the MBI tool. These articles met the reviewers’ criteria of having a full text, written in English language, and were representative of the study population.
The articles combined sample population of these health professionals and provided reports on burnout among physicians, nurses, midwives, medical and/or nursing students. The MBI-based burnout articles, demonstrated 81% burnout levels among physicians in South Africa. They scored 31% on each the MBI subscales: emotional fatigue, depersonalization and low personal accomplishment. Meanwhile, in Ethiopia, the physicians scored 65% on the emotional exhaustion MBI subscale, 91% and 85% on low personal accomplishment and high depersonalization respectively. There was no record of the overall burnout levels. The selected studies by Dubale et al. (2019), revealed that nurses in Nigeria had reported 39% on emotional exhaustion, 29% on the depersonalization aspect, while they scored 40% on low personal accomplishment.

The systemic study revealed that 46% of the nurses in South Africa had reported emotional exhaustion. Where general healthcare professionals, and others where nurses alone were examined, emotional exhaustion scored highest while physicians alone had depersonalization as highest of the three aspects of burnout (Dubale et al., 2019). Majority of the respondents in the Dubale et al. (2019) findings reported poor institutional support, staff shortage and disruptive interpersonal relationships at the workplace as instigating burnout highest. These reviewers recommended infrastructural transformation and programs to enhance recognition and management of stress. The implications of the results are that burnout is a consequence of overwhelming workload and negative work-related issues, lack of administrative support and appreciation of the employee’s efforts.

In a descriptive cross-sectional study to investigate burnout among medical workers at KNH, Nairobi, Kokonya et al. (2014) used the Compassion Fatigue Self-Test, whose reliability range between 0.94 to 0.86 and validity congruence of 0.91. The study selected the proportionate allocation and simple random sampling design. It identified the 345 medical workers out of the 2402 medical doctors and nurses.
The sample was drawn from those working in medicine (72%), operating rooms (27%) and 2% from the accident and emergency department with an exclusion criterion of 6 months in service at KNH. There were 94 males and 251 females aged between 23 and 53 years old with a median age of 33 years. This study was conducted over eight (8) weeks in 2003 with all nurses being KNH permanent employees while 70% of the doctors were employees of the University of Nairobi implying most were in-service trainees (Kokonya et al., 2014). Using the SPSS version 10.0 to analyze the data, the Kokonya et al. (2014) found that the prevalence rates of burnout were 97% and 94% among doctors and nurses respectively.

In the Kokonya et al. (2014) report, majority of the respondents were Christians and 2% each of Muslims and other religions. The high levels of burnout were almost equal on gender basis with males having 97% and females having 95% burnout prevalence. The findings were that the workplace environment contributed 56% to the burnout rates, patient factors accounted for 14%.

2.4.2 Emotional Intelligence among Healthcare Workers

Emotional intelligence among healthcare workers is an important aspect in patient care. In a study to assess the effect of coaching to improve the emotional intelligence among resident doctors, better clinicians’ wellbeing and doctor-patient interpersonal relationship was reported (Gorgas et al., 2015). Gorgas et al. (2015) conducted a randomized study with two groups of 33 resident doctors: one with 19 residents that went through a two-hour emotional intelligence teaching session, and a control group of 14. The training session comprised of customized mini-lectures and discussion on pre-set case scenarios. The emotional intelligence of each of the 33 participants was assessed prior, immediately after, and half year after the end of training program. The Hay 360 Emotional Competence Inventory (Hay 360 ECI) tool was used for the assessment. The results of this study included significant improvement from 62.6% to 74.2% ($t_{1,18} = -3.54; p\leq0.01$) emotional intelligence.
The control group showed no change (initially scoring 66.8%, and 66.1% post-test, p=0.77) in their emotional intelligence during the test periods. There was no significant difference in gender or training. The Gorgas et al. (2019) study concluded that training in emotional intelligence had a positive impact on the individuals and patient interaction. They however, suggested that the training could have yielded unique results had the residents been allowed longer time to synthesis the training content. Additional test tools too would have given further clarity on the results. This study therefore underscores the importance of training to improve the emotional intelligence competencies of healthcare workers.

The recommendation for continued development of emotional intelligence among healthcare workers was supported by (Nagel, Towell, Nel, & Foxall, 2016). Their respondents were 30 critical care nurses in a hospital in Gauteng, South Africa. The critical care setting being emotion-laden as is emergency department setting, the study established that improved emotional intelligence in such environment was essential. The respondents were subjected to completing the short form of the Trait Emotional Intelligence Questionnaire (TEIQue-SF). In the Global emotional intelligence range using this tool is 30 to 210, and the respondents had a mean of 148.9 with 94 being the lowest score and the highest scoring 197. The respondents scored themselves on a Likert scale of 1-7 on each indicator.

They recorded an average of 4.10 on sociability factor referring to aspects of self-awareness, self-control (4.89) representing ability to regulate emotional pressures, and emotionality (5.24) that indicated strengths in interpersonal relationships. The fourth factor was well-being. These high scores, attributed to enhanced emotional intelligence concurrent with continued professional development, subsequently led to better nursing care and handling work pressures effectively.
2.4.3 Relationship between Burnout and Emotional Intelligence

Emotional intelligence among HCW has a significantly positive correlation to job performance. This was established in a cross-sectional quantitative research design among HCW in Accra North (Nestor, Kofi, & Emelia, 2018). The study was also designed to control for gender, level of education, length of work experience and opportunity for continuous education. Through a simple random sampling technique, the 1,163 HCW completed a self-reported questionnaire whose study purpose was to establish the effect of emotional intelligence on employee performance. Findings showed that burnout can interfere with job performance.

Năstasă and Fărcaș (2015) study on emotional intelligence and burnout among health professionals, involved 120 male and female doctors and nurses. Their age bracket was 26 to 52 years. For assessing burnout, the 25-item Maslach Burnout Inventory (MBI) tool was employed while 33-item abridged version of the Emotional Intelligence Scale (EIS) was used for the emotional intelligence questionnaires. The study assessed the relationship between the different dimensions of burnout and individuals’ emotional intelligence (Năstasă & Fărcaș, 2015). Năstasă observed that emotional intelligence was negatively correlated with emotional exhaustion (r = -.138) and low personal accomplishment (r = -.451, p <.001).

In the Năstasă and Fărcaș (2015) study, statistically significant differences was noted between female and male with burnout syndrome (t = 3.91, p <.001). Further breakdown of this was emotional exhaustion (t = 3.11, p <.01), depersonalization (t = 2.55, p <.05) and personal accomplishment (t = 3.93, p <.001). The researchers’ conclusion was that a higher personal accomplishment aspect of burnout was attributed to the ability to identify, manage and express their emotions constructively. This study recommended implementation of programs that enhance emotional intelligence in the workplace.
In the Weng et al. (2011) research, 100 respondents were involved to investigate the relationship between emotional intelligence, burnout and job satisfaction. The age in years of 40.78 ±6.91. The self-report tools, Wong and Law Emotional Intelligence Scale (WLEIS) and MBI for burnout were used. Through the multitrait-multimethod (MTMM) it was found that there was a negative correlation between emotional intelligence and burnout, and lower level of burnout among the doctors was associated with increased satisfaction by the patients and higher job satisfaction by the doctors.

Two hundred and eleven (211) questionnaires out of the sample of 240 that were distributed among nurses in a university hospital in Korea, the WLEIS and Burnout Measure-Short Version (BMS) tools were used for emotional intelligence and burnout respectively, and included other study related tools namely, Korean Occupational Stress Scale (KOSS-SF), Turnover In-tention Scale (TIS) and the Emotional Labour Scale (ELS). Their conclusion among other findings were that improving emotional intelligence improved response to burnout thus positively affected work retention (Hong & Lee, 2016).

Strategies in improving emotional intelligence include understanding oneself (self-awareness), improve adaptability and problem-solving skills. In social competency, one needs to nourish relationships and build successful teams, engagement rather than detached, and mediate conflict successfully by maintaining focus on the issue, calmness rather than the emotional outburst (Arnone et al., 2019).

Emotional intelligence is credited for a work culture, individuals are self-aware, provide and are open to feedback that generates better teamwork. Their premise is to maximize on strengths and constructively work on areas of improvement (Szczygiel & Mikolajczak, 2018). Gorgas et al. (2015) suggested that emotional intelligence was can mitigate burnout consequently reducing the numbers of earlier exit from healthcare service provision.
2.5 Conceptual Framework

The conceptual framework posited that there is a relationship between burnout and emotional intelligence, shown on Figure 2. The facets of burnout are emotional exhaustion, depersonalization, and reduced personal accomplishment. The two components of emotional intelligence are personal and social competencies. Figure 2 demonstrates the conceptual framework.

Burnout was assessed using the self-administered 22-item Maslach Burnout Inventory which contains 9 items on emotional exhaustion, 5 items on depersonalization, and 8 items on personal accomplishment. The Emotional Intelligence tool assessed the personal competences whose facets are self-awareness and self-management, and the social competencies which comprises of social-awareness and social-relationship management. Each component has a minimum score of 5 and a maximum score of 25.
The scores of both the Maslach Burnout Inventory and the Emotional Intelligence tool are based on a Likert scale. The confounding factors explored were age, gender, and alcohol substance use.

2.6 Chapter Summary

Burnout is a physical and emotional situation that develops over a period of stress. It results in ineffectiveness in personal, social and occupational productivity. Emotional intelligence competencies empower individuals to recognize the impact of and ability to manage emotions.

The next chapter presents the framework of the research methodology aimed at assessing the levels of burnout and the level of emotional intelligence among the healthcare workers in the emergency departments in KNH.
CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter provides the research methodology with details on the research design, population and sample size, and the sampling technique. It also outlines the data collection instruments, research procedure and data analysis methods. Finally, the ethical considerations will be described.

3.2 Research Design

The research adopted a survey design (Gravetter & Forzaro, 2013). This involved face-to-face contact with observance of social distancing health recommendations due to the COVID-19 pandemic and also encouraged through the group social media chat. A descriptive quantitative approach was most appropriate in this context because it allowed the researcher to gather attitudes and perceptions of the respondents over a short period, hence quick and more financially feasible.

The respondents were engaged in December 2020 to January 2021 where correlational investigation on burnout and emotional intelligence compiled into one questionnaire was done. The advantage of this strategy was that it provided data from more than one variable simultaneously. The levels of burnout and emotional intelligence, and the relationship between these variables for the healthcare workers in emergency departments at KNH during the study period were analyzed. Based on this, the relationship between burnout and emotional intelligence was identified. It did not determine the cause-effect. Likewise, demographic data was surveyed. However, this design is time bound and does not guarantee representation.
3.3 Population

This study was carried out in Kenyatta National Hospital (KNH), a modern center of excellence and the largest medical facility in the East African region that has been in existence since 1902 then known as King George VI Hospital. KNH has a bed capacity of 1,800 with 26 busy outpatient clinics (KNH website), and hosting the University of Nairobi and the Kenya Medical Training College. It is a training center for local and international students, interns, and postgraduate learners from various institutions. Figure 3 shows the organizational structure.

Figure 3  KNH Organizational Structure

Note. Adopted from the Planning and Strategy Department as draft (2020)
The general staff population at KNH is 4,800 staff. KNH is a parastatal and a Teaching and Research Referral hospital (level 6) situated in the Upper Hill area, approximately 4 kilometers via Haile Selassie Avenue according to Google maps. Figure 3 Shows the organizational structure of KNH. The clinical services directorate comprises of the following categories: pharmaceuticals, surgical, medical, nursing, medical research, and diagnostics & Health information departments. The healthcare workers identified as the study population are drawn from these main departments and deployed in the emergency departments. According to the Human Resource Department records there are a total of 300 workers of various job categories in the emergency departments. These departments are the Accident & Emergency Department and the Pediatric Emergency Unit that had 218 healthcare workers.

Table 1 outlines a cross tabulation of the job category, the total number of respondents and the percentage of the HCW in the emergency departments in KNH.

<table>
<thead>
<tr>
<th>Job Category/Title</th>
<th>N</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctors</td>
<td>46</td>
<td>21%</td>
</tr>
<tr>
<td>Nurses</td>
<td>141</td>
<td>65%</td>
</tr>
<tr>
<td>Pharmacists</td>
<td>9</td>
<td>4%</td>
</tr>
<tr>
<td>Medical Social Workers</td>
<td>6</td>
<td>3%</td>
</tr>
<tr>
<td>Clinical officers</td>
<td>16</td>
<td>7%</td>
</tr>
<tr>
<td>Total</td>
<td>N = 218</td>
<td>100%</td>
</tr>
</tbody>
</table>

Note. Statistics from the Human Resource Department, KNH (2020). N = 218

The inclusion criterion was healthcare workers deployed in the emergency departments of the following professionals: doctors, nurses, clinical officers, medical social workers and pharmacists.
Exclusion criteria included healthcare workers that were away from the institution, those on preceptor training, probation period and those who had worked in the emergency departments for less than 6 months. The other KNH workers, any other healthcare workers in ED, and students on attachment were excluded.

3.4 Sampling Design

3.4.1 Sampling Frame

This study targeted only healthcare workers in the following job description: doctors, nurses, pharmacists, clinical officers, and medical social workers. These are clinical staff working in the target site, the emergency departments of the hospital. This data was obtained through a telephone call to the office of the Director, Human Resources Management, KNH.

3.4.2 Sampling Technique

A complete enumeration of the HCW in the emergency departments was selected for this study. Therefore, convenience sampling technique was used to engage those were willing and available to participate in the study. The HCW on duty during the study period and met the inclusion criteria were enrolled.

3.4.3 Sample Size

The study involved the healthcare workers who have worked for over 6 months in the two emergency departments at KNH. These are the pediatric emergency unit and the accident and emergency departments. The study used census method for respondent’s determination. This involved complete enumeration where all the healthcare workers in the target population were included in the study. The study employed complete enumeration method where all the healthcare workers in the ED were targeted.
However, in determining the minimum number required for the threshold of the study, Taro Yamane’s formula for sample size calculation was used. The minimum sample size targeted taking into consideration the study eligibility criteria was calculated as follows:

\[ n = \frac{N}{1 + N(e)^2} \]

where

n is the sample size

N is the total target population (N = 218)

e is the margin of error (e = 10%)

1 is a standard coefficient

The calculation is as follows;

\[ n = \frac{218}{1 + 218(0.1)^2} \]

\[ n = \frac{218}{1 + 2.12} \]

\[ n = \frac{218}{3.12} \]

n = 69.871

n = 70

Taking into consideration a 10% non-response which is 7

Thus, the corrected minimum sample size was 70 +7

The minimum sample size targeted was 77.

The total population distribution of the staff is as shown on Table 2. It outlines the number of HCW by profession working in the accident and emergency department and those working in the pediatric emergency unit.
Table 2  
*Population Distribution of Healthcare Workers in Emergency Departments*

<table>
<thead>
<tr>
<th>Job Category/ Title</th>
<th>Number of healthcare workers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Accident &amp; Emergency</td>
</tr>
<tr>
<td>Doctors</td>
<td>46</td>
</tr>
<tr>
<td>Nurses</td>
<td>116</td>
</tr>
<tr>
<td>Clinical officers</td>
<td>0</td>
</tr>
<tr>
<td>Pharmacists</td>
<td>6</td>
</tr>
<tr>
<td>Medical Social Workers</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>174</td>
</tr>
</tbody>
</table>

3.5  Data Collection Methods

3.5.1  Sources of Data

A self-administered questionnaire was the main source of primary data. The tool was availed mainly through WhatsApp social media platform. Secondary data on HCW on duty was gathered from the office of the Director, Human Resources Management. Additional secondary information was gathered from books and journals. Occupational and Safety Policies, Mental Health Act, among others documents were scrutinized.

3.5.2  Self-Administered Questionnaire on Burnout and Emotional Intelligence

A three (3) sections questionnaire compiled on Google forms was administered. The first section was demographic data and background information that included single item NIDA Quick Screen for Alcohol/ Tobacco/ Substance Use-Abuse inventory. The other two sections, Part B and Part C were the Maslach Burnout Inventory and Emotional Intelligence Self-Assessment tool respectively.
The study questionnaire was issued to the respondents as an online link whose responses will be submitted online. They were required to read and provide consent available in Appendix I, before completing the self-administered questionnaire available on Appendix II. Attention was drawn to the briefing and debriefing form on Appendix III. The structured, self-administered 22-item Likert-scale *Maslach Burnout Inventory tool* was be used to determine levels of burnout (Maslach, Jackson & Leiter, 1996).

This tool, Part B of the questionnaire, provided the scoring of the emotional exhaustion [7 items], depersonalization [7 items], and personal achievement [8 items]. The tool is a 7-point Likert-scale is rated as follows: ‘0 = Never, 1 = A few times a year, 2 = Once a month, 3 = A few times a month, 4 = once a week, 5 = a few times per week, and 6 = everyday”. In each facet of the self-administered *Maslach Burnout Inventory tool*, the scores were summated. For the depersonalization section, a score of 5 or less indicated low level of burnout, 6 to 11 indicated moderate burnout, while 12 and over was high level of burnout. For the section on Personal achievement, a score of 33 or less showed high levels of burnout, between 34 and 39 was moderate levels while scores greater than 40 was low levels of burnout. In total, a score 17 or less indicated low levels of burnout, while 18 and 29 moderate levels, and over 30 high levels indicated of burnout.

The *emotional intelligence self-assessment tool* in Part C of the self-administered questionnaire was adapted to collect data on emotional intelligence, it outlined the scoring and was not copyrighted (Sterrett, 2000). Further, reference to the Emotional Competence Inventory technical manual that has similar components was made to get additional clarification. This tool is a 20-item inventory that has Likert-scale ratings ranging from “1= Never to 5= Always”, specifically 1= never, 2 = rarely, 3= Sometimes, 4= usually and 5 = always. The tool measures four aspects of emotional intelligence namely: the self-awareness, self-management, social awareness and relationship management.
The scoring of the instrument includes having a total of each aspect which could range from 5 to a high score of 25. Scores below 18 in each area indicate a need to intentionally improve one’s emotional intelligence while a score 18 and above in each aspect is considered high emotional intelligence.

3.6 Research Procedures

Ethical approval was sought from National Commission for Science Technology and Innovation (NACOSTI) through the USIU’s Institutional Review Board (IRB) for authorization to carry out the study. Commendation and consent to conduct study within the institution was sought by submitting approval request letter (Appendix IV) to the Kenyatta National Hospital – University of Nairobi, Ethics and Research Committee (KNH-UoN ERC). Upon receipt of approval (Appendix IX), the researcher informed the heads of the departments of the study and requested for their logistical support. Sensitization sessions were conducted to orient and brief the staff.

The questionnaire on Google forms link (https://forms.gle/Xbs9u1FYyVnyhCsvY7), containing the study consent and instructions to the respondents, was administered by the researcher. Support was received from team leaders who encouraged staff to complete the questionnaire. The data was compiled and analyzed in various relevant data management methods.

3.6.1 Pilot Study

A pilot study as indicated on Appendix VI, was conducted in December 2020. The objective was to allow the researcher to get familiarized with the protocol and conduct a trial on the questionnaire. This pre-testing was carried out randomly among doctors and nurses in the medical section of the hospital. The pilot study exposed the researcher to the study process and therefore familiarized to the distribution, and process of data collection instruments. It informed the researcher of any anomalies and potential challenges that were anticipated during the study (Thabane et al., 2010).
The length of questionnaire was noted to be a challenge. During the data collection therefore, the researcher assisted the respondents that had challenges with the online process and encouraged all to ensure the questionnaire was completed in one sitting.

3.6.2 Reliability of the Instruments

In a study on the single-item NIDA quick screen tool, it was established that the tool had sensitivity of 73.3% and specificity of 84.7% for detecting unhealthy alcohol use. It had sensitivity of 71.3% and specificity of 94.3% for detecting unhealthy drug use and hence adopted in this study (McNeely et al., 2019; Saitz, Cheng, Allensworth-Davies, Winter, & Smith, 2014).

The reliability coefficients of the MBI tool in sub-Saharan Africa, Nigeria had Cronbach’s Alpha results of .86, and Split-half of .57 with Odd-Even result of .92 (Coker & Omoluabi, 2009). A Malawian study identified the reliability of the MBI. They found Cronbach's alpha coefficients for emotional exhaustion, depersonalization and personal accomplishment to be 0.90, 0.79 and 0.71 respectively. The test-retest reliability range of these was between 0.50 to 0.82 (Thorsen, Tharp, & Meguid, 2011). The reliability was found ranging 0.83 to 0.92 with alpha Cronbach of the emotional intelligence tool that has the dimensions of self-awareness, self-management, social-awareness, and social-relationship. Similarly, a co-efficient range of 0.81 to 0.95 on split-half test was noted (Sulaiman & Noor, 2015). The tools were therefore used because these reliability results had delivered consistent results in previous studies.

3.6.3 Validity of the Instruments

The validity test for the burnout tool conducted in Romania had the estimated internal consistency had Cronbach alpha coefficient of .83 and .84 on frequency and intensity respectively (Năstasă & Fărcăș, 2015).
The convergent and discriminant validity of this study had Cronbach's alpha coefficients scores of 0.67, 0.42, and 0.60 for emotional exhaustion, depersonalization and personal accomplishment respectively in a study carried out in Malawi (Thorsen et al., 2011). The validity of the emotional intelligence tools have been controversial (Miners, Côté, & Lievens, 2017). The validity of emotional intelligence tool similar in content as the one used in this study was found to have good criterion validity (Sulaiman & Noor, 2015).

Different tools have been used in Africa to assess emotional intelligence. In their study among mental health practitioners in Uganda, Kabunga, Anyolitho, and Betty (2020) used the 72-item tool. It has the self-awareness, self-management, and social awareness components that are similar to the Emotional Intelligence Tool. The fourth facet is identified as social skills, which the later describes as social relationship.

This has been standardized comprehensively by Hay Group (2005). The Hay Group (2005) found .78 and .63 on the average overall internal consistency on aspects of personal and social emotional intelligence. The pilot study was used to fulfill part of the validity assessment. It was anticipated, with the validity scores therefore that tools measured what they claimed to measure.

### 3.6.4 Administration of the Instrument

In December 2020, the department administrators were informed of the data collection tool and process. Pre-test was carried out in December 2020 and dissemination of the study questionnaire was carried out in December 2020 to January 2021.

The heads of the emergency departments were informed of the approvals and request made for a slot to make a presentation to the staff. The study focus was presented to the HCW via virtual (zoom) meeting on Thursday December 10, 2020. The HCW will be informed about process of the online administration of the instrument, (https://forms.gle/Xbs9u1FYvnyhCsvY7) and concerns were addressed.
Due to the COVID-19 pandemic, the researcher ensured to observe the infection control protocols. Donning face mask appropriately, use of sanitizer and recommended physical distance was maintained. The researcher approached the respondents and outlined the purpose of the research. The link was forwarded the link to respondents and responded to any concerns. Those who preferred completing at a later time were reminded to complete the link that the researcher forwarded directly to them through WhatsApp account or they could access it on the common departmental WhatsApp social media platform. The questionnaire (Appendix II), comprising of the social demographics that included NIDA quick screen for screen for alcohol/ tobacco and substance use, the Maslach Burnout Inventory, and emotional intelligence tool was used. It took the respondents an average of 20 minutes to complete the questionnaire.

The strategy used was to disseminate the questionnaire (Appendix II) based on timings of less workload at the ED. Dissemination of the tool was conducted on weekdays between 7.45am and 8.30am, and 12.45pm and 1.30pm. The sets of timings were selected based shift reporting and handing over procedures time for the morning section as staff had few patients to attend to. These timings also provided an opportunity for the researcher to administer the questionnaire to those who were signing off from duty.

3.7 Data Analysis Methods

The data was coded using excel version 10, and exported to Statistical package for social science (SPSS) version 25 for statistical analysis with assistance from a statistician. A descriptive analysis of the mean, standard deviation and frequency illustrated the demographic data. Graphical representations were used to provide analysis of the collected data. These included bar charts, graphs, tables and pie charts. The data was analyzed descriptively using frequencies and percentages distributions for the demographics, levels of burnout and emotional intelligence.
The correlation analysis was done using the *Pearson product-moment* correlation coefficient. The results were computed from the data analyzed and *Pearson* correlation coefficient ($r$) used to identify the relationship between the dimensions of burnout with each of the two components of emotional intelligence, and the confounding factors (age, gender, and alcohol and substance use).

### 3.8 Ethical Considerations

Verification and adherence to ethical consideration of the research proposal was presented to the NACOSTI after the USIU’s institutional review board (IRB) authorization to carry out the study. Subsequently, the KNH-UoN ethics and research committee (ERC) was contacted via letter for permission to conduct the study within the hospital (Appendix IV). Evidence of the approval letter (Appendix IX) from KNH-UoN ERC was submitted to Head of the emergency department before the study was initiated in the ED.

#### 3.8.1 Confidentiality, Anonymity and Informed Consent

The HCW working in the emergency departments were encouraged to voluntarily complete the questionnaire and without coercion. Further, to assure confidentiality the respondents were not required to log in to access the Google forms link and submitted their responses anonymously as the Google form link not have an identifier linked to the submitted form.

The consent form, Appendix I was attached to the questionnaire that was administered via a Google forms link. This allowed the respondents to read the consent document (Appendix I) in order to make a voluntary and informed consent to participate. Completion and submission of the questionnaire was also considered as informed consent. The consent form provided information to the respondents of their right to withdraw from the study at any time before submission of the questionnaire.
3.8.2 Briefing and Debriefing of the respondents

The staff were briefed, content of respondent briefing and debriefing form (Appendix III) was shared and clarifications made. To minimize the possibility of deception, the researcher outlined the study objectives and assured the staff of integrity during the study. A disclosure of “no competing interest” was declared.

3.9 Chapter Summary

The chapter explored the aspects of the research proposal involving the investigation of the relationship between emotional intelligence and burnout among the HCW at the ED, KNH. It provides information on the content of the research methods, process of sampling and verification of questionnaire.
4.1 Introduction

The study sought to determine the levels of burnout and emotional intelligence and evaluated the relationship between emotional intelligence and burnout among healthcare workers in emergency departments at Kenyatta National Hospital. It highlights the findings of the study from the 120 respondents that completed the questionnaire. This chapter was organized to include the demographic data and other sections guided by the study objectives. A brief summary of the chapter was also presented.

4.2 Demographic Characteristics of the Respondents

4.2.1 Number of Study Respondents

Figure 4 shows the distribution of the respondents in the ED.

![Figure 4: Number of Respondents](image-url)

Figure 4 Number of Respondents
Out of staff targeted in a complete enumeration of healthcare workers in the emergency departments, 120 completed the questionnaires. Of the nurses that completed the questionnaire, 70 were from Accident & Emergency Department while 9 were from Pediatric Emergency Unit. Doctors (n=28) and Medical Social Workers (n=8) were all from Accident and Emergency, while the 5 clinical officers that responded were from Pediatric Emergency Unit. No pharmacist completed the questionnaire as shown in Figure 4.

### 4.2.2 Age, Gender, and Educational Levels

Table 3 outlines the frequency in age, gender, and levels of education of the respondents.

<table>
<thead>
<tr>
<th>Table 3</th>
<th>Age, Gender, and Educational Levels of Education of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency (n)</td>
</tr>
<tr>
<td>Age group</td>
<td>Below 30 Years</td>
</tr>
<tr>
<td></td>
<td>31 - 40 Years</td>
</tr>
<tr>
<td></td>
<td>41 - 50 Years</td>
</tr>
<tr>
<td></td>
<td>51 - 60 Years</td>
</tr>
<tr>
<td>Gender</td>
<td>Male</td>
</tr>
<tr>
<td></td>
<td>Female</td>
</tr>
<tr>
<td>Highest level of formal education</td>
<td>Diploma/Higher Diploma</td>
</tr>
<tr>
<td></td>
<td>Undergraduate degree</td>
</tr>
<tr>
<td></td>
<td>Postgraduate degree</td>
</tr>
</tbody>
</table>

Table 3 shows the age, gender and educational levels. Among the respondents, 34% (n =41) were aged between 31 and 40 years, 33% (n =40) were aged between 41 and 50 years, while 15% (n =18) were aged below 30 years. The majority of the respondents were female 63% (n =76) and most, 58% (n =69) had diploma or higher diploma as their highest formal education level.

### 4.2.3 Marital status, Number of Children and Religious Affiliation

Table 4 shows the socio-demographic distribution of the respondents based on marital status, number of children and religious affiliation.
Table 4  *Marital Status, Number of Children, and Religious Affiliation*

<table>
<thead>
<tr>
<th>Marital status</th>
<th>Frequency (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>31</td>
<td>26</td>
</tr>
<tr>
<td>Married</td>
<td>70</td>
<td>58</td>
</tr>
<tr>
<td>Divorced</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Widowed</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Never Married</td>
<td>9</td>
<td>8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of children</th>
<th>Frequency (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>26</td>
<td>22</td>
</tr>
<tr>
<td>1 - 3 Children</td>
<td>78</td>
<td>65</td>
</tr>
<tr>
<td>Above 3 Years</td>
<td>16</td>
<td>13</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Religion</th>
<th>Frequency (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Christian</td>
<td>114</td>
<td>95</td>
</tr>
<tr>
<td>Muslim</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Atheist</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

Table 4 presented the additional demographic distribution of the respondents. The results showed that 58% (n =69) of the respondents were married, and 65% (n =78) had 1 to 3 children. Almost all, 95% (n =114) of the respondents were Christians.

4.2.4  Work Related Characteristics

The work-related characteristics of the respondents is outlined in Table 5.

Table 5  *Work-Related Characteristics among Respondents*

<table>
<thead>
<tr>
<th>Workplace characteristics</th>
<th>Frequency (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cadre of the respondents</td>
<td>Nurse</td>
<td>79</td>
</tr>
<tr>
<td></td>
<td>Doctor</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>Medical Social worker</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Clinical officers</td>
<td>5</td>
</tr>
<tr>
<td>Job grading</td>
<td>Job group K7 to K10</td>
<td>75</td>
</tr>
<tr>
<td></td>
<td>Job group K6 and above</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>Locum</td>
<td>16</td>
</tr>
<tr>
<td>Work station</td>
<td>Accident and Emergency</td>
<td>104</td>
</tr>
<tr>
<td></td>
<td>Pediatric emergency</td>
<td>16</td>
</tr>
<tr>
<td>Years of experience</td>
<td>Less than two years</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>2 - 5 years</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>Above five years</td>
<td>69</td>
</tr>
</tbody>
</table>
Table 5 shows the work related characteristics. It indicates that majority of the respondents, 66% (n =79) were nurses while 23% (n =28) were doctors. Job grading analysis found that 63% (n =75) of the respondents ranged from job group K7 to K10, 87% (n =104) worked at the accident and emergency work station. More than half of the respondents, 57% (n =69), had more than five years of experience working in an emergency department.

4.2.5 Alcohol and Substance Use or Abuse

The respondent’s use of alcohol in the past one year is recorded on Figure 5.

![Figure 5](image)

Figure 5   Respondents’ Use of Alcohol Products in past One Year

The findings as shown in Figure 5 revealed that, 67% (n =80) of the respondents affirmed that in the past one year, they did not use alcohol with 4% (n = 5) of the respondents disclosed that in the past one year, they had used alcohol weekly.

Figure 6 gives an illustration of the respondent’s use of tobacco in the last one year. It indicates how many of the respondent’s had not used tobacco in the past one year. It also provides the number of respondents who reported use of tobacco once or twice in the year, monthly, or weekly.
Figure 6  Respondent’s Use of Tobacco Products in past One Year

Figure 6 illustrates that almost all of the respondents, 93% (n = 112) affirmed that in the past one year, they never used any tobacco products. The results show that 4% had used tobacco once or twice in the year, 2% had used monthly, while 1% used tobacco weekly.

The respondent’s report on use of prescription drugs for non-medical use in the past one year is shown on Figure 7.
In identifying the number of times, the respondents used prescription drugs for non-medical use in past one year, 94% (n =113) never used while 5% (n = 6) used prescription drugs for non-medical use in the past one year as demonstrated in Figure 7.

The findings on Figure 8 show the respondents’ self-report on use of illegal drugs.

![Figure 8](image)

Figure 8  
Respondent’s use of Illegal Drugs in the past One Year

The respondents were asked the number of times they had used illegal drugs in the last one year. The results revealed that, 93% (n = 112) asserted that they never used illegal drugs in the past one year while 6% (n = 7) used illegal drugs once or twice in the past one year. These findings showed that almost all respondents did not misuse prescription drugs.

### 4.3 Burnout among Healthcare Workers

In assessing the levels of burnout among healthcare workers in the emergency department at Kenyatta National Hospital, a burnout self-report based on the Maslach Burnout Inventory (MBI) was used. Three key components, including burnout (exhaustion), depersonalization, and personal achievement, were investigated.
Table 6 provides the self-report by the respondents on their experience with burnout.

**Table 6  Levels of Burnout among Study Respondents**

<table>
<thead>
<tr>
<th>Burnout</th>
<th>Low-level burnout n (%)</th>
<th>Moderate burnout n (%)</th>
<th>High-level burnout n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burnout (Exhaustion) aspect</td>
<td>49(41%)</td>
<td>52(43%)</td>
<td>19(16%)</td>
</tr>
<tr>
<td>Depersonalization aspect</td>
<td>50(42%)</td>
<td>38(32%)</td>
<td>32(27%)</td>
</tr>
<tr>
<td>Personal achievement</td>
<td>79(66%)</td>
<td>22(18%)</td>
<td>19(16%)</td>
</tr>
</tbody>
</table>

In assessing burnout (exhaustion), the scoring was (≤17 = Low-level burnout, 18-29 = Moderate burnout, and ≥30 = high level of burnout). Under depersonalization, the scoring was (≤5 = Low-level burnout, 6-11 = Moderate burnout, and ≥12 = high level of burnout). Personal achievement scoring was based on (≥40 = Low-level burnout, 34 - 39 = Moderate burnout, and ≤ = high level of burnout).

The findings from the analysis showed that, 43% (n =52) had moderate level, 41% (n =49) had low level while 16% (n =19) had high level burnout (exhaustion). In evaluating depersonalization level among the respondents, 42% (n =50) had low level, 32% (n =38) had moderate level while 27% (n =32) had high level burnout. Personal achievement level analysis among the respondents showed that, 66% (n =79) had low level, 18% (n =22) had moderate level while 16% (n =19) had high level burnout as presented in Table 6.

More than half of the respondents had either moderate or high burnout on the dimensions of exhaustion and depersonalization. Majority were able to maintain a feeling of personal achievement as depicted in Table 6.

4.3.1 Association between Demographic (Age and Gender) Characteristics and Burnout

A chi square test for association was conducted to determine the association between respondent demographics (age and gender) and burnout level and results recorded on Table 7.
Table 7  
**Association between Burnout and Respondent Demographic Characteristics**

<table>
<thead>
<tr>
<th>Age</th>
<th>Below 30 Years</th>
<th>31 - 40 Years</th>
<th>41 - 50 Years</th>
<th>51 - 60 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low-level burnout</td>
<td>Moderate burnout</td>
<td>High-level burnout</td>
<td>degrees of freedom</td>
</tr>
<tr>
<td>Age</td>
<td>14(78%)</td>
<td>2(11%)</td>
<td>2(11%)</td>
<td>6</td>
</tr>
<tr>
<td>31 - 40 Years</td>
<td>7(17%)</td>
<td>23(56%)</td>
<td>11(27%)</td>
<td></td>
</tr>
<tr>
<td>41 - 50 Years</td>
<td>20(50%)</td>
<td>16(40%)</td>
<td>4(10%)</td>
<td></td>
</tr>
<tr>
<td>51 - 60 Years</td>
<td>8(38%)</td>
<td>11(52%)</td>
<td>2(10%)</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>Male</td>
<td>14(32%)</td>
<td>18(41%)</td>
<td>12(27%)</td>
</tr>
<tr>
<td></td>
<td>35(46%)</td>
<td>34(45%)</td>
<td>7(9%)</td>
<td></td>
</tr>
</tbody>
</table>

Table 7 showed that there was a significant association between age (df = 6, p = 0.001), gender (df =2, p = 0.027) and burnout among the study respondents shown in Table 7. Based on this distribution majority (78%) of those below age 30 had low burnout compared to 38% aged between 51-60. There was comparable moderate burnout by gender.

### 4.4  Emotional Intelligence among Healthcare Workers

The study also sought to investigate the self-appraisal of emotional intelligence among healthcare workers. An emotional intelligence self-assessment tool scores were based on four critical components: self-awareness, self-management, social awareness, and relationship management. The score range on the tool was from 5 to 25 on each aspect, and a total score of less than 18 was considered to be low, and there was room for improvement. The results were presented on Table 8.

<table>
<thead>
<tr>
<th>Emotional Intelligence</th>
<th>Levels</th>
<th>Frequency (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal competencies</td>
<td>Self-awareness</td>
<td>Low self-awareness</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High self-awareness</td>
<td>89</td>
</tr>
<tr>
<td>Self-management</td>
<td>Low self-management</td>
<td>34</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>High self-management</td>
<td>86</td>
<td>72</td>
</tr>
<tr>
<td>Social competencies</td>
<td>Social awareness</td>
<td>Low social awareness</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High social awareness</td>
<td>75</td>
</tr>
<tr>
<td>Relationship management</td>
<td>Low relationship management</td>
<td>32</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>High relationship management</td>
<td>88</td>
<td>73</td>
</tr>
</tbody>
</table>
The findings showed that most of the respondents, 74% (n = 89), had high self-awareness, and 26% (n = 31) had low self-awareness. Analysis of self-management showed that, 72% (n = 86) had high level of self-management while 28% (n = 34) had low level of self-management. The results also show that 63% (n = 75) of the respondents had a high level of social awareness, while 38% (n =45) had a low social awareness level. Evaluation of the relationship management identified that 73% (n =88) of the respondents had a high level of relationship management while 27% (n =32) had a low level of relationship management, as shown in Table 8.

### 4.4.1 Association between Gender and Emotional Intelligence

The results from the chi-square test for association between gender and emotional intelligence are shown in Table 9.

<table>
<thead>
<tr>
<th>Emotional intelligence</th>
<th>Gender</th>
<th>df</th>
<th>Chi-square</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-awareness</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Could Improve</td>
<td>Male</td>
<td>12(27%)</td>
<td>19(25%)</td>
<td>1</td>
</tr>
<tr>
<td>Good</td>
<td>Female</td>
<td>32(73%)</td>
<td>57(75%)</td>
<td></td>
</tr>
<tr>
<td>Relationship management</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Could Improve</td>
<td>Male</td>
<td>11(25%)</td>
<td>21(28%)</td>
<td></td>
</tr>
<tr>
<td>Good</td>
<td>Female</td>
<td>33(75%)</td>
<td>55(72%)</td>
<td>1</td>
</tr>
</tbody>
</table>

The study found that there was no statistically significant association between gender and emotional intelligence (p>0.05).

### 4.4.2 Association between Age and Emotional Intelligence

Table 10 illustrates the findings of the association between age and emotional intelligence.
The findings showed that there was statistically significant association between self-awareness and age of the respondents (p = 0.04) as illustrated in Table 10. These results show that the older respondents (51-60 years) had 90% self-awareness.

### 4.5 Relationship between Personal Emotional Intelligence Competencies and Burnout among Healthcare Workers in Emergency Departments

A Pearson correlation analysis was conducted to determine the relationship between personal competencies of emotional intelligence and burnout among healthcare workers in emergency departments and results presented on Table 11.

**Table 10**  
*Association between Age and Emotional Intelligence*

<table>
<thead>
<tr>
<th>Emotional Intelligence</th>
<th>Age</th>
<th>Below 30 Years</th>
<th>31 - 40 Years</th>
<th>41 - 50 Years</th>
<th>51 - 60 Years</th>
<th>df</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-awareness</td>
<td>Could Improve</td>
<td>5(28%)</td>
<td>8(20%)</td>
<td>16(40%)</td>
<td>2(10%)</td>
<td>3</td>
<td>0.04</td>
</tr>
<tr>
<td></td>
<td>Good</td>
<td>13(72%)</td>
<td>33(80%)</td>
<td>24(60%)</td>
<td>19(90%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relationship management</td>
<td>Could Improve</td>
<td>5(28%)</td>
<td>11(27%)</td>
<td>12(30%)</td>
<td>4(19%)</td>
<td>3</td>
<td>0.825</td>
</tr>
<tr>
<td></td>
<td>Good</td>
<td>13(72%)</td>
<td>30(73%)</td>
<td>28(70%)</td>
<td>17(81%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 11**  
*Relationship between Personal Emotional Intelligence Competencies and Burnout*

<table>
<thead>
<tr>
<th>Emotional Intelligence component – Maslach Burnout inventory</th>
<th>Personal competencies</th>
<th>Burnout (exhaustion)</th>
<th>Depersonalization</th>
<th>Personal accomplishment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Awareness</td>
<td>Pearson correlation (r)</td>
<td>-0.36</td>
<td>-0.068</td>
<td>0.287</td>
</tr>
<tr>
<td></td>
<td>Sig. (p-value)</td>
<td>0.696</td>
<td>0.464</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>n</td>
<td>120</td>
<td>120</td>
<td>120</td>
</tr>
<tr>
<td>Self-Management</td>
<td>Pearson correlation (r)</td>
<td>-0.128</td>
<td>-0.192</td>
<td>0.306</td>
</tr>
<tr>
<td></td>
<td>Sig. (p-value)</td>
<td>0.164</td>
<td>0.036</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>n</td>
<td>120</td>
<td>120</td>
<td>120</td>
</tr>
</tbody>
</table>
Findings in Table 11 indicated a statistically significant positive relationship between personal accomplishment self-awareness component of emotional intelligence, \( r = 0.287, p = 0.001 \), and self-management, \( r = 0.306, p = 0.001 \). The findings further revealed that there was a significant negative relationship between depersonalization and self-management, \( r = -0.192, p = 0.036 \). This indicated that the healthcare workers had a high positive self-evaluation of their ability to perform their roles.

4.6 Relationship between Social Emotional Intelligence Competencies and Burnout among Healthcare Workers in Emergency Departments

The findings of the relationship between social competencies of emotional intelligence and burnout was recorded in Table 12.

<table>
<thead>
<tr>
<th>Emotional Intelligence component – Social competencies</th>
<th>Maslach Burnout Inventory</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Burnout (exhaustion)</td>
<td>Depersonalization</td>
<td>Personal accomplishment</td>
</tr>
<tr>
<td>Social awareness</td>
<td>Pearson correlation (r)</td>
<td>0.012</td>
<td>0.011</td>
</tr>
<tr>
<td></td>
<td>Sig. (p-value)</td>
<td>0.901</td>
<td>0.906</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>120</td>
<td>120</td>
</tr>
<tr>
<td>Relationship management</td>
<td>Pearson correlation (r)</td>
<td>-0.206</td>
<td>-0.274</td>
</tr>
<tr>
<td></td>
<td>Sig. (p-value)</td>
<td>0.024</td>
<td>0.002</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>120</td>
<td>120</td>
</tr>
</tbody>
</table>

A Pearson correlation analysis revealed a significant negative relationship between burnout and relationship management \( r = -0.206, p = 0.024 \). The results showed that there was a significant negative relationship between depersonalization and relationship management, \( r = -0.274, p = 0.002 \) as shown in Table 12.
The findings also showed that there was significant positive relationship between personal accomplishment and social awareness, \( (r = 0.219, p = 0.016) \) and relationship management, \( (r = 0.419, p = 0.001) \). The results of this study suggested that the healthcare workers were motivated and maintained a positive attitude towards their ability. The evidence shown here indicated their inability to influence others was related to the increase in burnout levels.

### 4.7 Summary

The analysis involved describing the respondents’ socio-demographic characteristics, alcohol and substance abuse prevalence, levels of burnout, and levels of personal and social emotional intelligence as well as the association between their aspects and burnout.

Most of the study respondents were females. In assessing the prevalence of alcohol and substance abuse, the results showed that majority did not use any of the substances. However, several disclosed that they used alcohol and other substances occasionally in the past one year. In evaluating the level of burnout based on Maslach burnout inventory, the findings showed that majority reported emotional exhaustion depersonalization, though they had perceived personal accomplishment while at work. The self-appraisal on emotional intelligence revealed that many of the respondents were self-aware and high social relationship management.

The results also showed that there was a positive relationship between personal accomplishment and all aspects of emotional intelligence (self-awareness, self-management, social awareness and relationship management). There was a negative significant relationship between depersonalization and both self and relationship management. A significant negative relationship was also noted between emotional exhaustion and relationship management. These findings have been discussed in Chapter five with conclusions and recommendations clearly outlined.
CHAPTER FIVE

SUMMARY, DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

This thesis presented the burnout and emotional intelligence level of healthcare workers in the emergency departments at Kenyatta National Hospital. It also showed the relationship between personal and social emotional intelligence competencies and burnout. This chapter was therefore based on the demographic data and the study objectives of the thesis to present the summary and discussion of the findings. Conclusions and recommendations were also organized in similar manner.

5.2 Summary of Results

This section presents summary of findings of burnout and emotional intelligence of healthcare workers in the emergency departments at Kenyatta National Hospital. A survey design research methodology was adopted with complete enumeration. The self-administered questionnaire was disseminated to the healthcare workers and data collected was analyzed using Statistical package for social science (SPSS) version 25.

5.2.1 Demographic Characteristics of the Respondents

The total respondents were 120 who comprised of 87% (n=104) from the accident and emergency department and (n=16) the pediatric emergency unit, who were all healthcare workers in the emergency departments of Kenyatta National Hospital. Thirty four percent were aged 31-40 years of age, 33% 41-50 years. 18% 51-60 years and 15% were aged 30 and below years of age.

While female respondents were 63%, male were 37%, the distribution of their highest level of formal education was 58% diploma/ higher diploma, 35% undergraduate and 8% had attained postgraduate degrees.
The married individuals were 58%, while single parents were 26%. The other marital status included never married 8%, widowed 6% and 2% were divorced. Majority of the respondents at 65% had 1-3 children. Those who had no children were 22% and 13% had above 3 children. Ninety five percent were Christians, 3% Muslims and 2% declared themselves Atheists.

The most respondents were nurses (66%), others were 23% doctors, 7% medical social workers and 4% clinical officers. Many respondents (63%) were in the entry and medium management (Job Group K7-10) level, those at K6 and above were 24% and locum comprised of 13%. The respondents that had worked for above 5 years were 57%, those at 2-5 years 30% and those at less that 2 years were 13%.

In assessing the alcohol and substance abuse, majority of the respondents did not use either of those stated. Sixteen percent used alcohol once or twice in the year, 13% monthly and 4% weekly. Those that used tobacco products once or twice in the year were 4%, 2% monthly and only 1% used weekly. Five percent reported that they used of prescription drugs for non-medical use once or twice in the year while 1% used weekly. Respondents that used illegal drugs once or twice were 6% while 1% used monthly.

5.2.2 Levels of Burnout among the respondents

Objective number one was to establish the levels of burnout among healthcare workers in the emergency departments of Kenyatta National Hospital. The study findings indicate that 43% (n =52) had moderate level burnout and 41% (n =49) had low level.

High level burnout (exhaustion) was recorded by 16% (n =19) of the respondents. In the depersonalization aspect, 42% (n =50) of the respondents reported low burnout level. The rest were 32% (n =38) with moderate level and 27% (n =32) had high level burnout. In the analysis, 66% (n =79) of the respondents that had a perception of personal achievement had low level burnout, while 18% (n =22) had moderate level while 16% (n =19) had high level burnout.
5.2.3 Levels of Emotional Intelligence among the respondents

The study’s second objective focused on establishing the level of emotional intelligence. On the personal competencies’ aspect, 74% and 72% of the respondents had high self-awareness and high self-management, while 28% had low self-awareness and 26% had low self-awareness. Seventy three percent reported high relationship management and 63% high social awareness aspects of social awareness. Thirty eight percent had low awareness and 27% had low relationship management.

5.2.4 Relationship between Personal Emotional Intelligence Competencies and Burnout

Assessing the relationship between personal competencies and burnout was the third objective of the study. Personal accomplishment had positive significant relationship in both the self-awareness \( r = 0.287, p = 0.001 \) and self-management \( r = 0.306, p = 0.001 \) aspects of personal competencies. Exhaustion aspect of burnout however, had no significant difference in the self-awareness \( p=0.696 \) and self-management \( p=0.164 \). Depersonalization had no significant difference with self-awareness \( p=0.464 \) and positive significant positive relationship with self-management \( p=0.036 \).

5.2.5 Relationship between Social Emotional Intelligence Competencies and Burnout

The fourth and final objective of the study was to establish the relationship between social competencies of emotional intelligence and burnout.

Exhaustion \( r=0.012, p=0.901 \) and depersonalization \( r=0.011, p=0.906 \) both had no significant difference with social-awareness. However, both had statistically positive significance with relationship management. Personal accomplishment had statistically significant positive relationship with both social awareness \( r=0.219, p=0.016 \) and relationship management \( p=0.419, r=0.001 \).
5.3 Discussion of Results

5.3.1 Levels of Burnout among Healthcare Workers in the Emergency Departments

The Maslach Burnout Inventory was used to measure the level of burnout. The findings from this study showed that sixteen percent of the respondents had high emotional exhaustion while more than half had moderate emotional exhaustion. Emotional exhaustion has a significant influence on individual psychological as well as physical wellbeing hence the hospital should ensure that the levels of emotional exhaustion among healthcare workers especially within emergency department are extremely low or absent. This study further revealed that around one third of the respondents had high level of depersonalization while almost half of the respondents had low level of depersonalization. Similar conclusions were found among nurses in Emergency Department of the University Hospital of Ourense (Nespereira-Campuzano & Vázquez-Campo, 2017). The results as identified in this study shows that the notion of detachment is excessive which is likely to have a negative influence on the ability of healthcare workers to effectively perform their duties.

The assessment of personal achievement as a component of burnout was also performed in this study were the findings revealed that majority of the respondents had low level burnout with regards to assertion on personal achievement feeling or perception. Most of the respondents felt that they are achieving their personal success which is a crucial element in building a highly efficient platform where they can make informed decisions which are not self-limiting. These findings are similar to literature by Dubale et al. (2019) where high levels burnout was reported. Similarly, Hamdan (2017) in a study conducted in emergency department in Palestine identified that, there was high emotional exhaustion among ED workers with reported 64% with 38% suffering high depersonalization and 35% suffering from low personal accomplishment. Moukarzel et al. (2019) asserted that there was 35% burnout prevalence among ED workers.
Findings in Kokonya et al. (2014) indicated 95.4% (crude prevalence rate) of burnout syndrome among healthcare workers at Kenyatta National Hospital. This trend may interfere with healthcare practices. There was a difference in burnout between younger (30 years and below) and older above 30 years of age.

5.3.2 Levels of Emotional Intelligence of the Healthcare Workers in the Emergency Departments at KNH

The study also investigated the level of emotional intelligence where four components grouped into personal and social awareness. In assessing personal competencies, this study found that majority of the respondents had high level of self-awareness (74%) as well as self-management (72%). These findings show that most of the respondents had an understanding and ability to monitor and adjust their feelings effectively thereby which is key in building a highly advanced focus on improving quality of care delivered. The results were comparative with the findings (Nestor et al., 2018) where healthcare workers were classified as emotionally intelligent.

Social competencies were also evaluated in this study where the results found that a large number of the respondents (n=45) reported low level of social awareness while one third (n=32) of the respondents had low level of social management.

The positive significance of age found in this study were consistent with findings by Agnoli et al., (2019) who suggested increase in age was concurrent with growth in intelligence. These results where emotional intelligence seemed to develop with age was also reported in the (Weng et al., 2011). As was observed in Ghana, there was no significant difference $[t(118) = -0.283, p > .05]$ in the emotional intelligence between females (mean = 125.30, $SD$ 12.27) and males (mean = 124.51, $SD$ 17.50) among nurses (Tagoe & Quarshie, 2016).
In this study, HCW portray personal emotional intelligence, social interactions with others had been identified to be lower. Social relationships require improvement to help in building a positive interactive environment for delivery of quality care. Emotional intelligence is important. Its elements are grounded on creating skills to motivate colleagues and improve skills that facilitate teamwork (Taylor et al., 2011). Social emotional intelligence requires communicating emotional interest through empathetic response and adhering to positive social norms (Szczygiel & Mikolajczak, 2018). This means that this aspect needs to be enhanced in order to improve “caring behaviors” that are necessary in healthcare (Nightingale et al., 2018). HCW require training to ensure they control their negative emotions that leads to poor interaction with patients (Szczygiel & Mikolajczak, 2018). Healthcare environment is a multi-disciplinary team which require better positive relations to allow seamless delivery of quality care.

5.3.3 Relationship between Personal Emotional Intelligence Competencies and Burnout among Healthcare Workers in Emergency Departments at KNH

Personal competencies were assessed through self-awareness and self-management. The findings revealed that there was significant positive relationship between personal accomplishment and personal competencies in emotional intelligence. However, self-management was negatively correlated with exhaustion and lack of empathy. This supports the findings by Ünal (2014) whose study had indicated that emotional intelligence had contributed to personal accomplishment ($\beta = .485$, $p < .001$) on standardized regression coefficient.

The personal accomplishment in the Ünal study was despite emotional exhaustion ($\beta = -.324$, $p < .001$) and depersonalization ($\beta = -.173$, $p < .05$). This implied that though the respondents were able to maintain a good attitude towards their value, they were overwhelmed and therefore experienced burnout. Literature combines the facets of emotional intelligence hence discussed next.
5.3.4 Relationship between Social Emotional Intelligence Competencies and Burnout among Healthcare Workers in Emergency Departments at KNH

The study also assessed the relationship between social competencies of emotional intelligence and burnout among respondents who participated in the study. The results from this study showed that, there was a positive relationship between personal accomplishment and social competencies similarly found by (Ünal, 2014). Higher personal accomplishment was associated with higher level of social competencies among respondents which had a greater influence on their wellbeing and their ability to perform their duties (Nel et al., 2013). The findings however, of significant positive relationship between personal accomplishment and social competencies were contrary to the findings by (Năstasă & Fărcaș, 2015) indicated that there was a statistically negative correlation ($r = -0.451$, $p <0.01$) between emotional intelligence and personal accomplishment.

In addition, the findings from the study revealed that there was a significant negative relationship between burnout and relationship management. There was also a significant negative relationship between depersonalization and relationship management aspect of social competencies. Similar findings were emphasized by Weng et al. (2011) in a study conducted in Taiwan that found a significant negative correlation between burnout and emotional intelligence. On the other hand, lower level of burnout among doctors was associated with higher level of job satisfaction which is crucial in care management of patients. In addition, Hong and Lee (2016) in a study conducted in Korea revealed that burnout had a detrimental and affected both personal and social interaction within workplace.

Emotional intelligence was found to have positive influence on management on pressure associated with work and also fostered self-management (Szczygiel & Mikolajczak, 2018). Szczygiel suggested that it also modulates emotions that would otherwise instigate unhealthy behaviors that lead to burnout.
Ability to self-assess influences one’s ability to minimize depersonalization (Nespereira-Campuzano & Vázquez-Campo, 2017). It is therefore important to coach HCW on ways to improve their self-appraisal that include self-awareness exercises, self-expression, etc. Nespereira-Campuzano further recommends a better work environment. Thus, it was affirmed that, improving emotional intelligence improved response to burnout hence improving work retention.

5.4 Conclusions

The aim of the study was to assess the relationship between burnout and emotional intelligence in healthcare workers in Kenyatta National Hospital. According to the findings of this study, majority of the respondents were from the accident and emergency department. Over 80% of the healthcare workers did not use alcohol or other substances. However, there were those that used them weekly, daily or almost daily. The implication is that there are those healthcare workers that may require motivational interviewing to consider implications of their alcohol and other substances use. It was found that the HCW experience moderate and high burnout, have personal emotional intelligence, with social emotional intelligence that require to be enhanced. Finally emotional intelligence was found to have a negative association with burnout. The details of these findings are outlined herein.

5.4.1 Levels of Burnout

In this study, more than half of the respondents reported that they had burnout. This was depicted from their feeling of constant exhaustion and diminished interest and understanding in others’ feelings. They were therefore detached from work.

Remarkably however, there was 66% of the participant who had maintained a feeling of personal accomplishment and were able to retain a sense of self-worth. The younger respondents showed lower burnout levels. The healthcare workers therefore, were able to remain optimistic and confident of their professional output and success at work despite the overwhelming emotional pressure.
5.4.2 Levels of Emotional Intelligence

The healthcare workers had high emotional intelligence with 74% being self-aware and 73% having social relationship skills. Notably, only 63% of the respondents’ self-reflection led them to consider that they had social-awareness. Emotional intelligence seems to increase with age, though there was no notably difference in gender.

5.4.3 Relationship between Personal Emotional Intelligence Competencies and Burnout

The self-awareness and self-management were used to describe personal competencies. Emotional exhaustion and depersonalization had no correlation with self-awareness, though significant negative correlation with self-management. Findings by Ünal (2014) also indicated a negative contribution of emotional intelligence on exhaustion and burnout. Remarkably therefore the healthcare workers were able to maintain resilience in the work commitment and sustained a feeling of achievement.

5.4.4 Relationship between Social Emotional Intelligence Competencies and Burnout

Social competencies were describe by social-awareness and relationship management. It was found that the respondents had low relationship management skills that correlated negatively with the burnout. Their social-awareness did not have influence on burnout. This meant that they were unable to effectively influence the emotions of others and correspondingly had emotional exhaustion ad depersonalization. This component of emotional intelligence, as was the personal competencies, influenced positive attitude towards personal accomplishment.

5.5 Recommendations

This section of the research paper discusses the suggestions for improvements and further reading.

5.5.1 Suggestions for Improvements

In the demographic section, it was noted that majority of the respondents did not use alcohol or other substances of abuse.
Considering the addictive nature of alcohol and other substances, it would be helpful to conduct regular sensitization seminars and/or employ other means of communication to educate and support those that used either of the substances. Contributions on other variables are discussed below.

5.5.1.1 Level of burnout

A prevalence of moderate and high burnout in the components of depersonalization and exhaustion among the respondents was noted. Cynicism and impersonal attitude in a service industry is counterintuitive. Burnout interferes with the decision making and develops a gradual process that creates disinterest and commitment to work. Emergency departments, being sections that require high attention, it is important to maintain low burnout to minimize medical errors.

Employee assistance program need to coach staff to individually and collectively implement programs that empower them to reduce and prevent burnout. These programs include psychological approaches and therapies such as meditation, relaxation techniques and emotions’ management. Others include cognitive interventions that include mastery of attitudes and perceptions that mitigate stress. Staff need to feel confident and free of stigmatization if they seek psychological support.

Finally, is the human resource department’s role to improve perception of work stability (Nespereira-Campuzano & Vázquez-Campo, 2017). The younger employee, having lower burnout, require proactive intervention to safeguard them from burnout and interventions for those with burnout instituted (Gorgas et al., 2015). This may reduce resignation from the workforce due to burnout as observed in the Gorgas study where 60% of physicians had left service prematurely due to burnout. Most healthcare workers had remained positive and satisfied that their work made a difference. This personal accomplishment should be protectively maintained and enhanced with meaningful support and recognition.
On the other hand, burnout should be recognized as a condition that requires assessment and prompt intervention. They should conduct regular information sharing and sensitization workshops to ensure employees self-evaluate and are alert to increasing levels of burnout in order to seek assistance in time.

5.5.1.2 Level of emotional intelligence

The finding that a higher percentage of the respondents had high emotional intelligence was gratifying. This implied that the healthcare workers had the ability to harness own and others emotions. Similarly, they were able to regulate themselves and be sensitive about the effect of others’ emotions.

The dynamic nature and stressors in the workplace, relationships, rapid patients turn-over and unsuccessful outcomes in the emergency departments can disrupt the ability to maintain emotional intelligence. Therefore, individuals should be coached continually to self-evaluate on how they can intervene in order to improve the emotional awareness and management (Szczygiel & Mikolajczak, 2018). Consequently, they are in touch with their own emotions and can radiate positive emotions. These coaching programs include meditation, self-awareness exercises, relationship and stress management skills (Gorgas et al., 2015).

5.5.1.3 Relationship between personal emotional intelligence competencies and burnout

In the findings of this study, the correlation between the self-management aspect of personal emotional intelligence and depersonalization was negatively significant. The positive correlation of personal emotional intelligence with personal accomplishment indicated that they were able to retain a sense of self-worth. It was therefore recommended that assessment is done to establish the reasons and causes for cynical attitude and the loss of empathy yet perception of accomplishment was maintained.
Meanwhile, it was suggested that, the healthcare workers supported to maintain the positive attitude towards their accomplishment. HCW should undergo coaching and training on emotional intelligence as it was found to tremendously reduce levels of burnout (Szczygiel & Mikolajczak, 2018).

5.5.1.4 Relationship between social emotional intelligence competencies and burnout

The study showed a negative correlation between relationship management and the burnout domains, emotional exhaustion and depersonalization, yet social emotional intelligence had a significantly positive relationship with feeling of personal accomplishment. This indicated that the respondents required growth in the areas of correctly interpreting others’ emotions, and evaluate the outcome of their encounters to match their feeling of efficacy. Subsequently, improved social skills would result in effective and positive influence on others. Healthcare workers need learn skills to reduce burnout thereby develop emotional sensitivity and make effort to connect with others’ emotions hence improving their social competencies (Görgens-Ekermans & Brand, 2012).

5.5.2 Suggestions for Further Research

The unexpected finding that the healthcare workers had lack of empathy and had dehumanized human relations (depersonalization) yet majority had reported high emotional intelligence should be investigated. The urgency is based on the importance of human relations in healthcare services. The predisposing factors to use of alcohol and substances among healthcare workers in emergency departments of Kenyatta National Hospital should be explored cautiously. This will inform the employee assistance program on prevention and treatment policies. Consequently, a healthcare provider who does not use alcohol and substances will have moral authority to conduct motivational interviewing among patients who are identified as users.
This study targeted healthcare workers in the emergency departments at Kenyatta National Hospital. In addressing the specific job category, other employees in the emergency departments were left out. To ensure there is teamwork and appropriate programs for the department, it would be prudent to carry out a comprehensive evidence-based study. This would establish programs relevant for specific job categories and those that can be generalized in the emergency departments.

The other service delivery points and/or other departments in the hospital apart were not included in this study. These departments have directly or indirectly relationship with the emergency departments. A comparative study to assess the burnout level of the staff in other departments and perceptions of the interdepartmental contribution to burnout. These results, if well interpreted and relayed can create synergy.

Further, studies assessing individuals responses compared with whether other colleagues agree with their view may be considered. Inversely, conducting multi-variant analysis of the same respondents at different work timings may provide results that are controlled for age, gender and effect of workload. Also, neuro-cognitive oriented and longitudinal studies based on the Kenyan population should also be considered.
REFERENCES


APPENDICES

Appendix I: Informed Consent Form

Dear Respondent,

My name is Susan W. Ruturi. I am carrying out a research to study the “relationship between burnout and emotional intelligence among healthcare workers at Kenyatta National Hospital in Kenya.”

In order to obtain the necessary information, I have developed an impartial questionnaire to be completed by the clinical staff working in the emergency departments, KNH. Anonymity of the respondent and confidentiality of the information gathered will be observed. No harm or risk is expected while participating in this study.

Your participation is voluntary and highly beneficial as it will be useful for identifying burnout level and emotional intelligence competencies. There will be no monetary or administrative compensation for participating in this study. If you wish to withdraw at any point of this study, you will not be penalized. However, participating in this study will provide valuable information to develop recommendations for enhancing emotional intelligence and mitigate burnout among the staff working in the emergency departments, KNH.

The results of this study will be availed to the relevant Research authorities. Thereafter, the findings and study recommendations will be made in presentations to the staff during selected continuous professional development (CPD) sessions.

In case you need clarification, contact: Susan 0722 719 359 or 0202726300 extension 43107. You can also contact the secretary KNH-UoN ERC Tel. No. 0202726300 extension 44102.

The researcher declares no conflict of interest and do hereby request for your participation.

Thank you.

Yours faithfully,

Susan W. Ruturi (Researcher)

September 14, 2020

As the study respondent:

I certify that I have read and understood the study informed consent form and what the study involves, and do voluntarily consent to participate.

I consent: Yes (_) No (_)

…………………………………………………………

…………………………………………………..
Appendix II: Self-Administered Questionnaire on Burnout and Emotional Intelligence

Instructions:
This questionnaire is divided into three (3) sections.
Kindly provide responses to every question in all the 3 sections.

Part A: Demographic Data and Background Information
Provide your response by tick (√) against the most appropriate response

1. Age:
   Below 30 (_)
   31 – 40 (_)
   41 – 50 (_)
   51 – 60 (_)

2. Gender: Male (_) Female (_)

3. Number of children:
   None (_) 1 –3 (_)
   Above 3 (_)

4. Religion:
   Christian (_) Muslim (_)
   No religious affiliation (_)

5. Job description:
   Doctor (_) Nurse (_) Clinical officer (_)
   Pharmacist (_) Medical Social Officer (_)

6. Marital status:
   Single (_) Single parent (_) Divorced/separated (_)
   Married /Living with partner (_) Widowed (_)

7. Level of highest education relevant to your current job description
   Diploma/higher diploma (_)
   University degree (includes if in training) (_)
   Postgraduate degree (includes if in training) (_)

8. Duration of service at the KNH Emergency?
   Less than 2 years (_) 2 – 5 years (_)
   Above 5 years (_)

9. Job grading:
   Job group K 7 to 10 (_) Job group K 6 or above (_)
   Temporary (if not KNH permanent employee) (_)

10. Work station: Accident and Emergency (_)
     Pediatric Emergency Unit (_)

11. Alcohol/ Tobacco/ and others Substance Use or Abuse inventory (NIDA QUICK SCREEN V1.0)
Provide your response by tick (√) against the most appropriate response

In the past year, how often have you used the following?

<table>
<thead>
<tr>
<th>Substance</th>
<th>Never</th>
<th>Once or twice</th>
<th>Monthly</th>
<th>Weekly</th>
<th>Daily or almost daily</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol: For men, 5 or more drinks a day For women, 4 or more drinks a day</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tobacco Products</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prescription Drugs for Non-Medical Reasons</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Illegal drugs</td>
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</tbody>
</table>
Part B: Burnout Self-Test (Maslach Burnout Inventory)

The Maslach Burnout Inventory (MBI) is the most commonly used tool to self-assess whether you might be at risk of burnout. To determine the risk of burnout, the MBI explores three components: exhaustion, depersonalization and personal achievement. While this tool may be useful, it must not be used as a scientific diagnostic technique, regardless of the results. The objective is simply to make you aware that anyone may be at risk of burnout.

For each question, provide your response by tick (√) against the most appropriate response

<table>
<thead>
<tr>
<th>Questions:</th>
<th>Never</th>
<th>A Few Times per Year</th>
<th>Once a Month</th>
<th>A Few Times per Month</th>
<th>Once a Week</th>
<th>A Few Times per Week</th>
<th>Every Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section A:</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I feel emotionally drained by my work.</td>
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<tr>
<td>Working with people all day long requires a great deal of effort.</td>
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<td>I feel like my work is breaking me down.</td>
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<tr>
<td>I feel frustrated by my work.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel I work too hard at my job.</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>It stresses me too much to work in direct contact with people.</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>I feel like I’m at the end of my rope</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total score – SECTION A**
### Section B

<table>
<thead>
<tr>
<th>Questions:</th>
<th>Never</th>
<th>A Few Times per Year</th>
<th>Once a Month</th>
<th>A Few Times per Month</th>
<th>Once a Week</th>
<th>A Few Times per Week</th>
<th>Every Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel I look after certain patients/clients impersonally, as if they are objects.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I feel tired when I get up in the morning and have to face another day at work.</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>I have the impression that my patients/clients make me responsible for some of their problems.</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>I am at the end of my patience at the end of my work day.</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>I really don’t care about what happens to some of my patients/clients.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>I have become more insensitive to people since I’ve been working.</td>
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<td></td>
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</tr>
<tr>
<td>I’m afraid that this job is making me uncaring.</td>
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<td></td>
</tr>
</tbody>
</table>

**Total score – SECTION B**

### Section C

<table>
<thead>
<tr>
<th>Questions:</th>
<th>Never</th>
<th>A Few Times per Year</th>
<th>Once a Month</th>
<th>A Few Times per Month</th>
<th>Once a Week</th>
<th>A Few Times per Week</th>
<th>Every Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>I accomplish many worthwhile things in this job.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I feel full of energy.</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>I am easily able to understand what my patients/clients feel.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>I look after my patients’/clients’ problems very effectively.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>In my work, I handle emotional problems very calmly.</td>
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<td></td>
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</tr>
<tr>
<td>Through my work, I feel that I have a positive influence on people.</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>I am easily able to create a relaxed atmosphere with my patients/clients.</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>I feel refreshed when I have been closing to my patients/clients at work</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**Total score – SECTION C**
Part C: Emotional Intelligence Self-Assessment Tool

Please provide your response by the number on the scale 1-5 that best suits your response

1 never
2 rarely
3 sometimes
4 usually
5 always

1. I am aware of the physical reactions (twinges, aches, sudden changes) that signal a “gut reaction.”

2. I readily admit mistakes and apologize.

3. When I feel angry I can still stay composed.

4. I generally have an accurate idea of how another person perceives me during a particular interaction.

5. In assessing a situation, I look at my biases and adjust my assessment accordingly.

6. I can keep going on a project, despite obstacles.

7. I can engage in an interaction with another and pretty well size-up that person’s mood based on non-verbal signals.

8. Others feel encouraged after talking to me.

9. I consider my “emotional temperature” before I make important decisions.

10. When I feel a strong impulse to do something, I usually pause to reflect and decide whether I really want to act on it.

11. I can deal calmly, sensitively, and proactively with the emotional displays of others.

12. I can identify the emotion I am feeling at any given moment.

13. I am able to honestly say how I feel without getting others upset.

14. I can show empathy and match my feelings with those of another person in an interaction.

15. I think about the emotions behind my actions.

16. I am respected and liked by others, even when they don’t agree with me.

17. I watch how others react to me to understand which of my own behaviors are effective and which are not.

18. I am good at managing my moods, and I refrain from bringing negative emotions to work.

19. It’s easy to understand why other people feel the way they do.

20. I can effectively persuade others to adopt my point of view without coercing them

Google forms link: https://forms.gle/Xbs9u1FYynyhCsvY7

Thank you for participating
Appendix III: Briefing and Debriefing Guide

Dear Respondent,

Thank you for participating in this thesis research study whose purpose is to study the “Relationship between Burnout and Emotional Intelligence among Healthcare Workers at Kenyatta National Hospital in Kenya.” Your voluntary participation will be highly beneficial as it will be insightful in identifying the burnout level and emotional intelligence competencies in the emergency departments, Kenyatta National Hospital – Kenya in order to inform appropriate intervention.

The information will strictly be used for study purposes. Anonymity of the respondent and confidentiality of the information gathered will be observed. No harm or risk is expected while participating in this study. However, you are allowed to withdraw from the study at any point and you will not be penalty.

In the event you experience any distress or have concerns regarding the content in the questionnaire, kindly contact me, Susan W. Ruturi on 0722 719 359. If you observe personal insights that require psychological attention during or after submission of the questionnaire, do not hesitate to contact me. You are also free to seek the services of the hospital Employee Assistance Program for psychological support or debriefing.

Similarly, if you have questions regarding the study and would like any clarifications, kindly reach me, Susan W. Ruturi on 0722 719 359.

Once again, your participation is highly appreciated.

Sincerely,

Susan W. Ruturi

September 14, 2020
Appendix IV: Approval Request to KNH-UoN ERC

Susan W. Ruturi,
Accident & Emergency Department,
P.O. Box 20723 – 00202,
Nairobi.

The Chairperson,
KNH-UoN Ethics Research Committee,
P.O. Box 20723 –00202,
Nairobi.

Dear Sir,

Request for permission to conduct study research
I am an employee of Kenyatta National Hospital, deployed at the Accident & Emergency Department, Counseling Services; currently undertaking a Master’s Degree in Clinical Psychology.

I write to request for permission to carry out a study research at among the clinical staff at the KNH emergency departments (i.e. Accident & Emergency Department and Pediatric Emergency Unit) during the period of October to December 2020. The research study title is “Relationship between Burnout and Emotional Intelligence among Healthcare Workers at Kenyatta National Hospital in Kenya.” Google forms link (https://forms.gle/Xbs9u1FYynyhCsvY7) will be administered to each respondent and they will be supervised to complete the questionnaires. COVID mitigation measures will be observed. No risks are anticipated however, the staff will be informed of the availability of the KNH Employee Assistant Program in case of an adverse event. I will submit to your office the NARCOSTI approval note once received. Attached herewith is the research proposal.

Your positive response will be greatly appreciated.

Yours faithfully,

Susan W. Ruturi; P/No. 530565; Cell phone: 0722 719359; E-mail: sruturi@gmail.com
September 14, 2020

CC: CEO, KNH
## Appendix V: Research Budget

<table>
<thead>
<tr>
<th>ITEM</th>
<th>Cost/ item (Ksh.)</th>
<th>Cost (Ksh.)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Proposal development</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stationery</td>
<td>5,000</td>
<td></td>
</tr>
<tr>
<td>Airtime/ internet bundles (post-paid subscription)</td>
<td>2,000</td>
<td></td>
</tr>
<tr>
<td>Transport (fuel)</td>
<td>5,000</td>
<td></td>
</tr>
<tr>
<td>Printing and binding</td>
<td>6,500</td>
<td></td>
</tr>
<tr>
<td>Permits (IRB, NACOSTI, KNH-UoN ERC)</td>
<td>4,000</td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>22,500</strong></td>
<td></td>
</tr>
<tr>
<td><strong>2. Data collection</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Airtime/ internet bundles (post-paid subscription)</td>
<td>2,000</td>
<td></td>
</tr>
<tr>
<td>Transport (fuel)</td>
<td>10,500</td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>12,500</strong></td>
<td></td>
</tr>
<tr>
<td><strong>3. Data analysis and compilation of report</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Airtime/ internet bundles and 2 month’s internet subscription</td>
<td>7,500</td>
<td></td>
</tr>
<tr>
<td>Data entry and statistician</td>
<td>30,000</td>
<td></td>
</tr>
<tr>
<td>Editorial services (2 people)</td>
<td>10,000</td>
<td></td>
</tr>
<tr>
<td>Report writing, printing and binding</td>
<td>24,500</td>
<td></td>
</tr>
<tr>
<td>Transport (fuel)</td>
<td>7,500</td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>79,500</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Total Research Cost</strong></td>
<td><strong>114,500</strong></td>
<td></td>
</tr>
</tbody>
</table>
# Appendix VI: Research Work Plan

## Activity

<table>
<thead>
<tr>
<th>Activity</th>
<th>Proposal Writing</th>
<th>Data collection and Report Finalization</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Year 2020</td>
<td>Year 2021</td>
</tr>
<tr>
<td></td>
<td>June</td>
<td>July</td>
</tr>
<tr>
<td>Development, correction of thesis proposal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Submission of corrected proposal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Permit acquisition from various institutions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-testing the questionnaires</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dissemination of questionnaire</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data entry, analysis and supervisor’s review</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Report compilation and supervisor’s feedback</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Submission of final thesis for examination</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix VII: Institutional Review Board Approval letter

USIU-A Institutional Review Board (IRB)

1st October 2020

Dear Sir/Madam,

The USIU-A IRB has reviewed and granted ethical approval for the research proposal titled “Relationship between Burnout and Emotional Intelligence in Healthcare Workers in Kenyatta National Hospital in Kenya”. The approval is for twelve months from the date of IRB. A continuing review application must be approved within this interval to avoid expiration of IRB approved and remaining of all research activities. A mid-term report and a final report must be provided to the IRB within the twelve months approval period. All records relating to the research (including signed consent forms) must be retained and available for audit for at least 3 years after the research has ended.

You are advised to follow the approved methodology and report to the IRB any serious, unexpected and related adverse events and potential unanticipated problems involving risks to subjects or others.

Should you or study participants have any queries regarding IRB’s consideration of the project, please contact irb@usiu.ac.ke

Sincerely,

Dr. J. Nandleri,
IRB chair
Tel: +254 730 116-628
Email: jnandleri@usiu.ac.ke

United States International University-Africa

Date: 1st October 2020

IRB Approval Letter

USIU-AIRB3522-2020
Appendix VIII: NACOSTI Permit

This is to certify that Ms. Susan W. Ruturi of United States International University Africa, has been licensed to conduct research in Nairobi on the topic: Relationship Between Burnout and Emotional Intelligence in Healthcare Workers at Kenyatta National Hospital in Kenya for the period ending: 15/October/2021.

License No: NACOSTI/P/20/7091

222073
Applicant Identification Number

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.
THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013

The Grant of Research Licenses is Guided by the Science, Technology and Innovation (Research Licensing) Regulations, 2014

CONDITIONS

1. The License is valid for the proposed research, location and specified period
2. The Licensee may transfer the License to another entity
3. The Licensee shall inform the relevant County Director of Education, County Commissioner and County Governor before commencement of the research
4. The Licensee shall inform the relevant Government Agency if the research is conducted for more than six months
5. The Licensee shall submit an annual report to the relevant Government Agency
6. The Licensee shall submit a final report to the relevant Government Agency within one year of completion of the research
7. The Licensee reserves the right to modify the conditions of the License including cancellation without prior notice
8. NACOSTI reserves the right to modify the conditions of the License including cancellation without prior notice

National Commission for Science, Technology and Innovation
of Waliyaki Way, Upper Kabete,
P. O. Box 30623, 00100 Nairobi, KENYA
Land line: 020 6987000, 020 7243849, 020 3310371, 020 8901077
Mobile: 0713 792 767 / 0715 434 245
E-mail: dg@nacostl.go.ke / registry@nacostl.go.ke
Website: www.nacostl.go.ke
Appendix IX: ERC Approval Letter

UNIVERSITY OF NAIROBI
COLLEGE OF HEALTH SCIENCES
P O BOX 19767 Code 00202
Telephone: variety
Fax: 2726090 Ext 44355

KENYATTA NATIONAL HOSPITAL
P O BOX 20723 Code 00202
Tel: 760300-9
Fax: 7620762
Telegram: MEDSUP, Nairobi

KNH-UoN ERC
Email: knh-erc@uonbi.ac.ke
Website: http://www.erc.uon.ac.ke
Facebook: https://www.facebook.com/uooneknh
Twitter: @uoneknh ERC https://twitter.com/UONEKNH

Ref: KNH-ERC/A/434

November 2020

Susan W. Ruturi
Reg. No. 600322
School of Humanities and Social Sciences
United States International University-Africa (USIU-A)

Dear Susan

RESEARCH PROPOSAL – RELATIONSHIP BETWEEN BURNOUT AND EMOTIONAL INTELLIGENCE IN HEALTHCARE WORKERS IN KENYATTA NATIONAL HOSPITAL IN KENYA (P3290/9/2020)

This is to inform you that the KNH-UoN Ethics & Research Committee (KNH-UoN ERC) has reviewed and approved your above research proposal. The approval period is 30th November 2020 –29th November 2021.

This approval is subject to compliance with the following requirements:

a. Only approved documents (informed consents, study instruments, advertising materials etc) will be used.
b. All changes (amendments, deviations, violations etc.) are submitted for review and approval by KNH-UoN ERC before implementation.
c. Death and life threatening problems and serious adverse events (SAEs) or unexpected adverse events whether related or unrelated to the study must be reported to the KNH-UoN ERC within 72 hours of notification.
d. Any changes, anticipated or otherwise that may increase the risks or affect safety or welfare of study participants and others or affect the integrity of the research must be reported to KNH-UoN ERC within 72 hours.
e. Clearance for export of biological specimens must be obtained from KNH-UoN ERC for each batch of shipment.
f. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. (Attach a comprehensive progress report to support the renewal).
g. Submission of an executive summary report within 90 days upon completion of the study. This information will form part of the data base that will be consulted in future when processing related research studies so as to minimize chance of study duplication and/or plagiarism.

Please discover...
For more details consult the KNH-UoN ERC website http://www.erc.uonbi.ac.ke

Yours sincerely,

[Signature]

PROF. M. CHINDIA
SECRETARY, KNH-UoN ERC

c.c. The Principal, College of Health Sciences, UoN
The Senior Director, CS, KNH
The Chairperson, KNH- UoN ERC
The Assistant Director, Health Information Dept, KNH
Supervisor: Dr. Rachel Ngesa, United States International University-Africa
Prof. Martin C. Njoroge, Deans, School of Humanities and Social Sciences
(USIU-Africa)